Attachments

Attachment A – GA EPD May 12, 2017 Letter

Attachment B – EPD June 2020 RFA

Attachment C – EA Closure Report

Attachment D – Sprayfield Data

Attachment E – Boiler Area Data

Attachment F – Survey and Environmental Covenant

Attachment G – Well Inspection Checklist

Attachment H – Appendix IX Laboratory Reports

Attachment I – Financial Assurance Documentation

Attachment A

GA EPD May 12, 2017 Letter

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Land Protection Branch
2 Martin Luther King, Jr. Drive
Suite 1054, East Tower
Atlanta, Georgia 30334
404-656-7802

May 12, 2017

Attn: Nancy Mick
Blue Jay Environmental Inc.
c/o Symrise Inc.
209 SCM Road
Brunswick, Georgia 31523

VIA Certified Mail and E-mail

Re: United States and the State of Georgia v. Renessenz, LLC
Civil Action No. CV-214-186

Dear Ms. Mick:

This letter is in response to a letter dated April 26, 2017 written on behalf of Symrise Inc. by Blue Jay Environmental Inc. to Region 4 of the United States Environmental Protection Agency ("EPA") and to the Georgia Environmental Protection Division ("EPD"). The letter (hereinafter, Symrise Letter) was sent in response to the March 6, 2017 letter from EPA Region 4 (hereinafter EPA Letter) requesting that Symrise submit a post-closure care permit application for the Symrise facility based on EPA and EPD's review of the Closure Report and the Pilot Injection Test Report submitted to EPA and EPD in August of 2016 and December of 2016, respectively. There are a number of assertions in the Symrise Letter that are of concern to EPD because they conflict with the clearly expressed terms and requirements in the Consent Decree entered on March 5, 2015 ("the Consent Decree").

It is important to note at the outset that a post-closure permit application for *facility wide corrective action* (emphasis added) must be submitted to EPD under the clear terms of Paragraph 21 of the Consent Decree, which states as follows:

> Post-Closure Obligations: In the event that EPA and/or GAEPD make a determination based on the Closure Report(s) that clean-closure has not been fully demonstrated and that post-closure care is necessary for any HWMU, pursuant to Ga. Comp. R & Regs r. 391-3-11-.11(1)(a), Renessenz shall submit to GAEPD a permit application for post-closure care and financial responsibility for any such unit in accordance with the closure and post-closure care requirements. In addition, if post-closure care is necessary for any HWMU, Renessenz shall include requirements for facility-wide corrective action in its permit application.

As you know, the EPA Letter informed you that based on the data contained in the Closure Report and the December 2016 Pilot Injection Test Report, clean closure has not been demonstrated for the First Flush Basin or the Process Wet Well. Thus, under the clear language

in Paragraph 21, if clean closure cannot be demonstrated for "any" hazardous waste management unit ("HWMU") – and the Symrise Letter acknowledges that with regard to the First Flush Basin, clean closure has not been demonstrated – it will be necessary to submit a permit application for facility-wide corrective action. As a reminder, the permit application for post closure of the First Flush Basin and the Process Wet Well is due within 180 days of receipt of the aforementioned EPA Letter.

It is important to note a clear distinction from the EPA Letter and your proposal. While the EPA Letter formally documented a joint EPA and EPD determination that post-closure was necessary for both the First Flush Basin and the Process Wet Well, the Symrise Letter proposed that a post-closure application be limited to the First Flush Basin only, with the benzene plume addressed separately as "Areas of Concern in the post-closure application." This would violate the Consent Decree's clear mandate that submittal of a permit application for post-closure care and financial responsibility is necessary for any such unit deemed necessary by EPA and/or EPD, which in this case is both the First Flush Basin and the Process Wet Well. Moreover, "Area of Concern" is a defined term in the Consent Decree, which refers to releases of hazardous waste, hazardous constituent, or a hazardous waste constituent that are not from one of the units, and there is no evidence to support any contention that the benzene contamination was not released from the units. To the contrary, as discussed more fully below, the data in the Closure Report and the Pilot Test Study demonstrate that there is a significant benzene source in groundwater below and downgradient of the two units. As an alternative to the "Area of Concern" approach, the Symrise Letter states that the benzene contamination in the groundwater might be "more appropriately" addressed "within an applicable Georgia EPD program". EPD's Hazardous Waste Management Program *is* the most applicable EPD program.

This letter will now respond to specific contentions and requests set forth in the Symrise Letter.

1. **Aeration Basin**: You requested written confirmation of the clean closure of the Aeration Basin.

   Response: EPD agrees that the facility has demonstrated clean closure of the Aeration Basin and is, therefore, confirming that the clean closure has been obtained for the Aeration Basin.

2. **Wet Well Basin:** A clean closure designation of the Wet Well Basin is requested. The Symrise Letter asserts that the Wet Well basin is a "tank" and thus exempt from RCRA regulation. The Symrise Letter further asserts that the groundwater monitoring wells near the Wet Well Basin have been non-detect for benzene since January 2015, with only trace detections of other VOCs that are below EPA MCLs. The Symrise Letter references an attachment as allegedly showing the applicable wells and the 2016 analytical data. The Symrise Letter states that the Wet Well is "intact with no structural flaws," and it requests a clean closure designation for the Wet Well basin.

   Response: Your assertions that the Wet Well Basin is a "tank" that is not subject to regulation under RCRA is directly contrary to the language in the Consent Decree that you negotiated and agreed to. The Consent Decree specifically defines as "hazardous waste management units" ("HWMUs") all three units that are the subject of regulatory closure in

the Decree (i.e., the First Flush Basin, the Process Wet Well, the Aeration Basin, and these units' "associated ancillary equipment.") See Consent Decree at III, 9. The Consent Decree refers to the unit as a "Process Wet Well," which includes both the Wet Well Basin and the Well's process lines. As noted above, the definition specifically includes "associated ancillary equipment," and, therefore, the entire Process Wet Well, including the influent and effluent lines to/from the Process Wet Well and the basin, is a HWMU subject to regulatory closure under the terms of the Consent Decree. The fact that you agree that the process lines have breaches impacting surrounding soils is in itself sufficient to demonstrate that clean closure of the Process Wet Well has not been demonstrated.

Furthermore, in Section 4.2.3 "Recommended Action" of the Closure Report, the first sentence acknowledged that the Closure Report has confirmed that the groundwater medium warrants further remedial action. A pilot test was conducted in July 2016, and based on the information provided in Section 2.2.1 of the Pilot Test Report, an approximate total of 17,640 gallons of fluid was pumped into the test wells in the vicinity of the Process Area. Displacement caused by that amount of fluid injected into groundwater alone would call into question whether the data presented in the Appendix to the Symrise Letter could be used to justify clean closure without additional information.

As noted above, while it is inappropriate to separate the Process Wet Well into discrete parts and argue for only partial regulation of the parts, it should also be noted that the data does not even support a clean closure designation for the basin portion of the Process Wet Well. For example, Benzene and LNAPL were detected in MW27 adjacent to the Wet Well Basin. Additionally, Photographs #4163 and 4164 from the Closure Report show structural flaws with infiltration into the basin after cleaning. Also, the attachment to the Symrise Letter only included a map of data points for one media (groundwater) and one single analyte (benzene) for a select group of wells at a single sampling event in time, providing only a snapshot of benzene.

Further, Section III of the Structure Evaluation Report, which was included as an Appendix to the Closure Report, indicated that the contractor had just pumped about four inches of water out of the basin, so the bottom was saturated, which could have concealed cracks. Evidence of cracks was noted on the sidewalls such as the one depicted in Photo #9 from Appendix A of the Closure Report. This evidence seems contrary to the statement in the Symrise Letter where it is stated that the unit is intact with no structural flaws.

The conclusions in Structure Evaluation Report do not meet the requirements of Paragraph 20.C. of the Consent Decree in the following ways:

a. The conclusions focused on the formation of an opinion as to whether the Units met the definition of a tank while Paragraph 20.C of the Consent Decree requires a certified report from a professional engineer (P.E.) licensed in the State of Georgia stating the current structural integrity of the subject HWMUs (i.e. the Aeration Basin, First Flush Basin, and/or Process Wet Well.

b. The engineering evaluation did not include an assessment of the ancillary equipment for the HWMUs. Therefore, the scope of the engineering evaluation was inadequate in each case. Paragraph 20.C of the Consent Decree clearly requires an engineering evaluation for the subject *HWMUs* (emphasis added). HWMUs are defined in Paragraph 10 of the Consent Decree as including associated ancillary equipment.

Thus, for the reasons set forth above, a demonstration of clean closure for the Process Wet Well, including the Wet Well Basin and its ancillary equipment, has not been made.

3. **First Flush Basin**: The Symrise Letter acknowledges that groundwater in the vicinity of the First Flush Basin did not meet risk assessment criteria for clean closure. As explained above, under the express terms of the Consent Decree in Paragraph 21, that finding alone triggers the need for facility-wide corrective action under the terms of a post-closure permit, even if there were no other issues. You then contend that the First Flush Basin is a "tank" and as such is exempt as a RCRA regulated unit. That point is irrelevant given that the Consent Decree specifically defines the First Flush Basin as an HWMU subject to regulatory closure under the terms of the Consent Decree. In the Consent Decree, you specifically agreed that the First Flush Basin was an HWMU subject to regulation under RCRA.

The Symrise Letter also states that there are "substantial questions" regarding whether the First Flush Basin is the source of the benzene contamination. EPD is not aware of any evidence, much less "substantial" evidence, suggesting that the units are not the source of the benzene contamination. For example, Section 3.3.3.2 of the Closure Report states that the LNAPL in nearby wells is likely associated with either the First Flush Basin or the associated underground wastewater lines. Furthermore, photograph #243 appears to show LNAPL within the basin prior to cleaning. Other issues noted in the Closure Report include, but are not limited to, cracks in the basin wall and a deteriorated seal at the wastewater line inlet. As you know, this enforcement action was commenced based on a 2008 Compliance Evaluation Inspection performed by EPA, which documented benzene and methyl ethyl ketone in a sample of wastewater taken from the First Flush Basin. Moreover, photographs 3-5 Structure Evaluation Report, which was included as an Appendix to the Closure Report, showed obvious cracks and water seepage in the First Flush Basin. As documented in the Structure Evaluation Report, groundwater was observed seeping into the unit. Therefore, if the unit was full, it is feasible that the internal pressure could exceed the groundwater pressure and the unit would leak.

The Symrise Letter also states that "given the source uncertainty, and the physical construction of the First Flush Basin, Blue Jay reserves the right to deal with those issues as appropriate in the course of the application process" and that "[i]nvestigation and analysis of data in this area will continue." As noted above, EPD is not aware of any evidence regarding "source uncertainty," and EPD is not sure what is meant by the reservation of rights. It is also not clear what additional investigation will be proposed; however, EPD would like to caution you that there can be no further delay in submission of the permit application for post-closure and facility-wide corrective action pursuant to the terms Consent Decree while additional data is obtained. We accommodated you during performance of the Pilot Test Injections in an attempt to determine if the benzene contamination could be addressed

through *in-situ* chemical oxidation. However, as indicated in the December 2016 Pilot Test Injection Report, it is undisputed that the Pilot Test did not succeed in addressing the benzene. Over 6 months have passed since the Pilot Test, and it is now well past time to address the contamination through a post-closure permit (including facility-wide corrective action) as required by the Consent Decree.

4. **"Process Lines."** The Symrise Letter references the term "process lines" found in the attachment to the EPA Letter and states correctly that the EPD's use of the term is intended to refer to any above or below grade wastewater lines and/or associated equipment (flanges, sumps, etc.) connected to the HWMUs. This would not include lines transporting product or product intermediates. The Symrise Letter, however, errs in its suggestion that the lines are not part of the Process Wet Well and that it is "premature" to define them as a SWMU. As noted above, "ancillary equipment" associated with the First Flush Basin, Process Wet Well, and Aeration Basin is specifically defined in Paragraph 10 the Consent Decree as part of the HWMUs. And, again, as noted above, the Consent Decree requires that in the event that any HWMU cannot be clean closed, it will be necessary for the facility to apply for a post-closure permit that addresses facility-wide corrective action. VOCs were detected in soil in several line sample locations and multiple significant breaches were observed in the line photographs. Addressing the benzene contamination associated with a regulated unit outside of a permit is inappropriate and directly contrary to the language of the Consent Decree.

5. **LNAPL.** Your assertion that "there is no recoverable LNAPL present in any of the wells and that the historical sources of LNAPL have been eliminated" is verifiably incorrect. Section 3.3.3.2 of the August 2016 Closure Report specifically notes that LNAPL was found in three wells and was 8 inches thick in one of those wells, with a distinct odor and a dark color. LNAPL was again found in December 2016 in three wells as documented in the 2016 Annual Groundwater Monitoring Report. The assertion that an "LNAPL program is not required as part of the RCRA permit application" is thus incorrect.

Paragraph 23 - Notification Regarding Need for Modification of Closure Report

While the August 2016 Closure Report is deficient in a number of respects, given that the focus should now be on submission of an acceptable permit application for post-closure for the First Flush Basin, post-closure for the Process Wet Well, and facility-wide corrective action, it would not be a productive use of time and resources to spend more time revising and reviewing every technical deficiency in the current version of the Report. There are, however, a few easily addressed areas where the Closure Report must be modified, and those are set forth below. EPD is notifying you of the need for these modifications pursuant to Paragraph 23 of the Consent Decree. **Pursuant to Paragraph 24, failure to submit a modified Closure Report to address these deficiencies within 60 days of receipt of this Notification will result in the accrual of stipulated penalties pursuant to Section XI of the Consent Decree.**

The Closure Report should be amended/modified in the following ways:

1. All additional data obtained since submission of the August 2016 Final Report, including, but not limited to, the data contained in the December 2016 Pilot Test Injection Report and the

2016 Annual Groundwater Monitoring Report should be incorporated into the Closure Report.

2. A revised integrity assessment for the First Flush Basin and the Process Wet Well should be included. The integrity assessment must include a statement of the current structural integrity of the First Flush Basin and the Process Wet Well (including ancillary equipment).

3. Section 4.2.3 "Recommended Action" in the current August 2016 Report should be deleted. The following language should be substituted: "Pursuant to Paragraph 20(d) of the Consent Decree, [Renessenz/Blue Jay/Symrise – insert current facility owner and operator here as defined in 40 CFR 270.2 and as prescribed in 40 CFR 270.10(b)] is recommending post-closure care for the Process Wet Well and the First Flush Basin including ancillary equipment associated with the two aforementioned units."

4. Pursuant to Paragraph 21 of the Consent Decree, the application to be submitted by Renessenz/Blue Jay (as operator) and Symrise (as owner – see 40 CFR 270.10(b)) must include requirements for facility-wide corrective action for the facility in its permit application. This corrective action will include measures to address contamination associated with both of the aforementioned HWMUs requiring post-closure and any known contamination detected in environmental media (soil, surface water, groundwater, etc.) elsewhere at the facility.

5. Include a certification as required by Paragraph 26 of the Consent Decree.

Pursuant to Paragraph 24 of the Consent Decree, please address each of four changes to the Closure Report as outlined in the numbered paragraphs immediately above within sixty (60) days of receipt of this letter. At this point, resources are best spent preparing a satisfactory permit application, and not continuing to revise any other portions of the Closure Report. Please let us know if you have any technical questions regarding the permit application.

EPD looks forward to working cooperatively with you in the processing of the permit application for post-closure care. Please do not hesitate to contact me if you have any questions about any of the issues in this letter.

Sincerely,

Mike Elster, Unit Coordinator
Treatment and Storage Unit

cc: Larry Lamberth, EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 0 6 2017

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Symrise, Inc.
c/o Nancy Mick
Blue Jay Environmental, Inc.
209 SCM Road
Brunswick, Georgia 31523

Subject: Review – August 2016 Final Closure Report
Former Renessenz LLC Facility
Brunswick, Georgia
EPA ID#: GAD 980 847 339

Dear Ms. Mick:

The U.S. Environmental Protection Agency and the Georgia Environmental Protection Division (GA EPD) have completed their reviews of the August 2016 Final Closure Report ("Closure Report") and the December 2016 Pilot Test Injection Report ("Pilot Test Report") for the Symrise Facility (f/k/a Renessenz, LLC).

As you know, several technical issues in the Closure Report remain to be resolved, and Symrise had concluded that a path-forward recommendation would be withheld until the results from the injection pilot test could be evaluated. Based on the Closure Report, while limited contaminated soil was discovered surrounding the First Flush Basin and the Process Wet Well, significant benzene contamination was discovered in the groundwater below and downgradient of the two units. Additionally, the Pilot Test Report recommended additional sampling, monitoring, and data collection in order to further characterize the benzene plume.

In accordance with paragraph 21 of the Consent Decree (Civil Action No. 2:14-cv-185 filed in the Brunswick Division, U.S. District Court for the Southern District of Georgia), the EPA and GA EPD have made a determination based on the Closure Report and informed by the Pilot Test Report that clean-closure has not been fully demonstrated, and that post closure-care is therefore necessary for the First Flush Basin and the Process Wet Well.

Accordingly, Symrise is hereby directed to submit a permit application to GA EPD for the post-closure care of, and financial responsibility for, the First Flush Basin and the Process Wet Well. As contemplated under the terms of the Consent Decree, please submit a complete post-closure permit application to the GA EPD within 180 days of receipt of this letter. Enclosed herewith are comments GA

EPD has prepared (Enclosure) on the Closure Report covering major technical issues that will need to be addressed through the post-closure permit application and corrective action process.

Sincerely,

Larry L. Lamberth
Chief, Enforcement & Compliance Branch
Resource Conservation and Restoration Division

Enclosure

Enclosure: Closure Comments

Former Rennesenz Facility – Brunswick, GA

Final Closure Report – The following items should be addressed as part of the Post-Closure Permit Application:

1. Section 2.2.3 Process Lines – This section identifies only two specific "major breaches" observed in the process lines. A review of the line inspection photos included in Appendix F showed that were several more process line locations that had breaches significant enough to release to surrounding soils. Therefore, these lines should be considered Solid Waste Management Units in the Post-Closure Permit Application.

2. Section 3.3.3.2 LNAPL Findings – This section states that analysis of the LNAPL recovered from well MW-34 indicated that it was a mixture of facility materials. However, no analytical reports were included to document the exact makeup of the LNAPL. Please include the analytical results for the LNAPL discovered in MW-27, MW-30, and MW-34 in the appropriate section of the Post-Closure Permit Application. Additionally, the volume of LNAPL recovered from each of those wells should be included.

Human Health Risk Assessment – If Rennesenz chooses to establish risk based remedial goals, a site-wide Human Health Risk Assessment must be submitted as part of a site-wide corrective action plan in the Post-Closure Permit Application or in accordance with a schedule established in the Post-Closure Permit Application. The following comments must be incorporated into any such submittal:

1. Section 2.2.4.3 Vapor Intrusion into Indoor Air – The USEPA Vapor Intrusion screening Levels (VISL) Calculator output sheets for the hypothetical future resident and current/future commercial worker have been provided as requested in previous correspondence. However, please note that the VISL worksheets should supersede the site-specific J&E model evaluations (Attachment 4) to aid in support of any risk management decisions consistent with the USEPA Vapor Intrusion Guidance1 document.

2. Section 2.5 Risk Characterization Results and Section 4 Conclusions – EPD would like to reiterate the following statement in EPA's November 16, 2015 letter: "Several chemicals of concern (COCs) had estimated cumulative cancer and non-cancer risk in excess of EPD's remediation trigger of $1X10^{-6}$ for carcinogens and hazard index (HI) of 1 for non-carcinogens. Pursuant to the Georgia EPD Guidance for Selecting Media Remediation Levels at RCRA SWMU (GAEPD, 1996), risk-based RGOs must be determined at a proposed level of risk for these COCs as part of the Feasibility Study or Correction Action Plan. As previously noted, adequate justification for RGOs based on risk levels greater than EPD's preferred target risk must be provided."

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1 USEPA Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air, June 2015.

3. Table 2 Non-Detected Chemicals Reporting Limit – Over 10 constituents in the table had the incorrect tapwater RSLs. For your convenience, a table is provided below with the correct tapwater RSL:

Chemical	Tap Water RSL (ug/L)
1,1,2-Trichloroethane	0.41
1,1-Dichloroethane	2.8
1,2,4-Trichlorobenzene	0.41
2,4,6-Trichlorophenol	1.2
2,6-Dinitrotoluene	0.049
3,3′-Dichlorobenzidine	0.13
4-Chloroaniline	0.37
Benz(a)anthracene	0.012
Bis(2-chloroisopropyl)ether	7.1
Carbon Tetrachloride	0.46
Dibromochloromethane	0.87
Hexachlorobenzene	0.0098
Hexachlorobutadiene	0.14
Hexachloroethane	0.33
Trichloroethene	0.28

4. The following comments provided by GAEPD on July 7, 2015 were not addressed in the revised HHRA dated March 2016:

    a. Table 2.1 Occurrence, Distribution and Selection of Chemicals of Potential Concern (COPC) for Groundwater – It was noted that m- and p-xylene were combined while o-xylene was assessed separately. Since a tap water RSL exists for each xylene isomer in addition to total xylenes, it is recommended that concentrations be summed and compared to the tapwater RSL for total xylenes.

    b. Table 2.2 Occurrence, Distribution and Selection of Chemicals of Potential Concern (COPC) for Subsurface Soil –

        i. Similar to Comment 4.a above, please sum the concentrations of m, p-xylene and o-xylene for comparison to the residential soil RSL for total xylenes.

        ii. Methylcyclohexane does not have a residential soil RSL. However, please add a footnote indicating that the screening value used in the table is based on the USEPA-approved surrogate cyclohexane.

Screening Level Ecological Risk Assessment (SLERA) – If Rennesenz chooses to establish risk based remedial goals, a site-wide Screening Level Ecological Risk Assessment must be submitted as part of a site-wide corrective action plan in the Post-Closure Permit Application or

in accordance with a schedule established in the Post-Closure Permit Application. The following comment must be incorporated into any such submittal:

> Section 5 Conclusions – The statement, "A comparison of reporting limits to risk screening values demonstrated that any perceived risk is highly uncertain. Consequently, there is no need to go beyond a SLERA as there is acceptable risk to ecological receptors from COPCs" is unsubstantiated as it does not provide justification for eliminating the 14 non-detected chemicals as COPECs. The non-detected chemicals in Table 4.1 listed as COPCs all have a hazard quotient (HQ) greater than 1, and therefore, should be further refined in the SLERA by evaluating the hexachlorobenzene, hexachlorbutadiene, and high molecular weight PAHs for bioaccumulative effects by utilizing food chain modeling as described in Section 3.1.5 of the USEPA Region 4 Ecological Risk Assessment Supplemental Guidance (ERAGS) Interim Draft[2].

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2 U.S. Environmental Protection Agency, Region 4 Ecological Risk Assessment Supplemental Guidance, (2015). Available at: https://www.epa.gov/risk/region-4-ecological-risk-assessment-supplemental-guidance

Attachment B

EPD June 2020 RFA

FILE COPY

RCRA FACILITY ASSESSMENT

Symrise Inc.
209 SCM Road
Brunswick, Glynn, Georgia
EPA I.D. #GAD980847339

GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
LAND PROTECTION BRANCH

JUNE 2020

SUMMARY

The Resource Conservation and Recovery Act (RCRA) regulates the disposal of solid and hazardous waste. The regulation of non-hazardous solid waste is regulated under Subtitle D of RCRA and the management of hazardous waste is regulated under Subtitle C. A RCRA Facility Assessment is the first component in most cleanup programs and consists of the initial site assessment at a RCRA facility. During the initial site assessment information is gathered on the site conditions, releases, potential releases, and exposure pathways to determine the appropriate remediation approach and to identify areas of potential concern.

Symrise Inc. (Facility) is located on the southwest portion of Colonels Island in Brunswick, Glynn County, Georgia at 209 SCM Road and consists of approximately 192 acres, with the active portion consisting of approximately 25 acres. The Facility has been in operation since 1981, and currently processes alpha-pinene into fragrances, compounds and flavors, and is considered a small quantity generator of hazardous waste. The Facility has two open Consent Orders with EPD, EPD-HW-1046 and EPD-HW-1535. EPD HW-1046 was issued in 1993 and required a site-wide investigation of the integrity of the underground wastewater lines, an evaluation of LNAPL recovery via semi-annual groundwater monitoring and reporting. EPD-HW-1535 was issued in 2003 and focuses on monitoring well maintenance. A Consent Decree between EPA and the Facility was executed in 2014 and required the regulatory closure of the Facility Former Wastewater Treatment System that consist of the Aeration Basin, the First Flush Basin, the Process Wet Well, and associated underground lines. Currently, only the Aeration Basin has achieved clean closure and the remaining hazardous waste management units will be addressed in a RCRA post-closure care permit. In addition, the Consent Decree requires the post-closure care permit application to also address facility-wide corrective action. The nature and extent of releases at the Facility, and wastes involved, is the subject of this report.

1.0 INTRODUCTION TO THE RFA PROCESS

The RCRA Facility Assessment (RFA) is the initial phase of the RCRA corrective action program. The purpose of the program is to remediate releases to the environment of hazardous waste or hazardous constituents. The program pertains to all operating, inactive, or closed facilities that treat, store, or dispose of hazardous waste (i.e. treatment storage and disposal facilities; TSDF) and which therefore are required to obtain RCRA permits.

Prior to the passage of the 1984 Hazardous and Solid Waste Amendments to RCRA, the Georgia Environmental Protection Division's (EPD) authority to require corrective action for releases of hazardous constituents was limited to releases to groundwater from units that were covered by RCRA permits. Paragraph 391-3-11.10(2) of the Georgia Rules for Hazardous Waste Management, which incorporates 40 CFR 264 Subpart F, provided the means for requiring corrective action at these "regulated" units. Subsequent to state authorization for the 1984 amendments, EPD's program now extends to releases of hazardous constituents to any media from all units at TSDFs. "Unit" in the present context implies "solid waste management unit" (SWMU), the definition of which includes, but is not limited to, any landfill, surface impoundment, waste pile, land treatment unit, incinerator, injection well, tank (including storage, treatment and accumulation tanks), container storage unit, wastewater treatment unit, including all conveyances and appurtenances used in waste management or stormwater handling, elementary neutralization unit, transfer station, or recycling unit from which hazardous waste, or hazardous constituents might migrate, irrespective of whether the units were intended for the management of solid and/or hazardous waste. The term also applies to areas associated with production processes which have become contaminated as a result of routine, systematic and deliberate releases of wastes or constituents. Atmospheric releases that are covered by an operating permit under Georgia's Air Quality Act are excluded. The Georgia Rules for Hazardous Waste Management have been amended by adopting 40 CFR 264.101 which, in part, states that corrective action for releases from SWMUs will be specified in the RCRA permit. The Georgia Hazardous Waste Management Act, O.C.G.A 12-8-60 *et seq.*, independently specifies that any permit "shall contain conditions requiring corrective action for any releases into the environment of hazardous waste or hazardous constituents at the facility seeking a permit, regardless of the time at which waste was placed at such facility" [12-8-66(e)]. The mechanism by which corrective action is specified includes the RFA, for which the present document is the final report.

The RCRA corrective action program consists of three phases:

1. The RCRA Facility Assessment – identify releases or potential releases requiring further investigation.
2. The RCRA Facility Investigation (RFI) – fully characterize the extent of identified releases.
3. If required, corrective measures study (CMS) to determine the need for and extent of remedial measures. CMS consists of the selection and implementation of appropriate remedies for all problems identified.

Purpose of the RFA process:

1. Identifying and gathering information on releases at RCRA facilities;

2. Evaluating solid waste management units and other areas of concern for releases to all media and regulated units for releases to media other than groundwater;
3. Making preliminary determinations regarding releases of concern and the necessity for further actions and interim measures at the RCRA facility; and
4. Screening from further investigation those SWMUs which do not present a threat to human health or the environment.

During the RFA, the EPD inspector will compile information on SWMUs and other areas of concern at the RCRA facility. Sources of information include inspection reports, permit applications, historical monitoring data, interviews, aerial photographs, and visual site inspection. As of June 28, 1988, Paragraph 391-3-11-.11(3)(g) of the Georgia Rules [40 CFR 270.14(d)] requires that a permit applicant itself provide descriptive information on the SWMUs and provide all available information pertaining to any release from the units. EPD evaluates this information to screen from further investigation or action those SWMUs which do not pose a threat to human health or the environment, and to make preliminary determinations regarding releases from the remaining SWMUS, i.e., whether interim corrective measures and/or further investigations are needed. These "further investigations" are handled under the RFI phase of the program.

Technical approach of the RFA process:

1. Unit characteristics – An evaluation of the design and operating characteristics of the SWMUs at the RCRA facility to determine the extent of a potential release.
2. Waste characteristics – An evaluation of the waste initially or currently contained in the unit(s) in order to connect constituents observed in the environment with those present in the contaminant source.
3. Pollutant migration pathways – An evaluation of surface water, groundwater, soils, subsurface gas, and air that could be associated with each SWMU and an evaluation of their characteristics.
4. Evidence of release – direct evidence of release can include facility records, official reports (i.e. RCRA enforcement documents, permitting documents, other Federal, State, or local government documents), visual evidence and/or information from sampling data. Indirect evidence of release refers to sampling data obtained from relevant migration pathways and waste composition data that can be linked to a specific unit at the RCRA facility. During the onsite visit, visual sightings can also indicate evidence of releases, an example including stained soils.
5. Exposure potential – an evaluation of any available information on the number, location, and characteristics of receptors that could be affected by continuing releases at the RCRA facility. Receptors can consist of human populations, animal populations, more specifically endangered and/or protected species, and sensitive environments.

2.0 FACILITY DESCRIPTION

2.1 Facility Location

Symrise Inc. is located at 209 SCM Road in Brunswick, Glynn County, Georgia. The Facility is located about 2.5 miles east of Interstate 95 off US Highway 17 on the southwest portion of Colonels Island and consists of approximately 192 acres, with the active portion consisting of approximately 25 acres. The Georgia Port Authority owns the adjoining land on the Colonels Island peninsula, which is used as a staging area for new cars after they are off-loaded from the port terminal north of US Highway 17. North of the Facility is Allied Universal Corporation, who manufacture and packages sodium hypochlorite, sodium bisulfite, chlorine, and other water treatment products. The remainder of the Facility is forested and undeveloped. Details of the Facility Layout and surrounding areas can be found in **Attachment A – Figures**.

2.2 Nature of Operation

Alpha-pinene is received from the Symrise Jacksonville, Florida location and processed into geraniol, pinanols, and other terpenols that are used for fragrance and food flavoring. Manufacturing at the Brunswick location consists of chemical processing and support operations described in more detailed below.

1. Receiving and processing of alpha-pinene - the alpha-pinene that is received from the Jacksonville location is transferred to above-ground storage tanks. Alpha-pinene is processed into geraniol, pinanols, and other terpenols through continuous and batch reactions, distillation and pyrolysis. During these processes, a nickel-based catalyst is used to convert the alpha-pinene to pinane in Area 5 in Reactor 501. PCE is used in small amounts as a catalyst poison. Significant chemicals used or produced at the site include: ammonia, pinane, catalyst G-69B, liquid boric acid solution, nickel catalyst, dihydromyrcenol, caustic soda, borate, phosphoric acid, potassium hydroxide, geraniol, sulfuric acid, nitric acid, pinanol, dihydromyrcene, isobutyl alcohol, diesel fuel, and glidfuel. BTEX, MEK, MBK, MIBK and acetone are produced as undesirable by-products and have been handled in the wastewater system, flared or processed into glidfuel. Also, hydrogen gas is produced on-site by catalytically reforming natural gas.
2. Material Storage & Packaging – Above-ground storage tanks ranging in size from 1,500 gallons to over 200,000 gallons are used to store liquid raw materials, intermediates and final products. Products are shipped between the Jacksonville and Brunswick locations via truck and no drum or tote packaging occurs at the Facility.
3. Wastewater Treatment and Management – Process effluents and stormwater are transferred to the wastewater treatment plant by way of above ground piping. The wastewater treatment plant consists of two clarifiers for the removal of oil, an equalization tank, secondary clarifier, an aeration tank, a sludge centrifuge, and a 20-acre land application spray field. Note that the former sludge drying beds at the Facility are out of service.
4. Basic Utility Generation – The Facility has the capability to self-generate a portion of its utility needs. The primary fuel source, natural gas, is supplemented with production distillate/co-product with high BTU value (glidfuel) in the two on-site boiler units. There are two diesel-fired generators for emergency shutdown purposes in the event of a power

failure. A nitrogen gas plant for purging oxidation reactors is present on-site, with cryogenic back-up during peak usage. Hydrogen gas is produced on-site by catalytically reforming natural gas. Process water is derived from three groundwater production wells developed on-site, one of which is presently inactive and maintained on standby for emergency back-up needs.

5. Ancillary Operation – activities include shipping/receiving, administrative and laboratory operations, machinery maintenance, and mobile equipment support and operation.

2.3 Facility Features

The Facility includes an administrative building, storage buildings, a central control room, above ground piping, electrical lines, tanks, ten process distillation towers, eight reactors, two pyrolysis furnaces, two boilers, and a wastewater treatment plant. An overview of the Facility features can be found in **Attachment A – Figures.**

3.0 OWNERSHIP AND REGULATORY STATUS

Symrise is located at 209 SCM Road, Brunswick, GA 31523

The Facility was constructed in 1981 by SCM Corporation for the processing of alpha-pinene into fragrances and flavors. Since the construction of the Facility, ownership has changed throughout the years. EPD-HW-1046 was issued in 1993 and required a site-wide investigation of the integrity of the underground wastewater lines, evaluation of LNAPL recovery via semi-annual groundwater monitoring and reporting. In 1996, Millennium Specialty Chemicals acquired the Facility and by 2003, Consent Order EPD-HW-1535 was executed due to violations identified during a compliance evaluation inspection with a focus on monitoring well maintenance. Millennium Specialty Chemicals declared Chapter 11 bankruptcy in 2009 and LyondellBasell Flavors and Fragrances, LLC (LBFF) acquired the Facility. LBFF was purchased by Torquest International in late 2009 and renamed Renessenz, LLC. A Consent Decree between EPA and Renessenz LLC was executed in 2014 and required the regulatory closure of the First Wastewater Aeration Basin, the First Flush Basin, the Process Wet Well, and associated underground lines. Furthermore, groundwater is contaminated with perchloroethylene (PCE), used in Area 5 as a catalyst poison in Reactor 501, and the undesirable by-products discussed in 2.2.1 above. In 2015, Torquest International sold Renessenz to Symrise, Inc. and during this time, Torquest International created Blue Jay, Inc. as a separate entity to address environmental issues such as managing the post-closure and remediation activities from the Consent Decree and the PCE source in Area 5. The EPA Consent Decree will terminate upon the issuance of an EPD RCRA hazardous waste facility permit. A copy of the two EPD Consent Orders and the Consent Decree can be found in **Attachment B**.

4.0 ENVIRONMENTAL SETTING

4.1 Glynn County

Glynn County has a population of approximately 85,292 as of 2019, covers approximately 422 square miles and is located on the State of Georgia's southeastern coast. Glynn County includes the City of Brunswick, Jekyll Island, St. Simons Island, Little St. Simons Island, Sea

Island, and the unincorporated mainland between the Little Satilla River to the south and the Altamaha River to the north. Brunswick, the county seat, is the only incorporated area in Glynn County.

Glynn County is divided into four water systems and three sewer service districts: St. Simons Island, Hampton Plantation, North Mainland and South Mainland. The Turtle River serves as the borderline between the two mainland sewer districts. Sea Island and Lanier Island are served by water and sewer facilities on St. Simons Island, while Little St. Simons Island is not served by water and sewer facilities. The Glynn County Commission operates all county owned water and wastewater systems. The Glynn County water supply system comprises a water source, treatment plants, distribution and storage networks. The source(s) for Glynn County water are the Miocene and Floridian aquifers, which are aerated and chlorinated then pumped into the system.

4.2 Site Topography and Geology

The Facility's topography is relatively flat with elevations ranging from 10 to 13 feet above mean sea level. Due to the flat topography, surface runoff is controlled by drainage structures such as ditches and canals. General drainage is toward the tidal marshes to the west and south sides of the Site.

4.3 Groundwater

A collection of monitoring wells has been installed at the Symrise, Inc. to evaluate groundwater conditions. A proposed groundwater monitoring network will be evaluated in the Final RCRA post-closure care permit. Well construction details can be found in **Attachment C**.

4.4 Regional Hydrogeology and Lithology

The regional hydrogeologic units underlying the Facility consist of the surficial aquifer, the upper confining unit and the Miocene and Floridian aquifers. The surficial aquifer includes unconsolidated, fine to course grained sand and clayey silt and fine to medium grained clayey sand. The upper confining unit is the Hawthorn Formation, composed of strata between the surficial aquifer and the Upper Floridian aquifer consisting of low permeability clay and moderate permeability sand beds. The Upper Floridan aquifer is composed mainly of the Ocala Limestone and the Avon Park Formation (limestone and dolomitic limestone). An overview of the regional hydrogeology can be found in **Attachment A – Figures.**

The surficial aquifer beneath the Facility generally consists of sandy sediments in the upper part of the aquifer, which become more clayey with depth. The finer sands and stiffer clays occur below a depth of about 40 feet below ground surface (bgs). The top of the underlying confining unit is estimated to occur at about 130 feet bgs based on deeper borings advanced on Colonels Island. Historical information indicates that the upper 20 feet of sediment sequence for the surficial aquifer Facility-wide can be divided into five fairly distinct layers. First, a loose to very loose, dark-colored silty sand occurs at depths of 8 to 12 inches bgs. The second layer consists of a firm to dense, brown to dark brown, slightly silty fine sand, locally referred to as "hardpan," which occurs variably to depths of 10 to 18 inches bgs. Beneath this layer, at depths of 3 to 6 feet bgs, a loose to firm, gray brown, slightly silty fine sand occurs, followed by the fourth layer which consists of a firm to very firm, brown to gray tan, slightly silty fine sand, also locally referred to as "hardpan," occurring variably from depths between 3 to 6 feet bgs and 9 to 12 feet bgs. Beneath

this zone of brown sediment is the fifth layer, composed of loose, light gray to gray, slightly silty to clayey fine sand that occurs to depths of 21 to 27 feet bgs.

Limited lithologic data collected during closure activities presents a simpler strata for the former First Flush Basin and former Process Wet Well areas, consisting of three layers of medium sands, varying in color from the surface to 15 ft bgs., and a fine sand with silty clays from 15 to 20 ft bgs. In general, the sediment layers composing the upper 20 feet of the surficial aquifer at the Facility can be grouped into two types of lithology; a layer of firm sands extending to a depth of about 15 feet bgs, and a layer of loose fine sands extending to about 23 feet bgs. The two "hardpan" zones are weakly-cemented organic-stained layers. These zones are the result of groundwater level fluctuation through the topsoil leaching organic material into the acidic sandy soils. The upper and lower layers represent the results of two different groundwater stands in the area of the Facility. The deeper hardpan layer is believed to be the same stratum that outcrops on the South Brunswick River bluff at the north end of Colonels Island. Deeper subsurface materials underlying the Facility consist of firm to dense, gray, slightly silty to slightly clayey, fine to coarse sand with occasional thin silty clay seams occurring from depths of 20 to 40 feet bgs. From approximately 40 to 60 feet bgs, a very firm to very dense, light gray to gray slightly clayey, silty and slightly calcareous fine to coarse sand with some fine gravel occurs. The top of this layer has been observed at depths ranging from 39 to 42 feet bgs during drilling activities. A hard, light gray, slightly sandy and slightly calcareous silty clay with some fine gravel occurs from approximately 60 to 90 feet bgs. The base of the aquifer becomes more clayey with depth and the top of the upper confining unit is generally marked by clay beds. The upper 40 feet of sediment based on lithological descriptions appears to contain the most permeable material within the aquifer. Increasing clay content in the remainder of the aquifer decreases the permeability of the aquifer materials. Therefore, it is probable that near the 40-foot bgs depth, the groundwater vertical movement becomes more laterally oriented and the vertical component is significantly decreased. Recent groundwater level measurements suggest that the groundwater gradient at the Facility is relatively flat (ranging from 0.0005 foot/foot to 0.0045 foot/foot and averaging 0.0020 foot/foot in 2015). Slug tests were also completed in July 2015, resulting in a calculated hydraulic conductivity of 15.3 feet/day. Based on this hydraulic conductivity and a soil effective porosity of 30 percent, the approximate velocity of surficial aquifer groundwater flow at the Facility is about 38 feet/year.

4.5 Neighborhood Users

Only one off-site water supply well exists that belongs to Allied Universal, a chlorine solution packaging company located north/northwest of the Site. The off-site well is approximately 500-600 feet deep with a pumping rate of 2,000 gallons per day. There are no injection wells within a one-mile radius of the Site. Symrise draws process and sanitary water from on-site wells, but imports bottled water for consumption.

4.6 Climate and Meteorology

Glynn County climate is classified as subtropical with high humidity. High temperatures are in the summer months and moderate temperatures in the winter. Average December temperature is approximately 75° F and the average July temperature is about 90° F and the average annual rainfall is 49 to 54 inches.

5.0 WASTE MANAGEMENT UNITS and AREAS OF CONCERN

5.1 Introduction – Regulatory Overview

The Consent Decree (**Attachment B**) required the closure of the Former Waste Water Treatment System that consisted of the Aeration Basin, the former First Flush Basin, the former Process Wet Well, and auxiliary equipment, which includes the associated former underground wastewater lines. Closure activities included removal of residual liquids and solids, pressure washing to remove residual waste, inspection of the concrete integrity, evaluation of the former Process Wet Well, former First Flush Basin and the Aeration Basin, collecting rinsate samples and confirming the cleanliness of the basins and affected process lines, and sampling of the adjacent soils and groundwater. Prior to the issuance of the Consent Decree, the Facility initiated design of an upgraded Wastewater Treatment System in preparation for closure of the Process Wet Well and First Flush Basin. Since the completion of closure activities, groundwater monitoring, additional delineation efforts, and a pilot groundwater injection test around the former First Flush Basin and former Process Wet Well area have ensued. Currently, only the Aeration Basin has achieved clean closure and the remaining hazardous waste management units will be addressed in a RCRA post-closure care permit. In addition, the Consent Decree requires the post-closure care permit application to also address facility-wide corrective action.

Since 1993, the Facility has been subject to Consent Order HW-1046, which covers the area downgradient from the former tetrachloroethylene (PCE) drum storage area and the Area 5 process, due to the occurrence of chlorinated solvents in groundwater. Under the Consent Order, all underground wastewater lines at the Site were investigated, and over 1,100 gallons of light non-aqueous phase liquid (LNAPL) were removed from the groundwater along the wastewater lines between 1993 and 2002. Furthermore, EPD-HW-1535 was issued in 2003 and focuses on monitoring well maintenance.

5.2 Aeration Basin

The Aeration Basin was a 100-foot by 250-foot concrete-lined impoundment used for biological treatment of wastewater. Closure of the Aeration Basin began on December 29, 2014, with pumping of the remaining free liquids and biological solids from the Aeration Basin. The Aeration Basin was cleaned with a pressure washer to remove residual adhering solids. High solids rinse waters were shipped off site for disposal. Low solids rinse waters were treated through carbon filtration and discharged under the Facility's storm water construction permit or pumped to the plant's spray field system. A sample of the water utilized as rinsate water was collected and analyzed. Non-hazardous free liquids remaining in the Aeration Basin were shipped off-site for wastewater treatment or solidification. A total of 425,000 gallons of wastewater were shipped off-site for disposal.

As detailed in the Final Closure Report, the Aeration Basin's associated equipment was also cleaned using a pressure washer to remove residual adhering solids. This wash water and suspended solids was transferred to a temporary holding tank for characterization, followed by transportation and disposal. Nonhazardous residual waters or rinse waters were treated on site in the new Wastewater Treatment Plant, ancillary equipment was recycled as scrap and underground lines associated with the Aeration Basin were excavated and removed. Once the Aeration Basin was cleaned, two temporary groundwater wells were installed in the bottom of the basin.

Characterization sampling of the groundwater was conducted and prior to demolition the Aeration Basin was also visually inspected by a Licensed Professional Engineer.

Conclusions noted in the Final Closure Report for the Aeration Basin are as follows; there were no exceedances of USEPA screening levels detected in any of the samples collected at the Aeration Basin. The rinsate samples collected at the conclusion of the Aeration Basin removal and cleaning activity did not have any exceedances of USEPA Tap water Screening Levels or pH. The Aeration Basin has met the requirements for clean closure, and no further action is required.

5.3 Former First Flush Basin and Process Wet Well

The former First Flush Basin was a concrete structure designed for the purpose of handling wastewater at the Facility. The former First Flush Basin was approximately 35 ft. x 24 ft. and 6.5 feet in depth. The basin was made of concrete approximately 1 ft. thick and had two influent and two effluent lines. The basin was an in-ground formed concrete structure designed to accumulate wastewater from the underground wastewater lines prior to the transfer via overhead lines to the Equalization Tank and Aeration Basin. The former First Flush Basin received process wastewater and storm water from several process areas at the plant that included trench drains, pump pads, and truck loading and unloading areas. The basin provided capacity for storage of approximately one inch of storm water from the plant trenches and containment areas. Additionally, the former First Flush Basin was outfitted with an oil-phase capture weir, which provided for continuous removal of product oils and returning them to the process. Process wastewater and storm water was pumped through an overhead line to the wastewater equalization tank from the former First Flush Basin.

Facility reports suggest that there is no potential for ongoing releases from the former First Flush Basin. During closure activities, the fiberglass cover and other associated equipment were removed from the basin, cleaned, and disposed of off-site. Following a thorough pressure cleaning of the concrete floor and walls, the basin was filled in with stone and capped with concrete. Furthermore, although cracks were identified in the former First Flush Basin and groundwater was seeping through one crack from outside the basin, groundwater seepage was not observed from ten narrow vertical cracks and the former First Flush Basin has been filled in with stone and capped with concrete. Despite the fact that the seal between the clay wastewater inlet line and the former First Flush Basin had deteriorated, the wastewater lines have been removed from service, as described in 5.4 following.

The former Process Wet Well was an in-ground formed concrete structure designed for the purpose of handling wastewater from the underground wastewater lines prior to the transfer via overhead lines to the Equalization Tank and Aeration Basin. The former Process Wet Well was approximately 14 ft. x 11.5 ft. and 11 ft. in depth, was made of concrete approximately 1 ft. thick, and had four influent lines and two effluent lines. During closure activities, the concrete cover and associated equipment were removed from the well, cleaned, and disposed off-site. Following a thorough pressure cleaning of the concrete floor and walls, the wet well was filled in with concrete. The former Process Wet Well collected wastewater streams that were separated from product in various process units and the wastewater streams did not typically contain solids. The process wastewater was pumped via overhead line to the Wastewater Equalization Tanks. Facility reports suggest that there is no potential for ongoing releases from the former Process Wet Well. Vertical cracks were noted at the midpoint of both long walls of the former Process Wet Well but

were not believed to be leak points. The former Process Wet Well has been filled in with a concrete mix.

Residual solids from the former Process Wet Well were transferred by vac truck into the former First Flush Basin. Solids from the associated Process Wet Well and First Flush Basin sumps were also transferred into the First Flush Basin. The solids were then loaded by backhoe into lined, covered roll-off boxes. The resulting solidified mixture was characterized as non-hazardous by TCLP but designated as ignitable (D001) based on the characterization of the unsolidified sludge. The solidified mixture, approximately 200 cubic yards, was shipped off site for disposal by incineration.

The Final Closure Report for the former First Flush Basin and Process Wet Well concluded the following: 1,2-Dibromo-3-chloropropane was detected above USEPA residential soil screening levels in sample SB-16 (0.26 mg/kg). Benzene in groundwater was detected above the USEPA Tapwater Screening Level in MW-9 (560 µg/L), MW-21 (130 µg/L), MW-27 (7.6 µg/L), MW-31 (5.4 µg/L), MW-34 (960 µg/L), MW-34B (11 µg/L), MW-34C (10 µg/L), MW-38 (900 µg/L), MW-38B (34 µg/L), MW-38C (100 µg/L), MW-39 (89 µg/L), MW-44 (81 µg/L), MW-46 (19 µg/L), MW-47(1,100 µg/L), MW-47B (720 µg/L), MW-47C (130 µg/L), MW-49 (170 µg/L), MW-51 (100 µg/L), and MW-53 (17 µg/L). Risk results were within the acceptable risk range for the commercial/industrial worker and there are no risks to ecological receptors. Specifically, the risk assessment indicates that the Former First Flush Basin and Former Process Wet Well meet the 10^{-4} USEPA risk level, but do not meet the State preferred 10^{-5} risk level. These two units have been designated as requiring permitting.

5.4 Auxiliary Equipment and Former Underground Wastewater Lines/Process Lines

Wastewater was transported to the former First Flush Basin and former Process Wet Well through a sequence of underground wastewater lines. These lines were constructed of vitrified clay with cemented joints. Cracks and breaches were observed in the underground wastewater lines during the closure process. Both spiral and horizontal cracking was noticed along the underground pipelines but no visual evidence of leaking at these locations was detected. Influent and effluent lines to/from the former Process Wet Well and former First Flush Basin were flushed by hydro-blasting and vacuuming to the former First Flush Basin. Low solids rinse waters were transferred to wastewater treatment. Higher solids mixtures were solidified for off-site disposal and placed into a lined, covered roll-off box. Solidified materials from the first round of cleaning were disposed of as D001 waste. When the influent/effluent line rinsate sample was determined to be clean, the remaining underground lines were sealed. Non-hazardous residual waters or rinse waters were treated on site in the new Wastewater Treatment Plant. Ancillary equipment was recycled as scrap. A sample of the water utilized as rinsate water was collected and analyzed to ensure that it did not cross contaminate the final rinsate samples.

Soil samples were collected during the closure process at the locations of line breaches, and there were no detections above screening levels from these samples. Most of the former underground wastewater lines are unavailable to soil sampling due to the fact that they are within active operations areas and may be beneath active above-ground process line pipe racks and/or closely bordered by storage and process area containment structures. Prior to the closure of the basins, all underground wastewater lines were flushed, and process area drains were sealed with concrete grout. After completion of cleanout of the Process Wet Well and First Flush Basin, the underground lines were cleaned using a water jet and vac truck and steam. To date, each

underground line has been cleaned and all entry, exit, or cleanout points have been grouted and sealed.

5.5 Former PCE Drum Area

The Former PCE Drum Area will be designated as an "Area of Concern". As defined in the Consent Decree, an "Area of Concern" describes a geographic area that has experienced a probable release of a hazardous waste, hazardous constituent, or hazardous waste constituent and that, while not from a Solid Waste Management Unit, has nevertheless been determined to pose a current or potential threat to human health or the environment. The Former PCE Drum Area is located within Area 5 of the plant. Hydrogenation of alpha-pinene, the first of thirteen major steps to produce geraniol, is conducted in Area 5. In the process, alpha-pinene is reacted with high pressure hydrogen in the presence of a metal catalyst to produce cis-pinane. Other by-products, such as trans-pinane, can also be produced during this reaction. The desired ratio of cis-pinane to other byproducts is controlled by catalyst selectivity. Since the 1990s, PCE has been used to enhance the catalyst selectivity. A small amount of PCE, typically 0.1 to 1 gallon, is added to the reactor as needed by drawing it from a one-gallon container into the circulation sample port. Prior to 2010, the PCE drum was stored on an open metal drum dolly. In 2010, the dolly was replaced with a plastic containment dolly. Operators would pour PCE from the drum into a one-gallon transfer container as needed. Due to the infrequent usage of PCE and to reduce the potential for leaks or spills during transfer, the plant discontinued handling PCE in drums in May 2017 and now purchases PCE in individual one-gallon containers.

Facility reports suggest that there have been no documented releases or spills of PCE at the Facility. However, as corrosion in the concrete in the PCE drum area was observed by Facility personnel in October 2015, it is possible that small amounts of PCE were released during historical materials handling practices. As a result, soil samples were collected beneath the concrete slab in the PCE drum storage area at one-foot intervals from the bottom of the slab to the top of the water table. Soils from each interval were screened with a photoionization detector (PID), and the interval with the highest PID reading was analyzed for VOCs. The sample collected from the first foot below the slab contained PCE at a concentration of 26 mg/kg, and PCE was the only VOC detected in the samples. This is located within the active operations of Area 5 and the subsurface soils are not accessible.

5.6 Former Blowdown Area for Cooling Towers and Vicinity of the Boiler Area

Potential SWMUs at the Site include areas near the vicinity of the cooling towers and the vicinity of the boiler area. Two cooling towers are located east of Area 5, and north of the surface water ditch. These units were not serviced by any of the former underground wastewater lines. Historically, blow down water from the cooling towers may have discharged to the drainage ditch; currently blow down water is piped by means of above-ground lines to a sump at the Power House in the northern portion of the plant. Water from the Power House is pumped to a pond behind the Power House before being discharged to the surface water ditch. The location and condition of any former piping that may have discharged directly to the ditch is currently unknown. In May 2016, chloroform was detected in one groundwater sample collected south of the cooling towers in the 16-20 ft bgs interval. The concentration was confirmed in June 2017, with additional borings conducted to confirm the chloroform is isolated to a small area. In July 2018, a permanent monitoring well was installed to monitor chloroform levels over time.

Chloroform was never used in any of the plant processes according to Facility reports, there have been no documented releases or spills of chloroform at the Facility. However, chloroform may have historically been discharged through blow down water from the cooling towers.

Two boiler units are at the Site for energy generation and new procedures are being established for the handling and clean out of these units. On rare occasions (three times in the last 20+ years) the boiler cleanouts have exhibited the D007 characteristic, hazardous for chromium content. A concrete pad is being installed near the boiler #2 cleanout area and recent excavated soil that has been characterized showed "non-detect" for hexavalent chromium. This area will be classified as a "Potential SWMU requiring No Further Action" and data that support this characterization will need to be incorporated into the permit application.

5.7 The Current and Former Sprayfields

The Former Sprayfield has an approximate area of 15 acres and was taken out of service in 1992. The Current Sprayfield has an approximate area of 20 acres. **Attachment D** includes the 1992 sampling results of the Former Sprayfield, which has been analyzed for nickel. Furthermore, a total of eight soil samples have been analyzed for nickel, at 6-inch depth intervals (0-6, 6-12, etc.) to a final depth of 3 feet. The Former and Current Sprayfields will be designated as "SWMU requiring No Further Action" and historical and current data from the monitoring of groundwater wells in this area will need to be incorporated in the post-closure care permit to address any data gaps.

6.0 IMPOSITION OF RFI

6.1 Summary of Investigations

Groundwater is impacted with Volatile Organic Compounds and benzene is the primary constituent of concern in the former First Flush Basin, former Process Wet Well, and associated auxiliary equipment (underground wastewater lines) area. Groundwater has been monitored at the Facility since 2005 following the completion of the LNAPL recovery program, as required by the 1993 Consent Order. Benzene is present in shallow groundwater in the central portion of the Facility, adjacent to the former First Flush Basin and Area 6/12 process. Monitoring wells surrounding the former Process Wet Well indicate the wet well was not a source of benzene in groundwater. The extent of benzene in groundwater covers approximately 0.5 acre and is over 700 feet from the nearest Facility boundary.

Benzene has never been used at the Facility; however, it is a by-product of the pyrolysis of pinane as part of the dihydromyrcene process. Based on previous investigations and available data, the source of benzene in groundwater is the former First Flush Basin and associated underground piping. During the closure process, cracks were identified in the former First Flush Basin and at several locations along the former underground wastewater lines. In addition to benzene, several other minor groundwater constituents have been detected in the wells around the Area 6/12 process. These constituents include 2-hexanone, cumene, xylenes, methyl ethyl ketone, methyl isobutyl ketone, and toluene. These constituents are also by-products of the pyrolysis process. As these constituents are all co-located with benzene and are all VOCs, the corrective action proposed for benzene will also address these constituents.

Chlorinated solvents, including PCE, trichloroethylene (TCE), cis-1,2-dichloroethylene (cis,1,2- DCE) and vinyl chloride (VC) are present above their respective MCLs south of the Former PCE drum area, with cis-1,2-DCE being the primary COC in the area. Tetrachloroethylene (PCE) has only been used in the Area 5 process area of the Site. Since the 1990s, PCE has been used as needed to enhance the catalyst selectivity of the process. In October 2015, PCE was detected in a soil sample collected beneath the PCE Drum Storage Area slab at a concentration of 26 mg/kg, and PCE was the only VOC detected in the sample. The chlorinated solvents, primarily cis-1,2-dichloroethylene, detected in groundwater within the AOC are not currently used at the facility, nor have they been previously used. Thus, it is likely these compounds are present due to the reductive de-chlorination of PCE.

Chloroform has never been used in the Facility processes. Chloroform has only been detected at the Site south of the cooling towers adjacent to Area 5 and is confined to an isolated pocket approximately 16-20 feet below ground surface.

Approximately 1,100 gallons of light non-aqueous phase liquid (LNAPL) were discovered in Area 5 in 1992. During this time, an initial soil and groundwater investigation and monitoring wells MW-1 to MW-4 were installed. Furthermore, during well installation, soil samples were screened in the field for total organic vapors (TOV) and the TOV readings indicated that subsurface soils within Area 5 may be impacted. Groundwater from all four monitoring wells was sampled. No VOCs were detected in groundwater except for acetone, 2-butanone, and carbon disulfide, none of which have Maximum Contaminant Levels. Terpene-related compounds were also detected in the groundwater samples. The LNAPL collected was determined to be 96 percent cis-pinane and trans-pinane, and four percent terpene-related compounds. Former underground wastewater sewer lines in Area 5 have been identified as the potential source of the LNAPL which have then been replaced with concrete surface trenches in late 1992.

An RFI is not recommended at this time. Available data indicate that identified SWMUs and AOCs have been sufficiently characterized to make remedial decisions. A summary of the status of identified SWMUs/AOCs at the Facility follows:

SWMUS that are regulated units under 40 CFR 264.90

- Former First Flush Basin
- Former Process Wet Well

SWMUs/AOCs requiring Corrective Action under 40 CFR 264.101

- Former Underground Wastewater Lines
- PCE Drum Area

SWMUs/AOCs requiring No Further Action

- Former Aeration Basin
- Current and Former Spray Fields
- Cooling Tower Area
- Boiler Cleanout Area

Discussions with Symrise representatives have resulted in an agreement to utilize the flexibility under 40 CFR 264.95 to provide a unitary Point of Compliance for adjacent regulated units. Discussions are ongoing as to whether this will take the form of two points of compliance, the Main Production Area and Area 5, or a single point of compliance at Area 5 covering the upgradient Main Production Area. In either case, the Former Underground Wastewater Lines and any contamination from them will not need to be addressed separately from the regulated unit and PCE Drum Area contamination requiring remediation.

7.0 SCHEDULE

A schedule for submission of the RFI work plan and RFI report is not recommended as new and additional releases were not observed during the March 2020 RFA inspection, and current contamination at the Facility has been adequately characterized.

8.0 REFERENCES

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New Fields, 2018. Figure 2-1. Site Location – Colonels Island Brunswick, Georgia (09/19/2018). Adapted from Draft RCRA Post-Closure Correction Action Plan.

New Fields, 2018. Figure 2-2. Site Map – Colonels Island Brunswick, Georgia (09/19/2018). Adapted from Draft RCRA Post-Closure Correction Action Plan.

New Fields, 2018. Figure 2-3. Site Boundary and Vicinity – Colonels Island Brunswick, Georgia (09/19/2018). Adapted from Draft RCRA Post-Closure Correction Action Plan.

New Fields, 2018. Figure 5-1. General Hydrogeologic Cross-Section for Brunswick, Georgia – Colonels Island Brunswick, Georgia (09/20/2018). Adapted from Draft RCRA Post-Closure Correction Action Plan.

New Fields, 2018. Figure 5-2. Site Topographic Map – Colonels Island Brunswick, Georgia (09/19/2017). Adapted from Draft RCRA Post-Closure Correction Action Plan.

U.S. Environmental Protection Agency. 1986. RCRA Facility Assessment Guidance. Permits and State Programs Division. Office of Solid Waste, October 1986.

U.S. Environmental Protection Agency. 2010. SUBJ: RCRA Compliance Evaluation Inspection (August 19 and September 8, 2008). August 12, 2010.

ATTACHMENTS:

- Attachment A – Six FIGURES (Facility Location, Facility Map, Facility Boundary & Vicinity, General Hydrologic Cross Section for Brunswick, GA Facility Topographic Map, and Process Wastewater Lines).
- Attachment B – Consent Decree, Consent Order 1535 and Consent Order 1046
- Attachment C – Well Construction Details and Groundwater Elevations
- Attachment D – Sprayfields Sample Report & Sample Location
- Attachment D – PHOTOGRAPH Log (March 2020 RFA)

FILE:
Symrise Inc.

REVIEWED BY: Jim McNamara Digitally signed by Jim McNamara Date: 2020.06.18 13:31:50 -04'00'

Jim McNamara
Unit Coordinator
Remedial Sites Unit 1

ATTACHMENT A

Legend

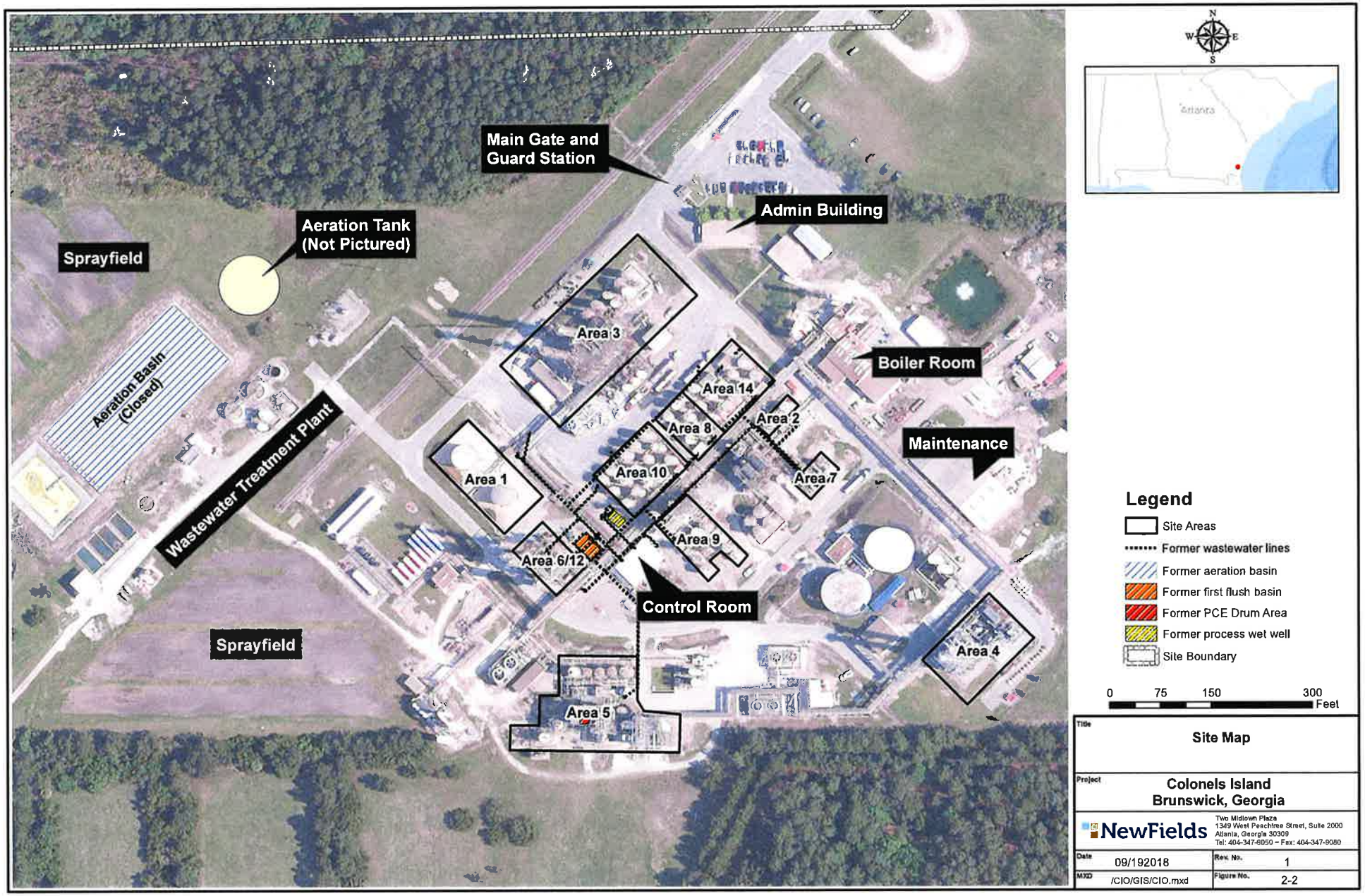
Site Boundary

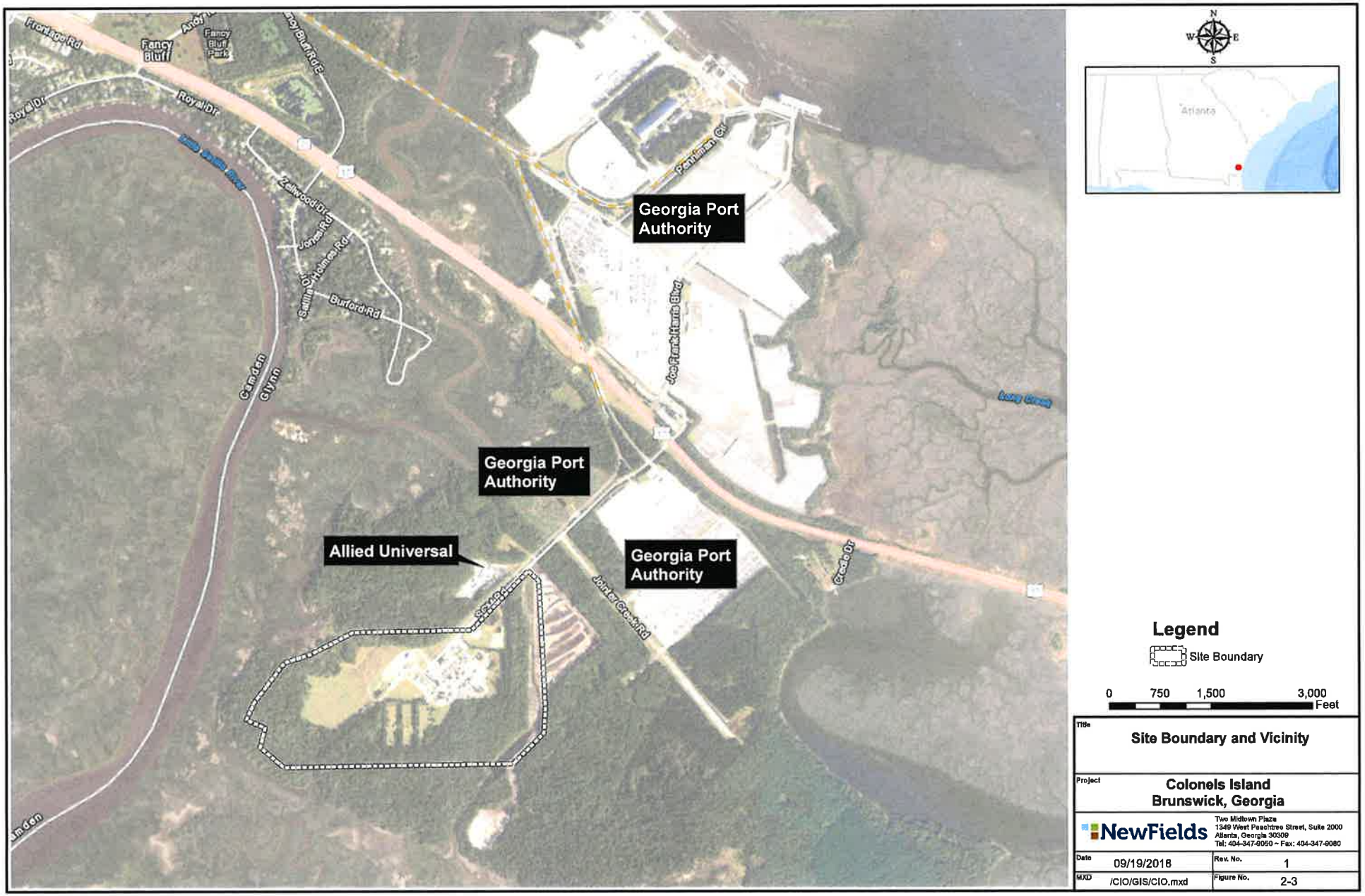
0 0.5 1 2 Miles

Title	**Site Location**
Project	**Colonels Island** **Brunswick, Georgia**

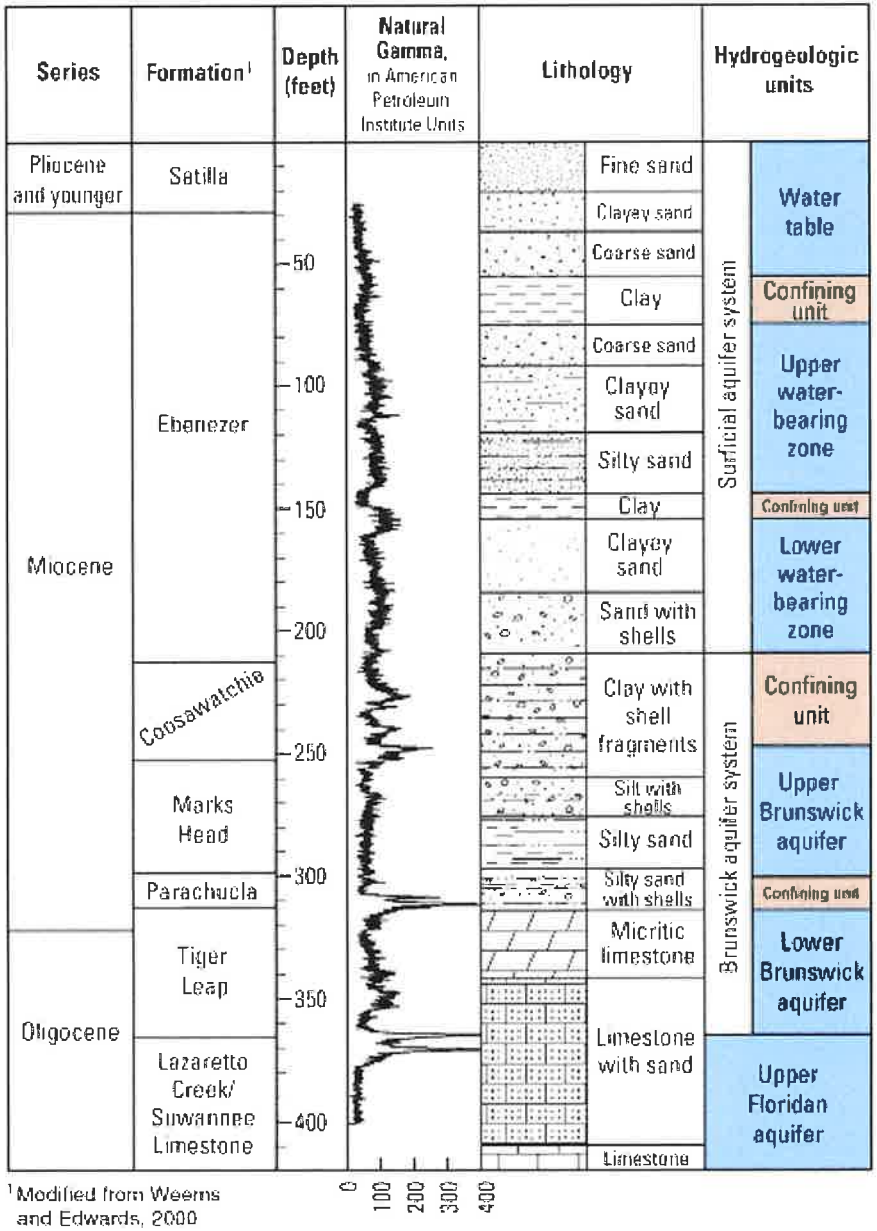
NewFields
Two Midtown Plaza
1349 West Peachtree Street, Suite 2000
Atlanta, Georgia 30309
Tel: 404-347-9050 – Fax: 404-347-9080

Date	09/19/2018	Rev. No.	1
MXD	/CIO/GIS/CIO.mxd	Figure No.	2-1


Main Gate and Guard Station
Admin Building
Aeration Tank (Not Pictured)
Sprayfield
Area 3
Boiler Room
Aeration Basin (Closed)
Area 14
Area 2
Area 8
Maintenance
Wastewater Treatment Plant
Area 1
Area 10
Area 7
Area 9
Area 6/12
Control Room
Sprayfield
Area 4
Area 5
N
W
E
S
Atlanta
Legend
Site Areas
Former wastewater lines
Former aeration basin
Former first flush basin
Former PCE Drum Area
Former process wet well
Site Boundary
0
75
150
300
Feet
Title
Site Map
Project
Colonels Island
Brunswick, Georgia
NewFields
Two Midtown Plaza
1349 West Peachtree Street, Suite 2000
Atlanta, Georgia 30309
Tel: 404-347-6050 – Fax: 404-347-6080
Date
09/192018
Rev. No.
1
MXD
/CIO/GIS/CIO.mxd
Figure No.
2-2



Title	Site Boundary and Vicinity
Project	Colonels Island Brunswick, Georgia
NewFields	Two Midtown Plaza 1349 West Peachtree Street, Suite 2000 Atlanta, Georgia 30309 Tel: 404-347-9050 ~ Fax: 404-347-9080
Date: 09/19/2018	Rev. No.: 1
MXD: /CIO/GIS/CIO.mxd	Figure No.: 2-3



[1] Modified from Weems and Edwards, 2000

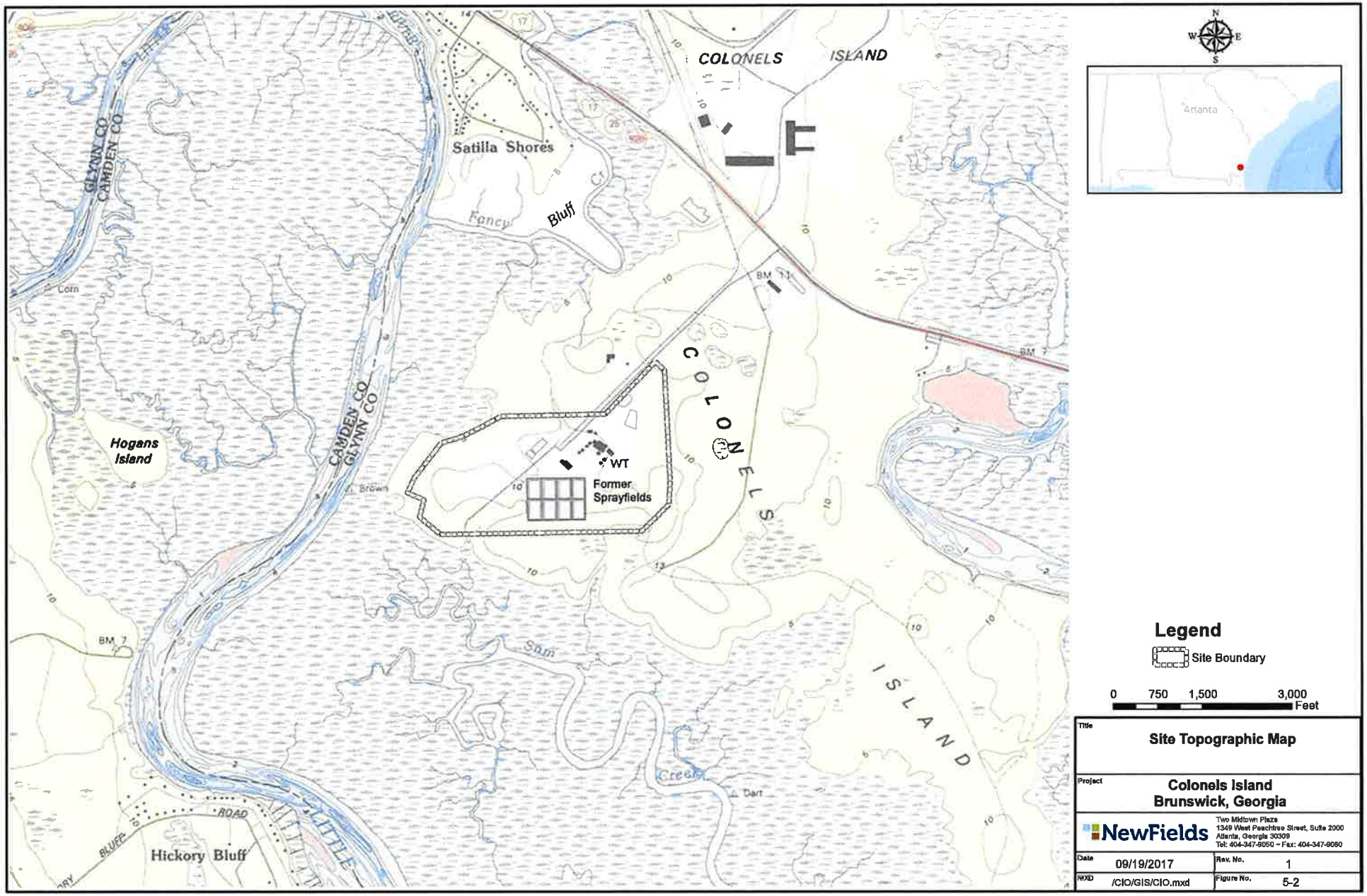
Figure from Leeth, D.C. et al, 2005

Title: General Hydrogeologic Cross-section for Brunswick, GA

Project: Colonels Island
Brunswick, Georgia

NewFields
Two Midtown Plaza
1349 West Peachtree Street, Suite 2000
Atlanta, Georgia 30309
Tel: 404-347-9050 - Fax: 404-347-9080

Date	Rev. No.
09/20/2018	1
MXD /CIO/GIS/CIO.mxd	Figure No. 5-1



Legend

Site Boundary

0 750 1,500 3,000 Feet

Title	**Site Topographic Map**
Project	**Colonels Island** **Brunswick, Georgia**
NewFields	Two Midtown Plaza 1349 West Peachtree Street, Suite 2000 Atlanta, Georgia 30309 Tel: 404-347-9050 - Fax: 404-347-9060
Date: 09/19/2017	Rev. No.: 1
MXD: /CIO/GIS/CIO.mxd	Figure No.: 5-2

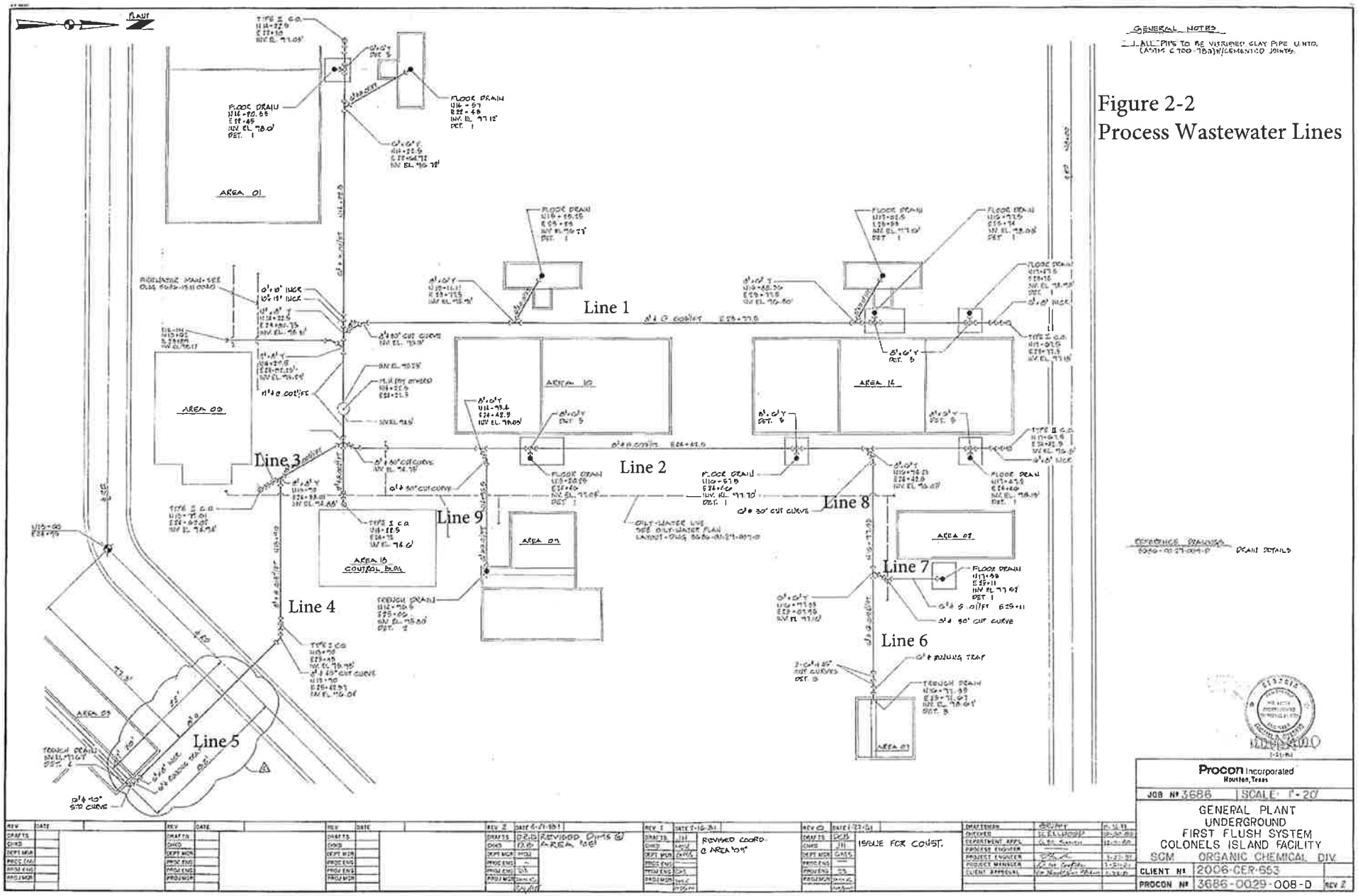


Figure 2-2
Process Wastewater Lines

ATTACHMENT B

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF GEORGIA
BRUNSWICK DIVISION

UNITED STATES OF AMERICA, and STATE OF GEORGIA, Plaintiffs, v. RENESSENZ, LLC, f/k/a LYONDELLBASELL FLAVORS & FRAGRANCES, LLC, Defendant.	)	Civil Action No. _____

CONSENT DECREE

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WHEREAS, the United States of America, on behalf of the Administrator of the United States Environmental Protection Agency ("EPA"), and the State of Georgia, on behalf of the Director of the Environmental Protection Division of the Georgia Department of Natural Resources, filed their Complaint asserting claims against Renessenz, LLC, f/k/a LyondellBasell Flavors & Fragrances, LLC pursuant to the Resource Conservation and Recovery Act, as amended ("RCRA"), 42 U.S.C. §§ 6901 et seq., 42 U.S.C. § 6928(a), including but not limited to 42 U.S.C. § 6924(d), relating to the disposal of hazardous wastes restricted from land disposal, and 42 U.S.C. § 6925 relating to permitting requirements; federal regulations promulgated at 40 C.F.R. Parts 260 through 279; and the authorized hazardous waste management program of the State of Georgia relating to the generation, transportation, treatment, storage, handling and disposal of hazardous wastes as set forth in Georgia's Hazardous Waste Management Act ("HWMA"), Sections 12-8-60 to 83 of the Official Code of Georgia Annotated ("O.C.G.A.") and implementing regulations promulgated pursuant thereto as set forth in Chapter 391-3-11 of the Official Compilation of Rules and Regulations of State of Georgia, Department of Natural Resources, Hazardous Waste Management Ga. Comp. R. & Regs. r. 391-3-11.01 through 391-3-11.18.

WHEREAS, Renessenz, LLC is a limited liability company organized and existing under the laws of Delaware and licensed to do business in the State of Georgia.

WHEREAS, Renessenz, LLC is the current owner and operator of a facility located on Colonel's Island, in Glynn County, Georgia (the "Facility").

WHEREAS, Millennium Specialty Chemicals, Inc. ("Millennium") was the owner and operator of the Facility in 2008 when EPA undertook a RCRA Compliance Evaluation Inspection ("CEI") of the facility.

WHEREAS, EPA's analysis of wastewater sampled during the CEI at the First Flush Basin on the facility revealed that a sample exhibited the hazardous characteristic of ignitability (D001) and, using EPA's Toxicity Characteristic Leaching Procedure ("TCLP"), that it exceeded toxicity characteristic levels for Benzene (D018) and Methyl Ethyl Ketone ("MEK") (D035).

WHEREAS, during the CEI, wastewater from the First Flush Basin and an associated Process Wet Well flowed via primary and secondary clarifiers to an Equalization Tank from which the wastewater was then discharged to an Aeration Basin and ultimately pumped to aerators located on a twenty (20) acre spray field at the Facility.

WHEREAS, effluent from the Equalization Tank sampled during the CEI and analyzed using TCLP exceeded toxicity characteristic levels for MEK.

WHEREAS, Millennium filed for protection from creditors under Chapter 11 of the U.S. Bankruptcy Code on January 6, 2009 in the U.S. Bankruptcy Court for the Southern District of New York.

WHEREAS, upon confirmation of Millennium's Third Amended Plan of Reorganization, ownership of the Facility was transferred to LyondellBasell Flavors & Fragrances, LLC on or about April 30, 2010.

WHEREAS, in *In re: Lyondell Chemical Company, et al.*, Ch. 11 Case No. 09-10023 (S.D.N.Y. April 23, 2010), civil penalties for various alleged RCRA violations at the Brunswick facility, were resolved through the bankruptcy settlement providing the United States with an allowed general unsecured claim of $499,980.

WHEREAS, LyondellBasell Flavors & Fragrances, LLC was acquired by Pinova Holdings, Inc. in December 2010 and renamed Renessenz, LLC (hereafter "Renessenz").

WHEREAS, Renessenz has begun designing and renovating and/or upgrading the Facility's Wastewater Treatment Plant, which will involve modifying Renessenz's existing Wastewater Treatment Plant, constructing a new above-ground Aeration Tank to replace the existing Aeration Basin, and performing regulatory closure of the First Flush Basin, the Process Wet Well, and the existing Aeration Basin, for the purpose of coming into compliance with the requirements of RCRA.

WHEREAS, the parties, without the necessity of trial or adjudication of any issues of fact or law, and without any admission of liability or of any factual or legal allegations (except as provided below), consent to entry of this Consent Decree resolving all issues in this action, including all claims for civil penalties and injunctive relief for the violations alleged in the Complaint; and

WHEREAS, the parties agree, and the Court finds that this Consent Decree has been negotiated by the parties in good faith, that the implementation of this Consent Decree will avoid prolonged and complicated litigation, and that the Consent Decree is fair, reasonable and in the public interest.

NOW, THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED AS FOLLOWS:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331, 1345, 1355 and 1367, and Section 3008(a) of RCRA, 42 U.S.C. § 6928(a). This Court has supplemental jurisdiction over the State law claims asserted by the State of Georgia pursuant to 28 U.S.C. § 1367. Venue is proper in this judicial district pursuant to 28 U.S.C.

§ 1391(b) and (c), 42 U.S.C. § 6928(a), 9613(b), and 7413(b). The Complaint states claims upon which the Court can grant relief.

2. Solely for the purposes of this Consent Decree and the underlying Complaint, Renessenz waives all objections and defenses that it may have to the jurisdiction of the Court or to venue in this District. The parties shall not challenge the terms of this Consent Decree or this Court's jurisdiction to enter and enforce this Consent Decree.

II. PARTIES BOUND AND NOTICE OF TRANSFER

3. This Consent Decree shall apply to and be binding upon the United States, the State, including the Environmental Protection Division of the Georgia Department of Natural Resources ("GAEPD"), and upon Renessenz and Renessenz's officers, agents, successors, assigns and all other persons acting on Renessenz's behalf or in active concert with Renessenz with regard to the Facility.

4. Each party certifies that the undersigned representatives are fully authorized by that party to enter into the terms and conditions of this Consent Decree, to execute it on behalf of that party, and to legally bind the party.

5. Unless otherwise agreed to by GAEPD and EPA, no change in ownership, corporate, or partnership status relating to the Facility, or conveyance of title, easement, or other interest in the Facility, including but not limited to any lease or transfer of assets or real or personal property, will alter Renessenz's obligation to comply with the requirements of this Consent Decree or Renessenz's liability for compliance by any successor or assign of Renessenz, in the event such successor or assign fails to perform obligations required by the Consent Decree.

a) In the event that any such conveyance or lease of Renessenz property will entail the usage by another person of Renessenz's First Flush Basin, the Process Wet Well, or the

existing Aeration Basin: (1) Renessenz shall, in the conveyance document, reserve the right to monitor compliance by that person and require that such person establish and maintain legally required waste characterization and environmental management programs with respect to the acquired property; (2) Renessenz shall remain liable for such person's compliance with this Consent Decree in the event that such person fails to comply; and (3) Renessenz shall remain liable to GAEPD and EPA for any stipulated penalties that may accrue due to any non-compliance by that person or failure of that person to pay stipulated penalties.

b) For such period of time as this Consent Decree is in force, any deed, title, or other instrument of conveyance utilized by Renessenz with respect to the Facility shall contain a notice that the Facility is the subject of this Consent Decree, setting forth the case caption and civil action number, and the Court having jurisdiction.

6. Renessenz shall notify GAEPD and EPA in the manner contemplated in Ga. Comp. R. & Regs. r 391-3-11-.11(8)(a) [40 C.F.R. § 270.40][1] for transfers of permits prior to a change in the operational or ownership status of any portion of the Facility, including but not limited to the conveyance of title, easement, leasehold or other interest. This notice shall also include a description of both the current and expected future activities (to the extent known by Renessenz) on that portion of the Facility to be conveyed, leased or otherwise alienated. Renessenz shall also provide a copy of this Consent Decree to the grantee prior to any such conveyance. Nothing in this paragraph shall be construed as giving EPA or GAEPD the power to approve, veto or halt any change referred to in this paragraph. Nothing in this paragraph shall

[1] The State of Georgia's authorized hazardous waste program operates in lieu of the federal RCRA program. Bracketed citations to the federal regulation that may follow citations to the State of Georgia's authorized program have been included solely for ease of reference.

be construed as affecting other provisions of law, if any, which may provide EPA or GAEPD the power to approve, veto or halt any change referred to in this paragraph.

7. At least ten (10) days prior to the commencement of any Work (other than work commenced or completed on the date of entry of this Consent Decree), Renessenz shall provide to each contractor hired to perform or monitor any of the Work required by this Consent Decree or its Attachments, a copy of all sections of this Consent Decree or Attachments relevant to the contractor's employment, and shall condition all contracts entered into hereunder upon performance of the Work in conformity with the terms of this Consent Decree and its Attachments. Renessenz or its contractors shall provide written notice of the Consent Decree to all subcontractors hired to perform any portion of the Work required by this Consent Decree.

8. Notwithstanding any retention of contractors, subcontractors or agents to perform or monitor any Work required under this Consent Decree, Renessenz shall be responsible for ensuring that all Work is performed in accordance with the requirements of this Consent Decree. In any action to enforce this Consent Decree or obtain stipulated penalties hereunder, Renessenz shall not assert as a defense the failure of its employees, servants, agents, contractors or subcontractors to take actions necessary to comply with this Consent Decree, unless Renessenz establishes, pursuant to the procedures set forth in Section XII (*Dispute Resolution*) below, that such failure resulted from a "force majeure" event as defined in Section XIV (*Force Majeure*) of this Consent Decree.

III. DEFINITIONS

9. Unless otherwise expressly stated, the terms used in this Consent Decree that are defined in the HWMA or RCRA and in regulations promulgated thereunder shall have the meaning set forth in such definitions.

10. Whenever the terms listed below are used in this Consent Decree or any Attachments hereto, the following definitions shall apply:

"*Area of Concern*" or "*AOC*" shall, for the purposes of this Consent Decree, include but not be limited to any geographic area that has experienced a probable release of a hazardous waste, hazardous constituent, or hazardous waste constituent and that, while not from a Solid Waste Management Unit, has nevertheless been determined to pose a current or potential threat to human health or the environment.

"*Consent Decree*" shall mean this Consent Decree and all attachments and exhibits hereto, if any, and all modifications.

"*Corrective Action*" shall mean any measure necessary, including assessment, to protect human health or the environment as contemplated under Section 3004(u) or Section 3004(v) of RCRA, 42 U.S.C. § 6924(u) and (v), and 40 C.F.R. §§ 264.100 – 101 and as required under the HWMA, § 12-8-60, et seq., and its analogous implementing regulations .

"*Day*" shall mean a calendar day unless expressly stated to be a working day. "*Working day*" shall mean a day other than a Saturday, Sunday or federal holiday. In computing any period of time prescribed or allowed under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business the next working day.

"*Defendant*" shall mean Renessenz, LLC, f/k/a LyondellBasell Flavors & Fragrances, LLC.

"*Effective Date of this Consent Decree*" shall be the date it is entered by the Court.

"*EPA*" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

"*Facility*" shall mean the facility owned or operated by Renessenz at 209 SCM Road, Brunswick, Glynn County, Georgia and all contiguous property under the control of the owner or operator.

"*GAEPD*" shall mean the Environmental Protection Division of the Georgia Department of Natural Resources and any successor environmental departments or agencies of the State of Georgia.

"*HWMA*" shall mean Georgia's Hazardous Waste Management Act, Sections 12-8-60 to 83 of the Official Code of Georgia Annotated ("O.C.G.A.").

"*Hazardous Waste Management Unit*" or "*HWMU*" shall include but not be limited to the First Flush Basin, the Process Wet Well, the Aeration Basin, and associated ancillary equipment.

"*Parties*" shall mean the United States of America, the State of Georgia, and Renessenz.

"*Plaintiffs*" shall mean the United States of America, its agencies and departments, including the Environmental Protection Agency, and the State of Georgia, including the Environmental Protection Division of the Georgia Department of Natural Resources.

"*RCRA*" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901 et seq. (also known as the Resource Conservation and Recovery Act).

"*Solid Waste Management Unit*" or "*SWMU*" for the purposes of this Consent Decree includes, but is not limited to, any landfill, surface impoundment, waste pile, land treatment unit, incinerator, injection well, tank (including storage, treatment, and accumulation tanks), container storage unit, wastewater treatment unit, including all conveyances and appurtenances used in waste management or storm water handling, elementary neutralization unit, transfer station, or recycling unit from which hazardous waste or hazardous constituents might migrate, irrespective of whether the units were intended for the management of solid and/or hazardous waste.

"State" shall mean the State of Georgia.

"United States" shall mean the United States of America, on behalf of its agencies and departments, including the United States Environmental Protection Agency.

"Work" shall mean all activities Renessenz is required to perform under Section VI (*Work To Be Performed*) of this Consent Decree to complete regulatory closure of the First Flush Basin, the Process Wet Well, and the existing Aeration Basin.

IV. OBJECTIVES

11. The purposes of the United States, the State and Renessenz in entering into this Consent Decree are:

a) to resolve all pending RCRA claims according to the terms and subject to the reservations set forth herein, without admission of fact or liability or the necessity of further litigation;

b) to assure that Renessenz operates the Facility in compliance with applicable requirements of RCRA, corresponding state laws, and applicable implementing regulations under the foregoing statutes;

c) to protect human health and the environment from risks arising from any releases or threatened releases of hazardous waste or hazardous constituents at or from the existing Wastewater Treatment Plant (*"WWTP"*) located at the Facility by Renessenz's installation of a new WWTP and its regulatory closure of the existing WWTP in accordance with applicable law and in conformance with corrective action standards established in accordance with the HWMA, O.C.G.A. §12-8-60 et seq., the Georgia Hazardous Site Response Act O.C.G.A. § 12-8-90 et seq., and Chapter 391-3-11 of the Georgia Rules for Hazardous Waste Management, and the Georgia Environmental

Protection Division Guidance for Selecting Media Remediation Levels at RCRA Solid Waste Management Units.

V. GENERAL PROVISIONS

12. Compliance With Applicable Law: All activities undertaken by Renessenz pursuant to this Consent Decree shall be performed in accordance with all applicable federal, state and local laws and regulations, or permits, including, without limitation, federal or state laws and regulations governing the generation, management, treatment, storage, transport, and disposal of hazardous waste, all Occupational Safety and Health Act regulations, and the terms and conditions of any extant permit applicable to the Facility.

13. Permits: Where any portion of the Work requires a federal, state or local permit or approval, Renessenz shall submit timely and complete applications, shall take all other actions required by law to obtain such permits or approvals, and shall use best efforts to take all other actions necessary to obtain all such permits or approvals.

14. Renessenz may seek relief under the provisions of Section XIV (*Force Majeure*) of this Consent Decree for any delay in the performance of the Work resulting from the lack of a permit required for the Work, provided that Renessenz has complied with the preceding paragraph and used due diligence to obtain such permit.

15. This Consent Decree is not, and shall not be construed to be, a permit issued pursuant to any federal, state or local statute or regulation.

VI. WORK TO BE PERFORMED

16. Upon entry of the Consent Decree, Renessenz shall operate the Facility in compliance with all applicable provisions of the hazardous waste management program for the

State of Georgia, as well as all applicable federal provisions of RCRA and regulations promulgated thereunder, and the provisions of this Consent Decree, except that Renessenz may operate the First Flush Basin, Process Wet Well, and Aeration Basin without a permit or interim status until it completes the Work. Renessenz shall complete the Work as expeditiously as reasonably possible.

17. Renessenz shall expedite completion of the design, construction, and installation of a new WWTP at the Facility in such a manner as to timely undertake the regulatory closure of the existing WWTP in compliance with the provisions of this Consent Decree. Upon completion of the Work, Renessenz shall operate the Facility in full compliance with all applicable provisions of the hazardous waste management program for the State of Georgia, as well as all applicable federal provisions of RCRA and regulations promulgated thereunder.

18. Renessenz shall perform regulatory closure of the First Flush Basin, the Process Wet Well, and the Aeration Basin in accordance with GHWMR 391-3-11.10 [Subpart G of 40 C.F.R. Part 264 and 40 C.F.R. § 264.197 and/or 40 C.F.R. § 264.228] as part of its modifications to the Facility's existing WWTP. The First Flush Basin, Process Wet Well, and Aeration Basin, will be removed from service and shall be closed as described under the terms of an approved Closure Plan..

19. Closure Plan(s): Renessenz shall prepare a draft Closure Plan(s) for the First Flush Basin, the Process Wet Well, and the Aeration Basin consistent with the standards and requirements for closure and post-closure care set out at Ga. Comp. R. & Regs. r. 391-3-11.10 [40 C.F.R. § 264.197 and/or 40 C.F.R. § 264.228], as well as all pertinent EPA and GAEPD guidance. The draft Closure Plan(s) shall include a schedule setting out closure activities, and shall reflect physical on-site closure activities beginning no later than December 31, 2014. The

draft Closure Plan(s) shall be submitted for review and approval as set forth in Section VII (*Agency Review and Approval*) within forty-five (45) days of the Effective Date of this Consent Decree. Upon approval, the Closure Plan(s) shall be incorporated into and become enforceable under this Consent Decree.

20. Closure Report(s): Within 60 days of completion of the activities contemplated in the approved Closure Plan, Renessenz shall submit a Closure Report(s) for review and approval in accordance with Section VII (*Agency Review and Approval).* In addition to documenting compliance with the approved Closure Plan(s), the Closure Report(s) shall, at a minimum, contain the following:

a) A summary of all sampling conducted by Renessenz as required by the Closure Plan, including maps drawn to scale and/or aerial GPS maps that identify all sampling locations for soil, sediment, groundwater, and surface water, as well as the analytical results for each sample taken at each sampling location;

b) An evaluation of the analytical results for each HWMU, including:

(i) A summary of concentrations found in relation to EPA Regional Screening Levels (available at http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm); and EPA ecological screening values (available at http://epa.gov/region4/waste/ots/ecolbul.htm#ecoscreen)

(ii) Identification of pollution migration pathways (soil, sediment, surface water, groundwater, air, subsurface gas) if EPA screening levels are exceeded; and

(iii) Identification of potential/actual receptors (human and ecological);

c) A certified report from a professional engineer (P.E.) licensed in the State of Georgia stating the current structural integrity of the subject HWMU (i.e., the Aeration Basin, First Flush Basin, and/or Process Wet Well); and

d) A recommendation for: No further action ("NFA"), interim measures ("IM"), post-closure care, and/or the collection of additional confirmatory sampling data to make a NFA/IM/post-closure determination based on the evaluation of the analytical results.

21. Post-Closure Obligations: In the event that EPA and/or GAEPD make a determination based on the Closure Report(s) that clean-closure has not been fully demonstrated and that post-closure care is necessary for any HWMU, pursuant to Ga. Comp. R. & Regs. r. 391-3-11-.11(1)(a), Renessenz shall submit to GAEPD a permit application for post-closure care and financial responsibility for any such unit in accordance with the closure and post-closure care requirements. In addition, if post-closure care is necessary for any HWMU, Renessenz shall include requirements for facility-wide corrective action in its permit application.

22. All Work performed by Renessenz shall be undertaken in conformance with all pertinent EPA and GAEPD guidance documents, rules, and regulations.

VII. AGENCY REVIEW AND APPROVAL

23. Renessenz shall submit all draft and final work plans, reports, and other documents for the Work to EPA and to GAEPD for review and, if required, approval, in accordance with the terms of this Consent Decree. Except for submittals associated with Renessenz's post-closure obligations, if approval is required, EPA, in consultation with GAEPD, will notify Renessenz in writing of the agency(ies') approval, disapproval or modification of such plans, reports or other documents, or any part thereof. Similarly, GAEPD, in consultation with EPA, will provide such notifications to Renessenz with respect to submittals associated with

post-closure obligations. The Parties acknowledge and agree that EPA and GAEPD retain and reserve the right to alter or amend their review and approval roles subject only to providing Renessenz with adequate written notification of any such changes. In the event of a submittal's approval, Renessenz shall commence and complete implementation of the submittal within the time schedule set forth in the submittal. In the event of disapproval, the written notice will set out the reason(s) for the disapproval and specify or reference the data, if any, upon which the agency(ies) rely. Similarly, the written notice will set out the reason(s) and reference the data, if any for modifications which the agencies conclude must be made prior to the agencies' approval of any such work plans, reports or other documents.

24. Within sixty (60) days of receipt of agency disapproval or modification of any work plan, report, or other document required to be submitted under this Consent Decree, or within such other time as provided in the notification or this Consent Decree, or as agreed to in writing by the Parties, Renessenz shall amend and submit a revised document to EPA and GAEPD. In the event Renessenz does not timely amend, revise or submit a document addressing and correcting the matters described by the agencies: (1) Renessenz shall be subject to stipulated penalties under Section XI (*Stipulated Penalties*) of this Consent Decree and (2) EPA may unilaterally modify work plans, reports or other documents related to pre-closure activities, and GAEPD may unilaterally modify work plans, reports or other documents related to closure and post-closure activities. Subject only to the procedures set out in Section XII (*Dispute Resolution*) of this Consent Decree, Renessenz shall commence implementation of any revised or modified work plan, report or other document within thirty (30) days of receipt of GAEPD or EPA's approval or unilateral modification of a work plan, report or other document, unless the specific provision governing implementation of the document provides for a longer time period,

in which case the longer time period shall govern. If it fails to implement the modified work plan, Renessenz shall be subject to stipulated penalties pursuant to Section XI (*Stipulated Penalties*) of this Consent Decree. A deficient work plan, report or other document that is re-submitted with the same or substantially similar deficiency shall be deemed to have never been submitted for purposes of calculating stipulated penalties.

25. Documents, including reports, approvals, disapprovals and other correspondence to be submitted pursuant to this Consent Decree, shall be sent to EPA's and GAEPD's Project Coordinators at their respective addresses, as set out below, or such other person that Renessenz and GAEPD or EPA hereafter agree upon in writing:

a) One copy of all documents to be submitted to EPA shall be sent to:

Larry Lamberth, Chief
South Section, RCRA & OPA Enforcement and Compliance Branch
U.S. Environmental Protection Agency - Region IV
61 Forsyth Street, SW
Atlanta, Georgia 30303
Lamberth.Larry@epa.gov
Phone: (404) 562-8590
Fax: (404) 562-8566

b) One printed copy and one copy in optical media format (e.g., CD, DVD, USB "flash" storage) of all documents to be submitted to GAEPD, (except permit applications, in which case two printed copies and one optical media format) shall be sent to:

Mike Elster, Unit Coordinator
Treatment and Storage Unit
Land Protection Branch
GA Environmental Protection Division
2 Martin Luther King Jr. Drive
Suite 1052 East
Atlanta, GA 30334
Office: (404) 656-2833
Fax: (404) 651-9425
Email: Michael.Elster@dnr.state.ga.us

c) Documents to be submitted to Renessenz should be sent to:

Nancy Mick
Director of Strategic Environmental Initiatives
Pinova Holdings
c/o Pinova, Inc.
2801 Cook Street
Brunswick, GA 31520
Office: (912) 265-3550, Ext. 3222
Fax: (912) 261-0301
Email: nwmick@pinovasolutions.com

26. All documents submitted by Renessenz to GAEPD and EPA for review and approval or modification pursuant to this Consent Decree shall be signed by a responsible agent of the Facility as defined in 40 C.F.R. § 270.11(a)(1), or his or her duly authorized representative, and shall include the following certification statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I further certify, to the best of my knowledge and belief, that this document meets the objectives and requirements of the Consent Decree entered among GAEPD, EPA and Renessenz in connection with Civil Action No._____ in the United States District Court for the Southern District of Georgia, Brunswick Division. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

VIII. SAMPLE AND DOCUMENT AVAILABILITY AND QUALITY

27. Throughout all sample collection and analysis activities, Renessenz shall comply with all GAEPD and EPA guidance or other documents pertaining to appropriate methods and procedures concerning, *inter alia*, quality assurance/quality control ("QA/QC"), field procedures, record keeping, reporting, chain-of-custody, and laboratory methods.

28. After completion of appropriate QA/QC procedures, Renessenz shall make available to EPA and GAEPD the results of all sampling, laboratory, testing, and/or other data generated by or on behalf of Renessenz during implementation of this Consent Decree.

29. Unless otherwise provided herein or set out in a document approved by GAEPD or EPA under this Consent Decree, Renessenz shall notify EPA and GAEPD at least seven (7) working days prior to the performance of the Work at the Facility (including but not limited to borings, well drilling, equipment installation, and sampling) arising from its implementation of this Consent Decree. Written notification shall be sent by facsimile transmission or e-mail to EPA and GAEPD's Project Coordinators as described hereinabove. Upon request of EPA or GAEPD, Renessenz shall provide split samples to EPA and GAEPD, or allow EPA and GAEPD or their authorized representatives to take samples or split or duplicate samples of any samples collected by Renessenz or on its behalf, pursuant to the implementation of this Consent Decree.

30. Renessenz agrees to preserve and to make available to EPA and to GAEPD during the pendency of this Consent Decree and for a minimum of three (3) years after its termination, all records and documents in the possession, custody or control of Renessenz or its affiliates, employees, agents, consultants or contractors, which relate to the performance of its obligations under this Consent Decree. At least sixty (60) days prior to destruction or disposal of any such records, Renessenz shall notify EPA and GAEPD and make such records available to EPA or GAEPD for inspection or retention. With respect to the performance of obligations

pertaining only to Post Closure care or Corrective Action, however, such disclosures and notifications need only be made to GAEPD.

IX. FINANCIAL ASSURANCE

31. Renessenz shall submit an initial cost estimate for all closure-related activities to EPA and GAEPD with submittal of the Closure Plan. At that time, Renessenz shall establish and maintain financial assurance in an amount sufficient to cover the costs of assessment and any closure activities at the Facility as contemplated herein, in the form of a trust fund; surety bond guaranteeing payment into a trust fund; surety bond guaranteeing performance; letter of credit; insurance; or financial test and corporate guarantee, to be worded as set forth in Ga. Comp. R. & Regs. r. 391-3-11-.05. Upon a determination that a Post-Closure Permit or Corrective Action is needed, Renessenz shall revise and/or update its cost estimate, and shall update and maintain financial assurance in an amount sufficient to cover the costs of any such post-closure or corrective action activities at the Facility, in the form of a trust fund; surety bond guaranteeing payment into a trust fund; surety bond guaranteeing performance; letter of credit; insurance; or financial test and corporate guarantee, to be worded as set forth in Ga. Comp. R. & Regs. r. 391-3-11-.05. Updated cost estimates shall be submitted with any proposed modifications to any closure, post-closure or corrective action activities that may result in an increase to any cost estimates, but no less often than annually. If EPA or GAEPD needs clarification or disagrees with a cost estimate, EPA and/or GAEPD will notify Renessenz in writing of the determination. Renessenz shall then have 45 days from receipt of such notification to resubmit additional information or corrected documentation. All submittals provided in accordance with this paragraph are subject to Section VII (*Agency Review and Approval*) of this Consent Decree; such submittals provided to GAEPD shall be in duplicate.

X. ACCESS

32. Renessenz agrees to provide EPA and GAEPD and their representatives, including contractors, access at all reasonable times to enter and move about all property at the Facility, for any purpose relating to the implementation, monitoring or enforcement of this Consent Decree, including but not limited to the discussions with Renessenz's Project Coordinator, his/her designated representative(s) or personnel involved in Work at the Facility; inspecting records, operating logs and contracts related to the implementation, monitoring or enforcement of this Consent Decree; reviewing progress of Renessenz in carrying out terms of this Consent Decree; conducting such sampling and tests as EPA or GAEPD or their representatives deem appropriate for implementation, monitoring or enforcement of this Consent Decree; using a camera, sound recording, or other documentary type equipment; and verifying the reports and data that are submitted to GAEPD or EPA. Renessenz shall permit such person(s) to inspect and copy all records, files, photographs, computer records and other writings, including all sampling and monitoring data, related to the implementation, monitoring or enforcement of this Consent Decree. Such persons will comply with the terms of all health and safety plans approved in accordance with this Consent Decree. Representative(s) of Renessenz may accompany EPA or GAEPD representatives throughout the Facility but shall not in any way delay or impede their investigative or other activities. During sampling activities, Renessenz may, upon request, receive splits of any samples taken by EPA or GAEPD or their contractors, and/or may receive a copy of the results of analyses or tests made upon such samples. Renessenz shall remain entitled to all protections of all confidential business information available to it under applicable statute or regulation, and in the event Renessenz adequately identifies and properly determines that documents, materials, or other records provided to EPA and/or GAEPD under this Consent Decree contain such information, EPA

and/or GAEPD will handle such information in a manner consistent with such statute(s) and regulation(s). Nothing in this Paragraph shall be deemed to be a waiver of attorney-client or other privileges or doctrines available to Renessenz that would be otherwise applicable.

33. To the extent that Work required by this Consent Decree must be done on property that Renessenz does not currently own or control, or to which it does not have lawful access, Renessenz shall use best efforts, including the payment of reasonable sums of money in consideration of access, to obtain site access agreements for itself and its contractors, as well as for EPA or GAEPD and their authorized representatives and contractors, from the owner(s) or lessee(s) of such property. Renessenz shall seek to obtain such access agreements as expeditiously as practicable to prevent any delays in Work required under this Consent Decree. If Renessenz cannot, despite its best efforts, secure access to property where Work is to be performed under this Consent Decree, Renessenz shall, within thirty (30) days after its initial request for access to such property, again request access in a certified letter sent return receipt requested to the property owner. If an agreement for access to such property is not obtained within sixty (60) days after Renessenz's initial request for access, Renessenz shall notify EPA and GAEPD regarding both the efforts undertaken to secure an access agreement and the reasons for Renessenz's inability to obtain such an agreement. In the event that access is obtained by the United States and/or the State, Renessenz shall expeditiously perform the EPA- or GAEPD-approved Work on such property, and shall reimburse the United States and/or the State for all associated attorneys' fees and other reasonable costs.

34. Nothing in this Section shall in any way limit or otherwise affect GAEPD or EPA's right of access and entry pursuant to any applicable law authorizing access and entry, including but not limited to Section 3007 of RCRA, 42 U.S.C. § 6927, Section 104(e) of

CERCLA, 42 U.S.C. § 9604(e), O.C.G.A. § 12-8-70(a) of the Georgia Hazardous Waste Management Act, O.C.G.A. § 12-8-96(c) of the Georgia Hazardous Site Response Act, or any other applicable federal or state law.

XI. STIPULATED PENALTIES

35. Unless excused under Section XIV (*Force Majeure*) of this Consent Decree and as set forth below, Renessenz shall be liable to the United States and to the State for stipulated penalties for any failure to comply with the requirements of this Consent Decree. For purposes of this Section XI (*Stipulated Penalties*) "compliance" by Renessenz shall constitute no less than the full and successful completion of each activity contemplated under the terms of this Consent Decree, or of any work plan or other plan or document approved under this Consent Decree performed in accordance with all applicable requirements of law and this Consent Decree, and accomplished within the time frames and schedules established by and approved under this Consent Decree.

36. For a failure to comply with any of the requirement described below in this Paragraph, stipulated penalties shall accrue in the amounts set forth, per violation, per day:

	Period of Noncompliance		
	1-30 Days	31-60 Days	61 days & Over
Timely submittal of a workplan	$500	$750	$1,000
Meeting (a) deadline(s) *for commencing* work under any workplan	$500	$1,000	$1,500
Meeting (a) deadline(s) *for completion* of work under any workplan.....	$500	$1,000	$1,500
Timely payment of a stipulated penalty	$500	$1,000	$2,000
For a material violation of any other requirement of this Consent Decree.....	$500	$750	$1,000

37. All penalties shall begin to accrue on the earlier of the day after the complete performance is due or the day a violation occurs and shall continue to accrue through the day before compliance is achieved, except as provided below. Nothing herein shall prevent the simultaneous accrual of penalties for separate violations of this Consent Decree. Renessenz shall pay all penalties accruing under this Section to the United States and the State within thirty (30) days of the date Renessenz receives a written demand for payment from EPA or GAEPD unless Renessenz elects to timely invoke the procedures set out under Section XII (*Dispute Resolution*).

38. Either Plaintiff may, in its unreviewable discretion, choose to reduce or waive stipulated penalties otherwise due to that Plaintiff under the Consent Decree, or to establish an extended payment schedule for any such payments. The Parties hereby agree that any determination by one Plaintiff not to seek stipulated penalties or to reduce or waive the amount demanded shall not be construed by the other Plaintiff to bar or otherwise restrict said other Plaintiff in any way from seeking the full amount of the stipulated penalties demanded.

39. Where both Plaintiffs demand stipulated penalties for the same violation of this Consent Decree, Renessenz shall pay fifty (50) percent to the United States and fifty (50) percent to the State. Where only one Plaintiff demands stipulated penalties for a violation, and the other Plaintiff does not join in the demand within twenty (20) days of receiving written notice of the demand, Renessenz shall pay the full stipulated penalties due for the violation to the Plaintiff making the demand. Where both Plaintiffs demand stipulated penalties for a violation, but one subsequently elects to waive or reduce the amount of stipulated penalties for that violation, Renessenz shall pay the full amount of stipulated penalties due for the violation to the Plaintiff making the full demand less any amount paid to the other Plaintiff. All payments to the United

States under this Section shall be paid by certified or cashier's check(s), made payable to the "Treasurer of the United States," shall be mailed to the United States Attorney's Office for the Southern District of Georgia, attention _____, shall indicate that the payment is for stipulated penalties, shall state the basis for the payment of stipulated penalties, and shall reference DOJ file No. _____, and the name and address of Renessenz. Copies of the transmittal letter and check(s) shall be sent to EPA and GAEPD pursuant to Section VII (*Agency Review and Approval)* of this Consent Decree. All payments to the State under this Section shall be paid by certified or cashier's check, shall be made payable to the State of Georgia, and shall be mailed to the Georgia Environmental Protection Division; Land Protection Branch; 2 Martin Luther King Jr. Drive, Suite 1052 East, Atlanta, GA 30334-9000.

40. The penalties set forth in this Section do not preclude the United States, EPA, the State of Georgia or GAEPD from pursuing any other remedy or sanction, including contempt sanctions or statutory civil penalties, which may be available by reason of Renessenz's failure to comply with any of the requirements of this Consent Decree, and Renessenz retains all rights to contest such actions. The payment of such penalties shall not alter in any way Renessenz's obligation to complete performance of all Work required under this Consent Decree.

XII. DISPUTE RESOLUTION

41. Unless otherwise expressly provided for in this Consent Decree, Renessenz shall have the right to dispute any decision of EPA or GAEPD under this Consent Decree, and the provisions of this Section XII (*Dispute Resolution*) shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. However, the provisions in this Section shall not apply to actions by the United States or the State to enforce obligations of Renessenz that have not been disputed in accordance with this Section.

42. Informal Dispute Resolution. Any dispute which arises under or with respect to this Consent Decree shall in the first instance be the subject of informal negotiations between the parties to the dispute. The period for informal negotiations shall not exceed thirty (30) days from the time the dispute arises, unless it is modified by written agreement of the parties to the dispute. The dispute shall be considered *"to have arisen"* when one party receives a written Notice of Dispute having been sent by the other party.

43. Invocation of Formal Dispute Resolution.

a. In the event that the parties cannot resolve a dispute by informal negotiations as set out above, then the position advanced by EPA or GAEPD shall be considered binding unless Renessenz, within twenty (20) days after the later of the conclusion of the informal negotiation period or the termination of mediation if it has been agreed upon by the parties, invokes the formal dispute resolution procedures of this Section XII (*Dispute Resolution*) by serving on EPA and GAEPD a written "*Statement of Position*" on the matter in dispute, including, but not limited to, all factual data, analysis or opinion supporting that position, all supporting documentation relied upon by Renessenz, and any actions which Renessenz considers necessary for resolution of the dispute.

b. EPA or GAEPD may serve on Renessenz a Statement of Position, including but not limited to, any factual data, analysis or opinion supporting that position and any supporting documentation relied upon by EPA or GAEPD.

c. An administrative record of the dispute shall be maintained by EPA or GAEPD and shall contain all statements of position, including supporting documentation, submitted pursuant to this Paragraph. Where appropriate, EPA or GAEPD may allow submission of supplemental statements of position by the parties to the dispute.

d. EPA or GAEPD will issue a final administrative decision resolving the dispute based on the on the administrative record described in Paragraph 43(c) and shall notify Renessenz in writing setting forth the basis of its decision. This decision shall be binding upon Renessenz, subject only to the right to seek judicial review pursuant to Paragraph 44.

44. Judicial Review. Renessenz may seek judicial review of any administrative decision pursuant to Paragraph 43 (d) by filing with this Court and serving on all parties a motion requesting judicial review of the dispute. The motion must be filed within fifteen (15) days of receipt of the written determination referenced in Paragraph 43(d). The motion shall set forth a description of the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved in order to ensure orderly administration of this Consent Decree. GAEPD and EPA may file a response to this Motion.

45. Except as otherwise provided in this Consent Decree, in any dispute brought under this Section pertaining to the adequacy or appropriateness of plans, procedures to implement plans, schedules, or any other items requiring approval by EPA or GAEPD under this Consent Decree; the adequacy of the performance of Work undertaken pursuant to this Consent Decree; and all other disputes that are accorded review of the administrative record under

applicable principles of administrative law, Defendant shall have the burden of demonstrating, based on the administrative record, that the position of the United States or State is arbitrary and capricious or otherwise not in accordance with law.

46. The invocation of informal or formal dispute resolution procedures under this Section shall not of itself extend or postpone any obligation of Renessenz under this Consent

Decree, but the payment of stipulated penalties with respect to the disputed matter shall be stayed pending resolution of the dispute. Renessenz may request that GAEPD and/or EPA suspend performance otherwise required pending dispute resolution if performance would (a) render moot the matter submitted to dispute resolution or (b) pose a risk to human health or the environment. Notwithstanding the stay of payment, stipulated penalties shall continue to accrue as provided in this Paragraph during both informal and formal proceedings to resolve disputes under this Consent Decree. During the formal administrative dispute resolution process described above, stipulated penalties shall continue to accrue for sixty (60) days after EPA and GAEPD receive Renessenz's Statement of Position. After EPA and/or GAEPD issue a written determination as set out above, stipulated penalties shall again accrue until resolution of any judicial appeal. Stipulated penalties shall be paid within sixty (60) days after written demand by EPA or GAEPD following resolution of the dispute by EPA or GAEPD or the Court if, but only if Renessenz's position is not sustained. Upon resolution of any dispute, whether informally or through judicial appeal in which any part of Renessenz's position is not sustained, Renessenz shall, within sixty (60) days or such other time as EPA or GAEPD may approve or the Court may direct, incorporate the resolution into an amended work plan, procedure, or other document and proceed with the Work according to the amended plan or procedure, provided that Renessenz shall be given no less time to perform a specific task under a work plan amended following completion of the dispute resolution process than it would have had under the original work plan unless EPA or GAEPD determines that an imminent and substantial endangerment to human health or the environment exists.

XIII. INDEMNIFICATION

47. The United States and the State, including GAEPD, do not assume any liability by entering into this agreement. Renessenz agrees to indemnify, save, and hold harmless the United States and the State, their agencies, departments, officials, agents, employees, contractors, subcontractors and representatives from any and all claims, causes of action, losses, actions, liabilities, judgments, verdicts, awards, or demands of whatsoever kind or nature (including the payment of all litigation expenses and attorneys' fees), arising from or on account of acts or omissions of Renessenz, its officers, directors, employees, contractors, subcontractors, receivers, trustees, agents, or assignees, and any other person acting on its behalf or under its control in carrying out the activities pursuant to this Consent Decree. Further, Renessenz agrees to pay the United States and the State all costs they incur including, but not limited to, reasonable attorneys' fees of litigation and settlement arising from, or on account of, claims made against the United States or the State, including GAEPD, based on acts or omissions of Renessenz, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on its behalf or under its control, in carrying out activities pursuant to this Consent Decree. Neither the United States nor the State shall be held out as a party to any contract entered into by or on behalf of Renessenz in carrying out activities pursuant to this Consent Decree. Neither Renessenz nor any contractor shall be considered an agent of the United States or the State.

48. Renessenz waives all claims against the United States and the State for damages or reimbursement or for set-off of any payments made or to be made to the United States or the State arising from or on account of any contract, agreement, or arrangement between Renessenz and any person for performance of Work on or relating to the Facility, including, but not limited to, claims on account of construction delays. In addition, Renessenz shall indemnify and hold harmless the United States and the State with respect to any and all claims for damages or

reimbursement arising from or on account of any contract, agreement, or arrangement between Renessenz and any person for performance of Work on or relating to the Facility, including but not limited to, claims on account of construction delays.

XIV. FORCE MAJEURE

49. Renessenz shall perform the requirements of this Consent Decree in the manner and within the time limits set forth herein, unless the performance is prevented or delayed by events which constitute a *force majeure*. No stipulated penalties shall accrue for any time period during which performance is excused or delayed as a result of a *force majeure* event. Renessenz's obligation to comply with one or more of the provisions of this Consent Decree shall be deferred to the extent and for the duration that the delay is caused by a *force majeure* event. A *force majeure* is defined as any event caused by circumstances entirely beyond the control of Renessenz or any entity subject to control by Renessenz, including a contractor or consultant, which delays or prevents performance of any work or other action undertaken to fulfill any obligation of Renessenz under this Consent Decree, despite the best efforts of Renessenz, its contractors, or consultants to perform such work or other action in a timely manner. The requirement that Renessenz exercise "best efforts" includes using best efforts under the circumstances to anticipate any potential *force majeure* event and best efforts under the circumstances to address the effects of any potential *force majeure* event (1) as it is occurring and (2) following the *force majeure* event, such that the delay is minimized to the extent reasonably possible under the circumstances. "*Force Majeure*" shall not apply to any delay due to increased costs or Renessenz's financial inability to carry out the provisions of this Consent Decree, to normal precipitation events, or to Renessenz's failure to make timely and bona fide applications and to exercise diligent efforts to obtain permits. For purposes of this decree,

"normal precipitation events" are those which are equal to or less than a twenty-four hour (24 hour), twenty-five year (25 year) storm event.

50. When circumstances are occurring or have occurred that can reasonably be anticipated to cause a delay in achieving any requirement set forth in this Consent Decree, or in any plan developed hereunder within the time allowed, Renessenz shall promptly notify GAEPD and EPA in writing via email, and in no event later than 72 hours after Renessenz knew or reasonably should have known of the occurrence of such circumstances. Such notice shall include an estimate of the anticipated length of delay, including necessary demobilization and remobilization, its cause, measures taken or to be taken to minimize the delay, an estimated time table for implementation of such measures, a statement as to whether Renessenz is claiming a *force majeure* and the bases for such a claim. Renessenz shall adopt all reasonable measures to avoid or minimize any such delay. Failure to comply with the notice provision of this section shall constitute a waiver of Renessenz's right to assert *force majeure*. Notification of any delay, in and of itself, shall not extend the time allowed for meeting any requirement or excuse the delay or payment of stipulated penalties.

51. If EPA and GAEPD agree that the delay was attributable to a *force majeure* event, they will extend the time for performance of that requirement by a period not greater than the delay resulting from such circumstances, unless the parties agree that a different time period is acceptable. Such an extension does not alter the schedule for performance or completion of other tasks required under this Consent Decree, except that EPA and GAEPD will extend the time for performance of other tasks under this Decree that EPA and GAEPD agree will also necessarily be delayed as a result of the force majeure event.

52. In the event that EPA, GAEPD and Renessenz cannot agree as to whether a delay was caused by a *force majeure* event, or as to the length of the appropriate extension of time, the dispute shall be resolved in accordance with the dispute resolution procedures set forth in Section XII (*Dispute Resolution*). In any such dispute resolution proceeding, Renessenz shall have the burden of demonstrating by clear and convincing evidence that the event was a *force majeure* event, that the duration of the delay caused by such event is or was reasonable under the circumstances, and that, as a result of the delay, a particular extension period is appropriate. If Renessenz carries this burden, the delay at issue shall be deemed not to be a violation by Renessenz of the affected obligation of this Consent Decree. For purposes of this Consent Decree, a *force majeure* event may include a situation in which the EPA and GAEPD fail to agree between themselves regarding any approval or decision requiring by the terms of this Consent Decree unanimity between them, unless such failure to agree is caused by Renessenz's failure to submit information, data or documentation contemplated by this Consent Decree or by some other action or omission caused by Renssenz. As to matters required to be approved or decided by GAEPD and EPA under this Consent Decree, at no time shall Renessenz be required to choose which Plaintiff's decision to follow if following one Plaintiff's decision necessarily means rejecting or otherwise being inconsistent with the other's view. Renessenz shall give notice to GAEPD and EPA if it is faced with such a decision, and the agencies shall diligently work to resolve the issue upon receipt of such notice.

XV. RETENTION OF RIGHTS

53. GAEPD and EPA expressly reserve all rights and defenses that they may have, including, subject to the provisions of this Consent Decree, the right to disapprove of Work

performed by Renessenz pursuant to this Consent Decree and to request that Renessenz perform tasks in addition to those stated in this Decree, the attachments hereto, or work plan(s).

54. EPA and GAEPD hereby reserve all statutory and regulatory powers, authority, rights, and remedies, both legal and equitable, to enforce Renessenz's obligation to comply with any of the requirements of this Consent Decree. Except as otherwise provided in Section XVI (*Covenant of Plaintiffs*) of this Consent Decree, this Consent Decree shall not be construed as a covenant not to sue, release, waiver or limitation of any rights, remedies, powers and/or authorities, civil or criminal, which EPA or GAEPD has under RCRA, or any other statutory, regulatory or common law enforcement authority of the United States or the State of Georgia.

55. Except as otherwise provided in Section IV (*Objectives*) and Section VI (*Work To Be Performed*) of this Consent Decree, this Consent Decree and compliance by Renessenz with the terms of this Consent Decree shall not relieve Renessenz of its obligations to comply with RCRA or any other applicable local, state or federal laws, regulations and permits.

56. This Consent Decree is not intended to be nor shall it be construed as a permit or permit modification. Except as otherwise provided in this Consent Decree, this Consent Decree does not relieve Renessenz of any obligation to obtain and comply with any local, state or federal permits, and the United States and the State reserve the right to impose any permit requirement within their respective authority.

57. EPA and GAEPD reserve the right to halt work and/or perform any portion of the work consented to herein or any additional site characterization, study, and response/corrective actions as they deem necessary to protect public health and the environment. EPA and GAEPD reserve their rights to seek reimbursement from Renessenz for all costs incurred by them related to halting or performing any such work at the Facility.

58. Except as otherwise specified in this Consent Decree, Renessenz does not waive any right, defense or claim it has.

59. This Consent Decree does not limit or affect the rights of Renessenz, the State or the United States with respect to any third parties.

XVI. COVENANT OF PLAINTIFFS

60. In consideration of the Work that will be performed by Renessenz under the terms of the Consent Decree, and except as specifically provided hereinafter in this Section XVI (*Covenant of Plaintiffs*), the United States and the State covenant not to sue or to take administrative action against Renessenz, its officers, directors and employees, for claims specifically alleged in the Plaintiffs' Complaint. This covenant not to sue is expressly conditioned upon the complete and satisfactory performance by Renessenz of its obligations under this Consent Decree, including all Attachments hereto, and may be voided at any time prior to completion of the Work if Renessenz fails to comply with any of the requirements of this Consent Decree. This covenant not to sue extends only to Renessenz, its officers, directors and employees, and does not extend to any other person.

61. Subject to the covenant not to sue in the immediately-preceding Paragraph, the United States and the State retain all authority and reserve all rights to take any and all actions authorized by law to protect human health and the environment. Except as otherwise provided herein, the entry of this Consent Decree and Renessenz's consent to comply shall not limit or constitute a waiver of any rights or remedies, or otherwise preclude the rights or remedies of the United States or the State, and this Consent Decree is without prejudice to the United States' and the State's rights, authorities and remedies, including but not limited to, (1) the right to impose any permit requirements, including Corrective Action requirements under Section 3004(u) and

(v) of RCRA, 42 U.S.C. § 6924(u) and (v) or comparable State of Georgia law; (2) the right to require action pursuant to Section 7003 of RCRA, 42 U.S.C. § 6973; (3) the right to pursue remedies available to the United States and GAEPD for any violation by Renessenz of this Consent Decree, or of any federal or State law, regulation, or permitting condition not specifically alleged in the Complaint and resolved by this Consent Decree; or (4) the right of GAEPD to pursue any rights, authorities or remedies under the statutes it administers. The State and the United States reserve authority to take any action authorized by law if there may be an imminent and substantial endangerment in connection with hazardous waste or hazardous constituents at or from the Facility.

62. The rights reserved to the Plaintiffs include the right to disapprove of Work performed by Renessenz pursuant to this Consent Decree.

63. Nothing in this Consent Decree is intended either to create any rights in or grant any cause of action to any person not a party to this Consent Decree, or to release or waive any claim, cause of action, demand, or defense in law or equity that any party to this Consent Decree may have against any person(s) or entity not a party to this Consent Decree.

64. Except as provided herein, the Plaintiffs hereby reserve all statutory and regulatory powers, authorities, rights, remedies, both legal and equitable, civil, criminal, or administrative, including those that may pertain to Renessenz's failure to comply with any of the requirements of this Consent Decree or RCRA, including, without limitation, additional enforcement action and the assessment of penalties under Section 3008 of RCRA, 42 U.S.C. § 6928, against Renessenz, its officers and directors.

XVII. COVENANT OF RENESSENZ

65. Renessenz hereby covenants not to sue and agrees not to assert any claims or causes of action against Plaintiffs with respect to the allegations contained in the Complaint, actions or omissions expressly contemplated under Section VI (*Work To Be Performed*) herein and any of the Work required hereunder, or violations of environmental requirements that have been corrected to bring the facility into compliance with the law. Renessenz further agrees not to seek indemnification or reimbursement of any funds expended in connection with its performance of the Work from any agency, department or instrumentality of Plaintiffs. Renessenz hereby reserves and retains any defense, cause of action, and right not explicitly waived in this Consent Decree.

XVIII. MODIFICATION

66. Except as specifically provided for herein, there shall be no modifications or amendments of this Consent Decree without written agreement of the parties to this Consent Decree and approval by this Court. Any changes to the technical and schedule provisions set forth in any Appendix hereto, or in any approved deliverable, may be made without approval by the Court under the terms set forth in the respective Attachments, this Consent Decree, or upon written agreement between Renessenz, GAEPD and EPA

XIX. RETENTION OF JURISDICTION

67. This Court retains jurisdiction over both the subject matter of this Consent Decree and Renessenz for the duration of the performance of the terms and provisions of this Consent Decree, including its Attachments, if any, for the purpose of enabling any of the Parties to apply to the Court at any time for such further order, direction, and relief as may be necessary or

appropriate for the construction or modification of this Consent Decree, or to effectuate or enforce compliance with its terms, or to resolve disputes in accordance with Section XII (*Dispute Resolution*) hereof.

68. The Parties retain the right to seek to enforce the terms of this Consent Decree and take any action authorized by federal or state law not inconsistent with the terms of this Consent Decree to achieve or maintain compliance with the terms and conditions of this Consent Decree..

XX. COSTS

69. Each party to this action shall bear its own costs and attorneys' fees in the actions resolved by this Consent Decree.

XXI. NOTICE REQUIREMENTS

70. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States and the State reserve the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations that indicate that the Consent Decree is inappropriate, improper, or inadequate. Defendant consents to the entry of this Consent Decree without further notice.

71. If, for any reason, the Court should decline to approve this Consent Decree in the form presented, then this agreement is voidable at the discretion of any party, and the terms of the Consent Decree may not be used as evidence in any litigation between the Parties.

XXII. TERMINATION

72. This Consent Decree shall terminate upon motion filed by the Plaintiffs after all actions required to be taken by Defendant pursuant to the Consent Decree, including Work required under this Consent Decree and attachments hereto have been completed, provided that Defendant is in compliance with the terms of the Consent Decree, that Defendant has paid any accrued stipulated penalties, and that Defendant has certified in writing that it is in compliance with all the terms and conditions of this Consent Decree and any attachments thereto, as well as any GAEPD-issued Permit contemplated by the terms of this Consent Decree. If a post-closure permit is necessary pursuant to Paragraph 20 (*Post-Closure Obligations*), this Consent Decree shall not terminate until such time as a final, enforceable and non-appealable post-closure permit has been issued to Renessenz by GAEPD. In the event that Renessenz challenges a post-closure permit issued by GAEPD pursuant to O.C.G.A. § 12-8-73, this Consent Decree shall remain enforceable and in effect until all administrative and judicial challenges have concluded and until such time as a final, enforceable, and non-appealable post-closure permit has been issued to Renessenz.

73. Within forty-five (45) days of receiving Defendant's certification of compliance, the Plaintiffs may file a motion with the Court seeking termination of the Consent Decree, unless Plaintiffs inform Defendant that they do not believe that compliance has been achieved. If the Plaintiffs dispute Defendant's full compliance, the Consent Decree shall remain in effect pending resolution of the dispute by the Parties in accordance with Section XII (*Dispute Resolution*) of this Decree, or by Order of the Court.

74. No sooner than seventy-five (75) days after providing the certification of compliance to the Plaintiffs, pursuant to Paragraph 70, Renessenz may petition the Court for termination of the Consent Decree, provided Defendant has certified to the Plaintiffs and the

Court that it has satisfied each and every term and condition of this Consent Decree and attachments thereto and is in compliance with every GAEPD-issued Permit contemplated by the terms of this Consent Decree.

75. IT IS HEREBY ORDERED that the foregoing Consent Decree be entered as an Order of this Court.

FOR PLAINTIFF
UNITED STATES OF AMERICA:

Dated: 11/11/14

Sam Hirsch
Acting Assistant Attorney General
Environment and Natural Resources Division
United States Department of Justice

Dated: 11/17/14

Gabriel Allen
Trial Attorney
Environmental Enforcement Section
United States Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044
(202) 514-1032

Dated: 11/17/14

/s/ Edgar D. Bueno
EDGAR D. BUENO
Assistant United States Attorney
Chief, Civil Division
Virginia Bar No. 41307
U.S. Attorney's Office
Post Office Box 8970
Savannah, Georgia 31412
(912) 652-4422
edgar.bueno@usdoj.gov

FOR THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY:

Dated: 10/30/14

MARY J. WILKES
Regional Counsel And Director
Office Of Environmental Accountability
U.S. Environmental Protection Agency,
Region 4
61 Forysth Street, S.W.
Atlanta, GA 30303 8960

Dated: 10/27/14

GREGORY EUETSCHER
Associate Regional Counsel
U.S. Environmental Protection Agency,
Region 4
61 Forsyth Street, S.W.
Atlanta, GA 30303-8960

FOR PLAINTIFF
STATE OF GEORGIA:

SAMUEL S. OLENS
Attorney General

ISAAC BYRD
Deputy Attorney General

JOHN E. HENNELLY
Georgia Bar Number 347075
Senior Assistant Attorney General

Dated: December 4, 2014

Elizabeth A. Monyak

ELIZABETH A. MONYAK
Georgia Bar Number 005745
Assistant Attorney General
40 Capitol Square, S.W.
Atlanta, Georgia 30334-1300
Telephone: 404-463-0816
Facsimile: 404-651-6341
Email: emonyak@law.ga.gov

FOR DEFENDANT
RENESSENZ, LLC:

Dated: 9/16/14

TIMOTHY EBERLE

Date: _____ _____

UNITED STATES DISTRICT JUDGE
Southern District of Georgia

ENVIRONMENTAL PROTECTION DIVISION
DEPARTMENT OF NATURAL RESOURCES
STATE OF GEORGIA

IN RE:	Millennium Specialty Chemicals	#	
	209 SCM Road	#	Order No. EPD-HW-1535
	Brunswick, Georgia 31523	#	
	Respondent		

Consent Order

WHEREAS, Millennium Specialty Chemicals (hereinafter the "Respondent") presently operates a manufacturing facility for terpene derivatives (hereinafter the "Facility") located at 209 SCM Road, Brunswick, Georgia; and

WHEREAS, the Facility is subject to the provisions of the Georgia Hazardous Waste Management Act, O.C.G.A. § 12-8-60, et seq. (hereinafter the "Act"),the Georgia Water Well Standards Act, OCGA § 12-5-120, et seq. (hereinafter the "Water Well Standards Act"), and the Rules of the Georgia Department of Natural Resources, Environmental Protection Division (hereinafter the "EPD") Chapter 391-3-11, promulgated pursuant thereto, as amended, (hereinafter the "Rules"); and

WHEREAS, Respondent generates hazardous waste at the Facility, under EPA Identification Number GAD980847339; and

WHEREAS, Respondent notified as a large quantity generator on October 14, 2002; and

WHEREAS, on January 29, 2003, representatives of the EPD inspected the Facility to determine compliance with the Act and Rules, and

WHEREAS, during the inspection it was noted that Monitoring Well RW-1 did not have an adequate cover; and

WHEREAS, during the inspection it was noted that four hazardous waste shipments of discarded sulfuric acid were made in October 2002; and

WHEREAS, information gathered during the January 29, 2003, inspection identified the following alleged violations of the Water Well Standards Act and Hazardous Waste Rules:

Water Well Standards Act

I. ***Section 12-5-134 (5)(D) (ii) and (iv) "Standards for Wells and Boreholes"***, for the failure to have a monitoring well protected by a sanitary seal or cover to prevent entrance or pollutants to the well.

Hazardous Waste Rules

I. ***Section 391-3-11-.08 "Standards Applicable to Generators of Hazardous Waste"***

§262.20 "General Requirements", for the failure to properly fill out the manifest. The manifest document number was not included on two of the manifests.

II. ***Section 391-3-11-.10 "Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities "***

Section 265.74 "Availability, retention, and disposition of records," for the failure to provide requested records during the inspection. Facility personnel did not know where to locate the requested records during the inspection.

WHEREAS, an amicable disposition of these alleged violations is in the best interest of the citizens of the State of Georgia.

NOW, THEREFORE, before the taking of any testimony and without adjudicating the merits of the parties' positions in this matter, the parties hereby resolve the issues in this case by agreement and upon the Order of the Director of EPD and the consent of the Respondent as follows:

1. Within thirty (30) days after the date of execution of this Order, the Respondent shall pay to the EPD the sum of five thousand dollars ($5,000).

2. Within thirty (30) days after the execution date of this Order, the Respondent shall submit to EPD a plan containing procedures to insure that all monitoring wells onsite are constructed, maintained, or closed in accordance with the Georgia Water Well Standards Act.

3. Within thirty (30) days after the execution date of this Order, the Respondent shall submit to EPD a plan containing procedures to insure that all future hazardous waste manifests will be properly filled out and that facility personnel will be trained where to locate facility records.

4. Upon receipt of a written approval of the plans required by paragraphs 2. and 3. of this Order, the Respondent shall implement said plans.

For the purpose of enforcement under applicable State law, this Order shall be construed as, and have the same force as, a final order of the Director pursuant to the Georgia Hazardous Waste Management Act, O.C.G.A. §12-8-60 et seq. as amended. By agreement of the parties, this Order shall be considered final and effective immediately and shall not be appealable and the Respondent does hereby waive any hearing on the terms and conditions of same. This Order shall not constitute any finding, determination or adjudication of a violation of any State or Federal laws, rules, standards or requirements, nor does the Respondent through its signing of this Order admit or acknowledge any violation or potential violation, admit any liability of any sort to any party whatsoever, or agree to take any further action outside of this Order.

It is so ORDERED, CONSENTED, and AGREED to this 20 day of August, 2003.

Georgia Environmental Protection Division

By: _____

David M. Word

Millennium Specialty Chemicals

By: Michael F Templeton

Title: Director of Manufacturing

Date: 8/7/03

H:\TERRI\MISCEL\MILLENNIUM\PROPOSED CONSENT ORDER 2-2003.DOC

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
STATE OF GEORGIA

IN RE:	SCM Glidco Organics	#	
	Colonel's Island Facility	#	Order No. EPD-HW-1046
	Brunswick, Georgia	#	
	Respondent		

CONSENT ORDER

WHEREAS, SCM Glidco Organics (hereinafter referred to as "Respondent") presently operates a facility at Colonel's Island, Brunswick, Georgia (the "Facility") which is subject to the provisions of the Georgia Hazardous Waste Management Act, O.C.G.A. Section 12-8-60, et seq., as amended (the "Act") and Chapter 391-3-11 of the Georgia Rules for Hazardous Waste Management promulgated pursuant thereto (the "Rules"); and

WHEREAS, The Georgia Department of Natural Resources, Environmental Protection Division ("EPD") has alleged that the operations at the Facility have impacted the groundwater beneath the Facility; and

WHEREAS, Section 12-8-71(b) of the Act empowers the Director of the EPD (the "Director") to require corrective action for releases of hazardous constituents; and

WHEREAS, the Respondent has, of its own accord, completed contamination assessment activities, and designed and installed a groundwater and non-aqueous phase liquid ("NAPL") remediation system; and

WHEREAS, the Respondent has submitted a remediation plan entitled "Groundwater Remediation Plan Building No. 5, SCM Glidco Organics Colonel's Island Facility, Brunswick, Georgia", (the "Plan") which presented detailed plans and specifications to provide corrective

action for contaminated groundwater in the vicinity of Respondent's Building No. 5 facility that may have resulted from a release on or at the Facility; and

WHEREAS, per the teleconference call between the Respondent and EPD on June 15, 1993 the following definitions are to clarify certain conditions in this Order:

1. The integrity assessment of the underground drain pipes as described in Condition 2 of this Order includes the entire underground piping system at the SCM Glidco Organics, Brunswick, Georgia facility.

2. A report as described in Condition 3 of this Order will be submitted that summarizes the hydrogeology of the site and assesses the effectiveness of the remediation system (i.e. capture zone of recovery wells, progress in remediating free product, etc). Also pursuant to Condition 3 a Corrective Action Progress Report will be submitted on a bi-annual basis that will summarize the progress and effficiency of the remediation system. The bi-annual report will also include all samples, water levels measurements, potentiometric maps, etc... that have been collected during that bi-annual period. The schedule for submitting the Corrective Action Progress Report will be incorporated into the Remedial Action Plan Addendum that is addressed in Condition 4 of this Order.

3. SCM Glidco Organics must submit to EPD an addendum to the existing Remedial Action Plan to address the items in Condition 4 of this Order.

4. SCM Glidco Organics will provide EPD with financial assurance documentation that demonstrates sufficient financial responsibility to complete the groundwater investigation and remediation at the facility in order to comply with Condition 5 of this Order.

WHEREAS, the Respondent and the EPD wish to cooperate fully in implementing contamination assessment activities and, if necessary, remediate any impact that may have been caused by releases from the Facility in order to protect human health and the environment at the site; and

NOW THEREFORE, before the taking of any testimony and without adjudicating the merits of the parties' position in this matter, the parties hereby resolve the issues in this case by agreement and upon the Order of the Director of EPD and the Consent of the Respondent as follows:

1. Within thirty days (30) of the execution of this Order, the Respondent shall initiate tasks to sample existing monitoring wells for hazardous constituents.

2. Within thirty days (30) of the execution of this Order, the Respondent shall initiate tasks to provide data on the integrity of the underground drain pipes at the Facility.

3. Within sixty days (60) of the execution of this Order, the Respondent shall submit to EPD for approval a summary of previous hydrogeologic assessment work. This work should have characterized the hydrogeology underlying the site and defined the rate and extent of hazardous constituents in the uppermost aquifer resulting from operations at the facility. All plumes of contamination (both on site and off) resulting from operations attributable to the facility shall be depicted on a topographic map (minimum scale 1":200'). The summary shall provide the following information:

   a. A report with the sampling data collected pursuant to Condition 1, a potentiometric surface map, and specifications for a continuous quarterly monitoring program.

4. Within sixty (60) days of the execution of this Order, Respondent shall submit to the Director of EPD for approval modifications to the Plan to include, but not be limited to:

   a. Procedures to implement a groundwater monitoring program capable of demonstrating the effectiveness of the remediation program, and a schedule and statistical procedures for making this demonstration.

   b. Procedures to monitor background water quality representative of groundwater not affected by Respondent's operations (past and present);

c. All plans submitted must include, but are not limited to, the following elements:

1. A description and map of proposed well locations,

2. Size and depth of wells,

3. Description of well-intake design, including screen slot size and length; filter pack materials and method of filter-pack placement,

4. Methods used to seal the well from the surface and prevent downward migration of contaminants through the well annulus,

5. Description of the methods and procedures used to develop the wells.

5. Within thirty (30) days of the execution of this Order, the Respondent will establish and provide documentation to EPD of financial assurance to complete the remediation and documentation of implementation of the Remediation Plan.

6. Respondent may request an extension of any deadline contained in this Order or the Plan by submitting to EPD as early in advance of the deadline as possible a verbal request for an extension including an explanation of why the extension is needed. A written request shall follow the verbal request by not longer than seventy-two (72) hours and shall include written documentation of the need for the extension. Within ten (10) days of its receipt of the written request, EPD shall determine whether to grant an extension and for how long.

7. If Respondent or EPD determines that any element of the Plan no longer satisfies the requirements of the Plan, Respondent must, within thirty (30) days of such determination or written notification by EPD, submit a modified plan to make appropriate changes to the plan.

8. All plans, reports and schedules required by this Order or the Plan are, upon approval by EPD, incorporated into this Order. Any noncompliance with such approved plan, reports or schedules shall be noncompliance with this Order.

9. Upon receipt of any plan(s) or report(s) or of any modified plan(s) or report(s) required by this Order, EPD shall review said plan(s) or report(s) to determine their completeness with respect to this Order. Upon receipt of said plan(s) or report(s), EPD may confer with the Respondent in person, by telephone or in writing. If EPD determines that said plan(s) or report(s) are incomplete, EPD shall provide Respondent with written notice of any deficiencies. Respondent shall respond to such

notice or modify the plan(s) or report(s) to correct the deficiencies within thirty (30) days from the receipt of a notice of deficiency from EPD.

10. Notwithstanding compliance with the terms of this Order, Respondent may be required to take further action as necessary, including additional groundwater monitoring assessment and/or remediation to achieve compliance with the Georgia Hazardous Waste Management Act, or other applicable state or federal laws.

This Order shall not constitute a finding or adjudication of violation of any state or federal laws or rules or permit requirements by the Respondent, nor does the Respondent through its signing of this Order make any admission of fact or of any violations of state or federal laws or rules or of any liability to any third party.

By agreement of the parties, this Order shall be considered final and effective immediately and shall not be appealable and the Respondent does hereby waive any hearing on the terms and conditions of the same.

It is so ORDERED, CONSENTED, and AGREED to this 16th day of Sept., 1993.

ENVIRONMENTAL PROTECTION DIVISION

By: Harold Reheis
Harold Reheis, Director

SCM GLIDCO ORGANICS

By: R. P. Chatham

Title: V.P. of Mfg.

Date: 9/6/93

ATTACHMENT C

Table 4-1. Well Construction Details and Groundwater Elevations - 2017
Symrise Colonels Island Site

Monitoring Well ID	Northing (Feet - GA State Plane East Zone NAD 83)	Easting (Feet - GA State Plane East Zone NAD 83)	TOC Elevation (Feet)	Screen Interval (Feet bgs)	March 2017 Groundwater Elevation (ft)	June 2017 Groundwater Elevation (ft)
MW-1	403207.4	849110.25	12.97	5.72 - 10.72	6.16	7.24
MW-10	403406.3697	848994.4341	10.613	1 - 6	6.393	8.143
MW-13	403496.4	849269.24	13.71	2 - 7	6.08	6.2
MW-14	403092.27	849071.4	11.66	3.89 - 13.89	5.95	7.11
MW-15	403111.457	849081.046	11.22	33 - 43	5.85	6.9
MW-16	403072.3868	849109.3064	15.22	2 - 7	5.85	7.11
MW-17	403064.634	849017.4651	14.9	2 - 7	5.87	7.27
MW-18	402993.0693	849056.8257	14.78	2 - 7	NM	7.33
MW-19	403005.295	849133.1613	14.28	2 - 7	5.73	7.32
MW-20	403069.1068	849193.6931	10.41	2 - 7	5.78	7.22
MW-22	403366.1406	849102.8053	13.936	3.24 - 13.24	6.526	8.346
MW-27	403442.2829	849117.9009	14.474	3.42 - 13.42	6.674	8.424
MW-28	403416.2782	849111.9216	13.84	2 - 12	6.58	8.43
MW-30	403377.4126	849113.8839	13.65	2 - 12	6.32	8.36
MW-31	403397.0775	849094.6002	13.29	5.08 - 15.08	6.54	8.5
MW-34A	403393.3073	849057.2603	10.87	1.88 - 11.88	6.16	8.18
MW-34B	403395.2	849055.23	14.03	-	6.48	8.18
MW-34C	403398.58	849051.89	13.73	-	6.45	8.15
MW-35	403423.6169	849062.0775	10.79	2 - 12	6.45	8.29
MW-36	403445.5644	849083.2571	14.18	2 - 12	6.58	8.51
MW-37	403453.7957	849118.4012	14.5	5.2 - 15.2	6.62	8.41
MW-38A	403357.1839	848995.8015	12.079	5.24 - 15.24	5.329	6.909
MW-38B	403359.1112	848993.5533	13.169	13.9 - 18.9	6.349	7.979
MW-38C	403354.5049	848998.0861	13.037	18.4 - 23.4	6.327	7.927
MW-38D	403361.2676	848991.4947	12.863	33.75 - 38.75	5.983	7.253
MW-39	403305.636	849032.1038	13.49	2 - 12	6.28	7.7
MW-4	403098.11	849147.89	13.17	7.04 - 12.04	5.89	9.98
MW-40	403140.0751	849016.5706	11.06	3 - 8	6	7.17
MW-41	403024.9753	849040.4255	14.43	2 - 7	5.8	NM
MW-42	403028.8517	849158.209	15.23	3 - 8	5.74	7.26
MW-43	403400.0469	848953.2313	12.75	5.32 - 15.32	6.3	8.06
MW-44	403336.0116	848941.5166	12.14	5.2 - 15.2	6.23	7.83
MW-45	403277.2688	848994.8106	12.62	5.2 - 15.2	6.22	7.59
MW-46	403275.9788	849025.498	12.33	5.26 - 15.26	6.25	7.58
MW-47A	403288.5505	849060.0368	12.9	5.21 - 15.21	6.3	7.63
MW-47B	403290.4758	849056.9159	13.211	13.78 - 18.78	6.321	7.691
MW-47C	403292.9777	849061.1534	13.353	18.35 - 23.35	6.323	7.683
MW-47D	403295.6417	849064.1939	13.386	34.35 - 39.35	6.026	7.186
MW-48	403355.9273	848919.2064	12.763	5.3 - 15.3	6.213	7.933
MW-49	403314.6925	848918.1205	10.732	2.5 - 12.5	6.162	7.762
MW-5	403118.3075	849085.1534	13.87	6.38 - 11.38	5.98	7.09
MW-50	403243.5813	849030.2137	13.17	5.28 - 15.28	6.18	7.46
MW-51R	403251.52	849064.85	12.133	2 - 12	6.395	7.473

Table 4-1. Well Construction Details and Groundwater Elevations - 2017
Symrise Colonels Island Site

Monitoring Well ID	Northing (Feet - GA State Plane East Zone NAD 83)	Easting (Feet - GA State Plane East Zone NAD 83)	TOC Elevation (Feet)	Screen Interval (Feet bgs)	March 2017 Groundwater Elevation (ft)	June 2017 Groundwater Elevation (ft)
MW-52	403270.8866	849151.5841	13.034	5.15 - 15.15	6.334	7.494
MW-53	403284.4125	849263.2634	12.415	2 - 12	6.385	7.655
MW-54	403313.3914	848863.787	13.982	2 - 12	6.172	7.862
MW-55	403265.3544	848874.6118	13.807	2 - 12	6.117	7.657
MW-56	403252.3534	848930.4631	13.595	2 - 12	6.195	7.565
MW-57	403247.7994	849230.6889	12.331	2 - 12	6.291	7.381
MW-58	403282.0799	849317.7841	12.755	2 - 12	6.395	7.565
MW-59	403345.0318	849312.7623	13.553	2 - 12	6.503	7.793
MW-60	403309.7459	849245.687	13.226	2 - 12	6.426	7.826
MW-61	403057.87	849154.81	13.56	40 - 45	5.93	NM
MW-62A	403061.7081	849114.6951	14.25	17.6 - 22.6	5.85	7.18
MW-62B	403066.7598	849112.1431	14.5	27.7 - 32.7	5.83	6.92
MW-63A	403012.8085	849027.6889	13.56	18.06 - 23.06	5.77	7.25
MW-63B	403010.3339	849033.4877	13.55	27.88 - 32.88	5.79	6.88
MW-64A	403006.5571	849126.438	13.5	18 - 23	5.76	7.28
MW-64B	403006.7595	849131.9713	13.46	27.8 - 32.8	5.84	6.84
MW-65A	402994.804	849241.7987	12.71	17.9 - 22.9	5.5	6.8
MW-65B	402994.9656	849245.8842	12.98	27.7 - 32.7	5.94	6.91
MW-66	402979.2215	848937.0949	13.33	17.75 - 22.75	5.63	7.22
MW-67	402893.938	849116.488	13.15	17.91 - 22.91	5.6	7.14
MW-68	402913.8138	849311.068	13.33	17.88 - 22.88	5.28	6.4
MW-9	403310.41	848991.04	12.138	1 - 6	6.238	7.738

NOTES:
NAD 83 = North American Datum 1983
TOC = Top of Casing
NM indicates Not Measured

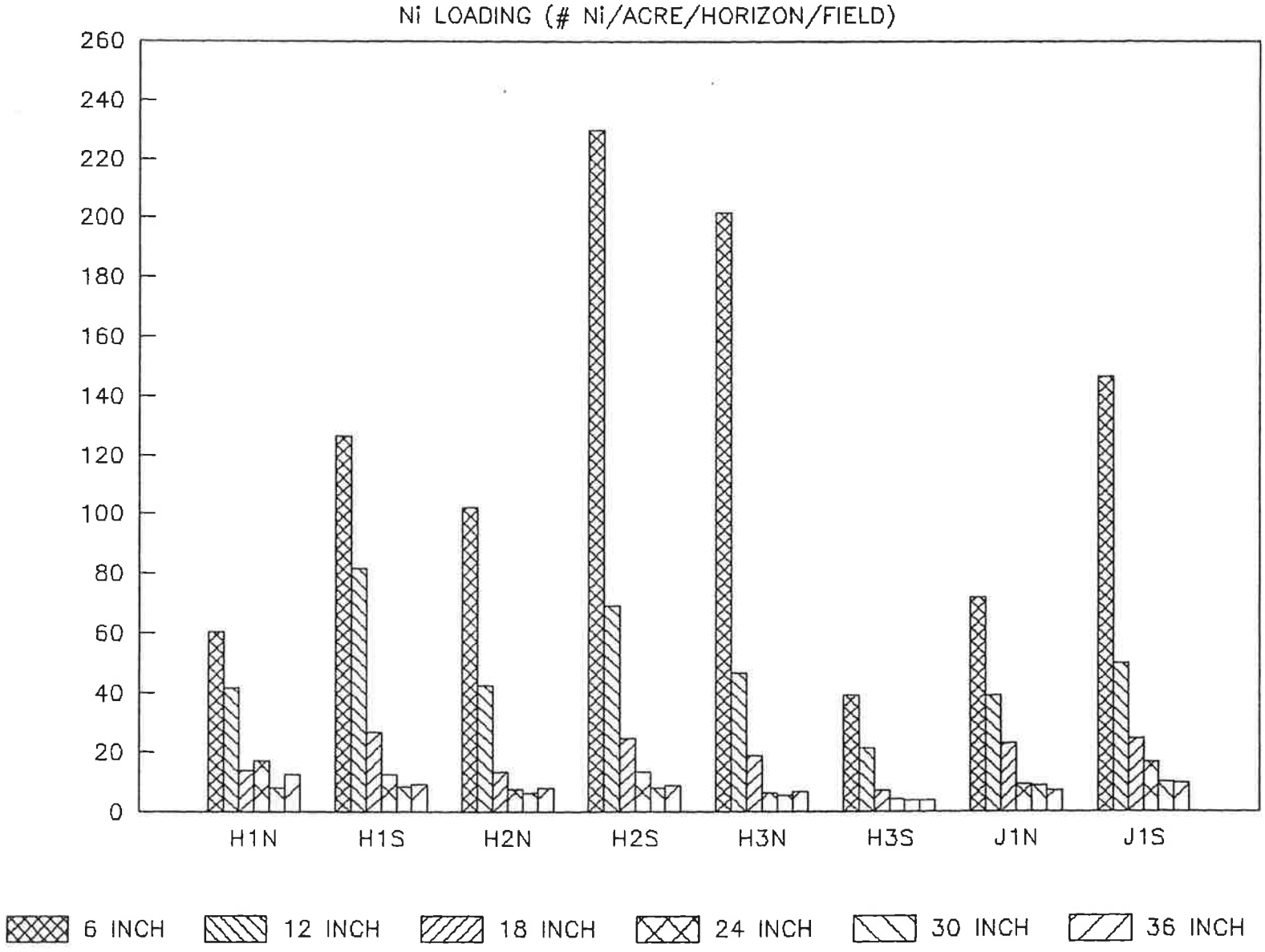
ATTACHMENT D

NICKEL CONCENTRATIONS FROM SPRAYFIELD SAMPLES TAKEN NOV 1991
(50 SAMPLE POINTS EACH COMPOSITED INTO ONE)

FIELD	HORIZON A		B		C		D		E		F		TOTAL
	PPM	#/ACRE	PPM	#/ACRE	PPM	#/ACRE	PPM	#/ACRE	PPM	#/ACRE	PPM	#/ACRE	#/ACRE
H1N	21.82	60.36	15.03	41.57	4.89	13.53	6.11	16.90	2.76	7.63	4.51	12.47	152.47
H1S	45.75	126.55	29.50	81.60	9.58	26.50	4.50	12.45	2.95	8.16	3.20	8.85	264.10
H2N	36.98	102.29	15.34	42.43	4.86	13.44	2.62	7.25	2.16	5.97	2.89	7.99	179.38
H2S	83.11	229.89	24.98	69.10	8.86	24.51	4.74	13.11	2.78	7.69	3.08	8.52	352.81
H3N	72.92	201.70	16.87	46.66	6.83	18.89	2.15	5.95	1.95	5.39	2.26	6.25	284.85
H3S	14.07	38.92	7.67	21.22	2.57	7.11	1.47	4.07	1.22	3.37	1.24	3.43	78.11
J1N	26.03	72.00	14.15	39.14	8.20	22.68	3.19	8.82	3.11	8.60	2.57	7.11	158.36
J1S	53.01	146.63	18.00	49.79	8.90	24.62	6.00	16.60	3.58	9.90	3.43	9.49	257.02
MIN	14.07	38.92	7.67	21.22	2.57	7.11	1.47	4.07	1.22	3.37	1.24	3.43	78.11
AVG	44.21	122.29	17.69	48.94	6.84	18.91	3.85	10.64	2.56	7.09	2.90	8.01	215.89
MAX	83.11	229.89	29.50	81.60	9.58	26.50	6.11	16.90	3.58	9.90	4.51	12.47	352.81

EACH FIELD IS 180 FEET BY 330 FEET	=	59400 FT2	=> 1.36363 ACRES
EACH HORIZON IS 6 INCHES DEEP	=	29700 FT3	VOLUME PER 6 INCH HORIZON
DENSITY OF SOIL	=	127 #/FT3	TAKEN AT 3 SAMPLE POINTS
AMOUNT OF SOIL FOR EACH FIELD HORIZON	=	4E+06 #	
AMOUNT OF SOIL PER ACRE OF FIELD	=	3E+06	

NICKEL ANALYSIS OF SPRAYFIELDS




J1N
H1N
H2N
H3N
J1S
H1S
H2S
H3S

PHOTO LOG

Facility name & address:
Symrise Inc.
209 SCM Road,
Brunswick, Glynn County

Date: Wednesday, 3/11/20

Photographed by:
C. Levy

Photo: 1 out of 17

Explanation:
Overview of Area 4

Facility name & address:
Symrise Inc.
209 SCM Road,
Brunswick, Glynn County

Date: Wednesday, 3/11/20

Photographed by:
C. Levy

Photo: 2 out of 17

Explanation:
Overview of the Maintenance Warehouse, 90-Day Accumulation Area, and the Food Grade Warehouse (door closed)

Facility name & address:
Symrise Inc.
209 SCM Road,
Brunswick, Glynn County

Date: Wednesday, 3/11/20

Photographed by:
C. Levy

Photo: 3 out of 17

Explanation:
Inside view of the 90 Day Hazardous Waste Accumulation Area

Facility name & address:
Symrise, Inc.
209 SCM Road
Brunswick, Glynn County

Date: Wednesday, 3/11/20

Photographed by:
C. Levy

Photo: 4 out of 17

Explanation:
Image of the signage in the 90 Day Hazardous Waste Accumulation Area

Facility name & address: Symrise Inc. 209 SCM Road, Brunswick, Glynn County
Date: Wednesday, 3/11/20
Photographed by: C. Levy
Photo: 5 out of 17
Explanation: Satellite Station in the 90 Day Accumulation Area.

Facility name & address: Symrise Inc. 209 SCM Road, Brunswick, Glynn County
Date: Wednesday, 3/11/20
Photographed by: C. Levy
Photo: 6 out of 17
Explanation: Overview of Facility Utility Pond.

Facility name & address:
Symrise Inc.
209 SCM Road,
Brunswick, Glynn County

Date: Wednesday, 3/11/20

Photographed by:
C. Levy

Photo: 7 out of 17

Explanation:
Overview of Area 7

Facility name & address:
Symrise, Inc.
209 SCM Road,
Brunswick, Glynn County

Date: Monday, 8/22/16

Photographed by:
C. Levy

Photo: 8 out of 17

Explanation:
Area 2 Overview

Facility name & address: Symrise, Inc. 209 SCM Road, Brunswick, Glynn County
Date: Wednesday, 3/11/20
Photographed by: C. Levy
Photo: 9 out of 17
Explanation: Area 3 Overview

Facility name & address: Symrise Inc. 209 SCM Road, Brunswick, Glynn County
Date: Wednesday, 3/11/20
Photographed by: C. Levy
Photo: 10 out of 17
Explanation: **Overview of Satellite** Accumulation Area on top of Process Wet Well.

Facility name & address:
Symrise Inc.
209 SCM Road,
Brunswick, Glynn County

Date: Wednesday, 3/11/20

Photographed by:
C. Levy

Photo: 11 out of 17

Explanation:
Overview of Aeration Basin

Facility name & address:
Symrise, Inc.
209 SCM Road,
Brunswick, Glynn County

Date: Wednesday, 3/11/20

Photographed by:
C. Levy

Photo: 12 out of 17

Explanation:
Overview of LAS Field

Facility name & address: Symrise, Inc. 209 SCM Road, Brunswick, Glynn County
Date: Wednesday, 3/11/20
Photographed by: C. Levy
Photo: 13 out of 17
Explanation: Overview of Former Sprayfield

Facility name & address: Symrise, Inc. 209 SCM Road, Brunswick, Glynn County
Date: Wednesday, 3/11/20
Photographed by: C. Levy
Photo: 14 out of 17
Explanation: Overview of Current Sprayfield

Facility name & address:
Symrise, Inc.
209 SCM Road,
Brunswick, Glynn County

Date: Wednesday, 3/11/20

Photographed by:
C. Levy

Photo: 15 out of 17

Explanation:
Overview of Area 19

Facility name & address:
Symrise, Inc.
209 SCM Road,
Brunswick, Glynn County

Date: Wednesday, 3/11/20

Photographed by:
C. Levy

Photo: 16 out of 17

Explanation:
Overview of Area 6/12

Facility name & address:
Symrise, Inc.
209 SCM Road,
Brunswick, Glynn County

Date: Wednesday, 3/11/20

Photographed by:
C. Levy

Photo: 17 out of 17

Explanation:
Overview of Former First Flush near MW-31

Attachment C

EA Closure Report

Final Closure Report
Aeration Basin, First Flush Basin, and Process Wet Well

Colonel's Island Wastewater Treatment Plant Upgrade
209 SCM Road, Brunswick, Georgia
EPA I.D. # GAD980847339

Prepared for

Blue Jay Environmental, Inc. and Symrise
209 SCM Road
Brunswick, Georgia 21523

Prepared by

EA Engineering, Science, and Technology, Inc.
225 Schilling Circle
Hunt Valley, Maryland 21031

July 2017
Version: Final
EA Project No. 62894.01

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Final Closure Report
Aeration Basin, First Flush Basin, and Process Wet Well

Colonel's Island Wastewater Treatment Plant Upgrade
209 SCM Road, Brunswick, Georgia
EPA I.D. # GAD980847339

Prepared for

Blue Jay Environmental, Inc. and Symrise
209 SCM Road
Brunswick, Georgia 215238

Prepared by

EA Engineering, Science, and Technology, Inc.
225 Schilling Circle
Hunt Valley, Maryland 21031

7 July 2017

John Fellinger
Project Manager, EA Engineering

Date

Nancy Mick

7 July 2017

Nancy Mick
Remediation Manager, Blue Jay Environmental, Inc.

Date

July 2017
Version: Final
EA Project No. 62894.01

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Responsible Agent of the Facility as defined in 40 CFR 270.11(b)(1)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I further certify, to the best of my knowledge and belief, that this document meets the objectives and requirements of the Consent Decree entered among GAEPD, EPA and Symrise in connection with Civil Action No. in the United States District Court for the Southern District of Georgia, Brunswick Division. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: James E Carson
Name: James Carson
Title: Plant Manager, Colonels Island Site, Symrise Inc.

Date: 7/7/17

Signature: Nancy W Mick
Name: Nancy Mick
Title: Remediation Manager, Colonels Island Site, Blue Jay Environmental Inc.

Date: 7/7/17

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Georgia Registered Professional Engineering Certification

I certify that I am a qualified professional engineer who has received a baccalaureate or post-graduate degree in engineering and have sufficient training and experience in environmental engineering and related fields, as demonstrated by state registration of completion of accredited university courses that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by myself or by a subordinate working under my direction.

Name: Geoffrey A. Tizard, II P.E.
License Number: 35764
Expiration Date: 31 December 2017

GEORGIA REGISTERED No. 35764 PROFESSIONAL GEOFFREY A. TIZARD

7/10/2017

Geoffrey A. Tizard, II P.E.

Date: 10 July 2017

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APPENDIX B: BILLS OF LADING/SHIPPING MANIFESTS (CD ONLY)
APPENDIC C: LOG BOOKS AND DAILY WORK SHEETS (CD ONLY)
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LIST OF ACRONYMS AND ABBREVIATIONS

AES	Analytical Environmental Services
bgs	Below Ground Surface
CFR	Code of Federal Regulations
COC	Chemical of Concern
DIMRA	Designated Interim Measures Remedial Area
DTP	Depth to Product
DTW	Depth to Water
ft.	Feet (foot)
GA EPD	Georgia Environmental Protection Division
GPS	Global Positioning System
HHRA	Human Health Risk Assessment
HWMU	Hazardous Waste Management Unit
IMP	Interim Measures Plan
MEK	Methyl Ethyl Ketone
Mg/Kg	Milligrams per Kilogram
OSHA	Occupational Safety and Health Administration
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
Renessenz	Renessenz, LLC
SAP	Sampling and Analysis Plan
SLERA	Screening Level Ecological Risk Assessment
SVOC	Semivolatile Organic Compound
TCL	Target Compound List
TCLP	Toxicity characteristic leachate procedure
Ug/L	Micrograms per Liter
USEPA	U.S. Environmental Protection Agency
VOC	Volatile Organic Compound
WWTP	Waste Water Treatment Plant

1. INTRODUCTION

1.1 BACKGROUND

The Symrise (formerly Renessenz LLC) Colonel's Island Facility has removed from service three concrete basins as part of an upgrade and modifications to the facility's existing Wastewater Treatment Plant (WWTP) and is submitting this Closure Report (Report) to complete regulatory closure activity. This Report describes the closure activities associated with the First Flush Basin and Process Wet Well, which were gravity-fed sumps used for flow equalization, and the Aeration Basin, a 100-foot by 250-foot concrete-lined basin used for biological treatment of wastewater (Figure 1-1). The Aeration Basin, Process Wet Well, and First Flush Basin are considered to be separate Hazardous Waste Management Units (HWMUs) for the purposes of this Closure Plan. The Aeration Basin was a surface impoundment and the Process Wet Well/First Flush Basins have been evaluated and determined to be tanks as defined by the Resource Conservation and Recovery Act (RCRA) (See Appendix A, Structure Evaluation Report). This Closure Report is a required submittal under Section VI of the Consent Decree between 1) Symrise; 2) the State of Georgia Department of Natural Resources, Environmental Protection Division (GA EPD); and 3) the United States Environmental Protection Agency (USEPA).

Closure activities included removal of residual liquids and solids, pressure washing of the HWMUs to remove residual waste, inspection of the concrete integrity, evaluation of the Process Wet Well /First Flush Basins and Aeration Basin, collecting rinsate samples verifying cleanliness of the basins and affected process lines, and sampling of the adjacent soils/groundwater.

Subsequent to the completion of the noted closure activities, a Pilot Test Injection Well Plan (Pilot Plan) was prepared and implemented to determine the feasibility of *in-situ* chemical oxidation (ISCO) to reduce contaminant concentrations in shallow groundwater in the vicinity of the former Process Wet Well and First Flush Basin. The objectives of the Pilot Plan were to determine: 1) the effective radii of influence (horizontal and vertical) in the sandy soils at the Facility; 2) if injection volumes are capable of reaching areas beneath process areas/structures that are incompatible/inaccessible for direct injections; and 3) the requirements for hydraulic/injection controls at the perimeter of Pilot Plan injection areas.

1.2 CLOSURE PLAN REQUIREMENTS

This Closure Report has been prepared to comply with the requirements of the Consent Decree including:

1. A summary of all sampling conducted by Symrise as required by the Closure Plan, including maps drawn to scale and/or aerial GPS maps that identify all sampling locations for soil, sediment, groundwater, and surface water, as well as the analytical results for each sample taken at each sampling location;

2. An evaluation of the analytical results for each HWMU, including:

(i) A summary of concentrations found in relation to USEPA Regional Screening Levels (available at http://www.epa.gov/reg3hwmd/risk/human/rbconcentration table/Generic_Tables/index.htm); and USEPA ecological screening values (available at http://epa. gov/region4/waste/ots/ecolbul.htm#ecoscreen)
(ii) Identification of pollution migration pathways (soil, sediment, surface water, groundwater, air, subsurface gas) if USEPA screening levels are exceeded; and
(iii) Identification of potential/actual receptors (human and ecological);

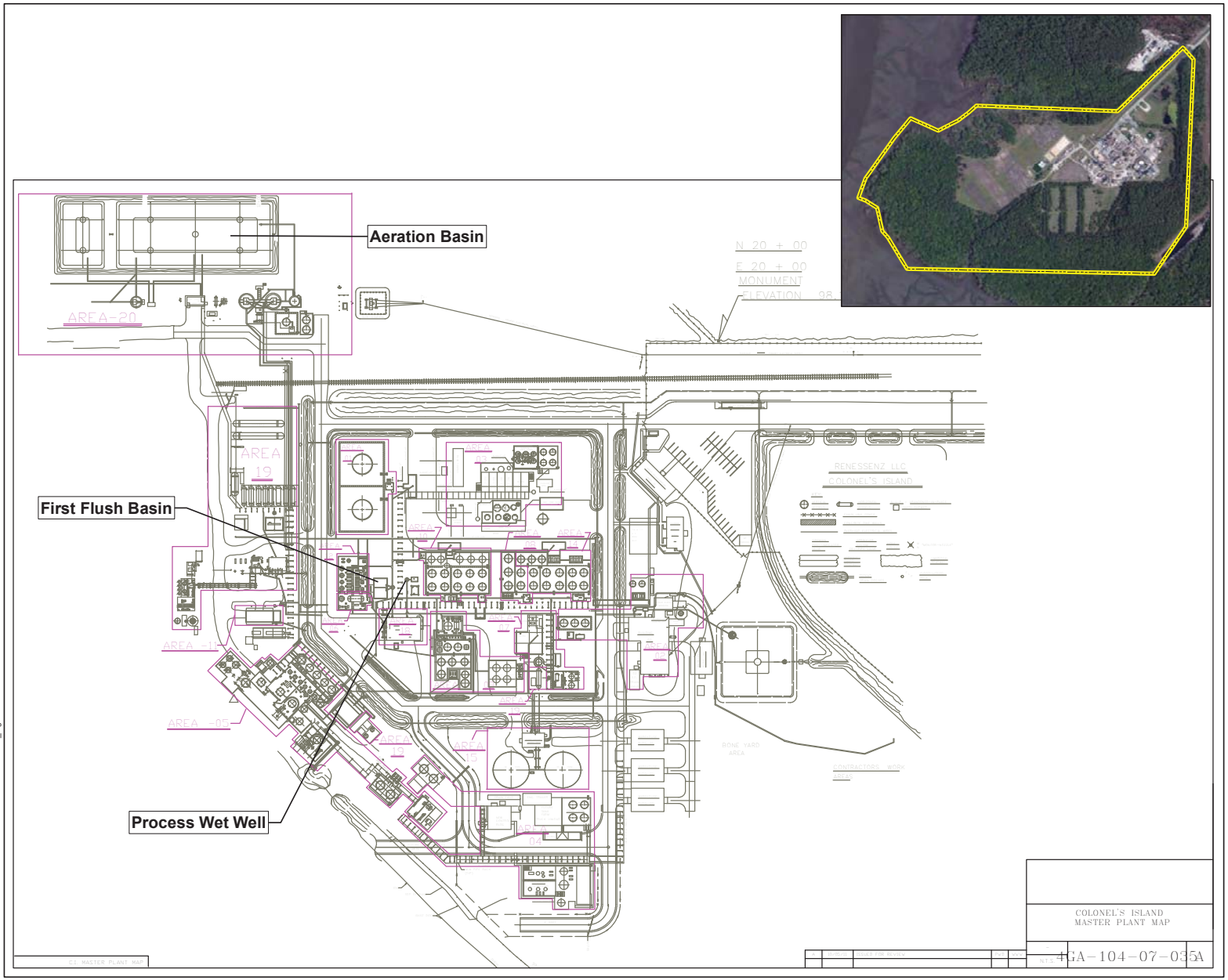
3. A certified report from a professional engineer (P.E.) licensed in the State of Georgia stating the current structural integrity of the subject HWMU (i.e., the Aeration Basin, First Flush Basin, and/or Process Wet Well); and
4. A recommendation for: no further action ("NFA"), interim measures ("IM"), post-closure care, and/or the collection of additional confirmatory sampling data to make a NFA/IM/post-closure determination based on the evaluation of the analytical results.

1.3 CLOSURE PERFORMANCE STANDARDS

The basins were closed in accordance with 40 CFR §264 in a manner that:

- Limited the need for further maintenance;
- Controlled, minimized, or eliminated post-closure releases of hazardous constituents to the ground, surface waters, or atmosphere; and
- All activities conformed to the standards identified in the Closure Plan.

The Occupational Safety and Health Administration (OSHA) standards were followed to ensure that all personnel involved in closure activities that were potentially exposed to hazardous materials were properly trained and protected.



VICINITY MAP

Legend

Property Boundary

Map Date: October 2014
Data Sources:
Note: Aeration Basin, First Flush Basin, and Process Wet Well locations are pre-closure

N

0 200 400

Feet

FIGURE 1-1
Site Location Map
Brunswick, Georgia

Document Path: C:\Users\rndhruv\Documents\Pinova\MXD\Pinova_Figure 1-1 General Location.mxd

2. CLOSURE OF THE AERATION BASIN, FIRST FLUSH BASIN AND PROCESS WET WELL

The following Tasks were performed in order to achieve final closure of the Aeration Basin, First Flush Basin, and Process Wet Well in accordance with requirements set forth in 40 CFR §264 and the established Closure Performance Standards. A conceptual flow chart of the closure activities is included as Figure 2-1.

2.1 PREPARATION FOR CLOSURE

General maintenance activity and preparation for closure included the following steps:

All free wastewater and biological solids from the aeration basin were transferred, to the greatest extent practicable, to the new system to provide activated sludge seed organisms for the new treatment tank.

2.2 CLOSURE ACTIVITIES

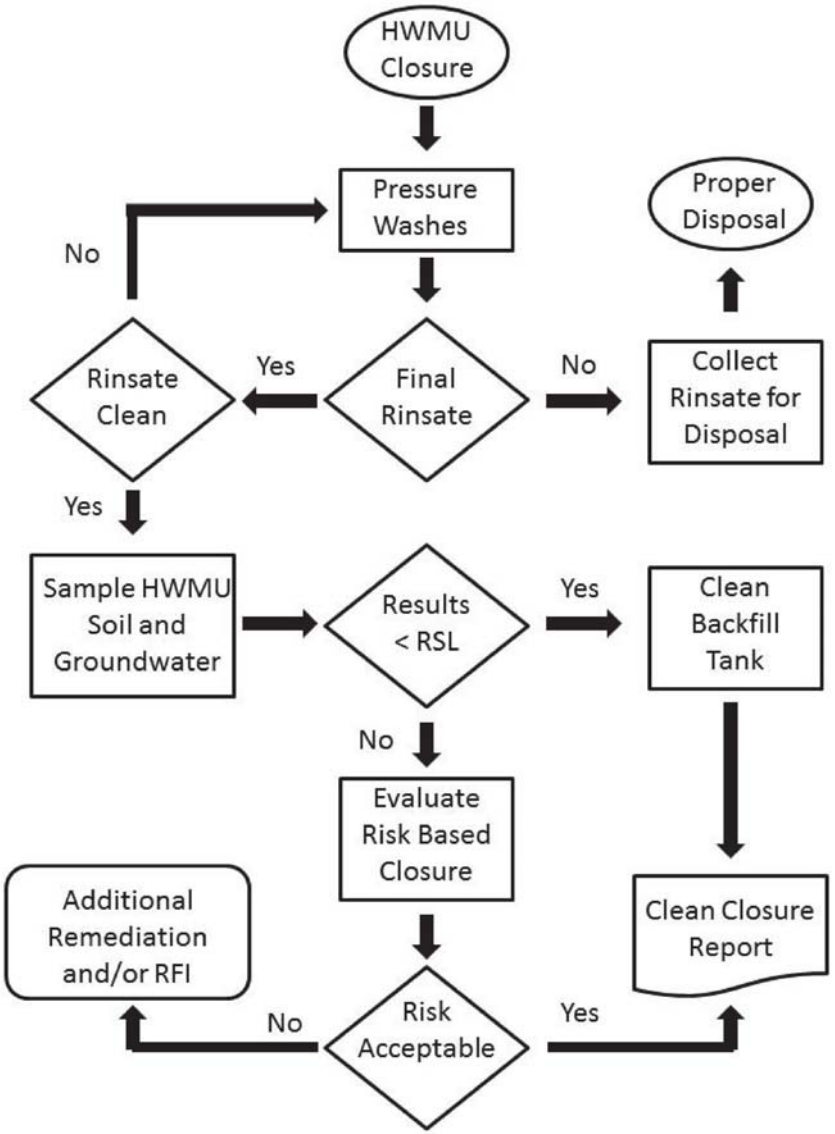
2.2.1 Aeration Basin

Closure began on December 29, 2014 with pumping of the remaining free liquids and biological solids from the Aeration Basin. Non-hazardous free liquids remaining in the Aeration Basin were shipped off site for wastewater treatment or solidification. A total of 425,000 gallons of wastewater were shipped off-site for disposal. The bills of lading/manifests are included in Appendix B (CD only).

During closure of the Aeration Basin, it was noted that the basin was bowed in the middle with a trough running along the full circumference of the basin floor. Cracks were noted in the raised center of the basin. Minor groundwater intrusion into the Aeration Basin was observed at these cracks. Samples of the intruding groundwater were collected and analyzed. The discussion of the groundwater samples and results is presented in Section 3. The rate of groundwater intrusion was such that groundwater could initially be managed through the plant's newly installed wastewater treatment system. However, during solidification of the sludge in the Aeration Basin, further groundwater leakage occurred along the bottom seams of the basin. This leakage rate quickly overwhelmed the plant's wastewater treatment system capacity.

Therefore, the facility sought and gained approval from GA EPD to handle groundwater removed for dewatering purposes as part of the existing Erosion and Sediment Control Plan for the Construction Stormwater permit.

The Aeration Basin's remaining solids were dredged out of the basin trough to the extent feasible. Water bladders were placed along the trough of the basin and filled with the water from inside the basin. These bladders formed a weighted seal against the basin floor and reduced groundwater intrusion. The remaining sludge within the basin was then solidified and removed for off-site landfill disposal. The dewatering system surrounding the Aeration Basin was utilized



AERIAL IMAGE

Legend

Map Date: October 2014
Data Sources:

N

0 1,000 2,000
Feet

FIGURE **2**-1
Closure Activities Flow Chart
Brunswick, Georgia

Document Path: L:\GISData\Southeast\Georgia\Penova\MXD\Pinova_Figure 3-1 Closure Activities.mxd

to reduce groundwater pressure on the basin by pumping groundwater to the plant's NPDES outfall under the conditions of the facility's storm water construction permit. All pumped groundwater was treated through a carbon filter system prior to discharge. Once the groundwater pressure was reduced, cleanup of the Aeration Basin's walls and floors was completed and a rinsate sample was collected for confirmation. The water held in the bladders was treated through dual carbon filtration and discharged under the facility's storm water construction permit.

The Aeration Basin was cleaned with a pressure washer to remove residual adhering solids. High solids rinse waters were shipped off site for disposal. Low solids rinse waters were treated through carbon filtration and discharged under the facility's storm water construction permit or pumped to the plant's spray field system. A sample of the water utilized as rinsate water was collected and analyzed. Characterization sampling was conducted as detailed in the Sampling and Analysis Plan (SAP) included in Appendix A of the Closure Plan. Sampling results are discussed in Section 3.

The Aeration Basin's associated equipment was cleaned using a pressure washer to remove residual adhering solids. This wash water and suspended solids was transferred to a temporary holding tank for characterization, followed by subsequent transportation and disposal. Non-hazardous residual waters or rinse waters were treated on site in the new WWTP. Ancillary equipment was recycled as scrap. Underground lines associated with the aeration basin were excavated and removed. These lines were common to the bank areas where soil samples were taken so additional soil sampling was not required. A sample of the firefighting suppression system water utilized as rinsate water was collected and analyzed to ensure that it did not cross contaminate the final rinsate samples. This characterization sampling was conducted as detailed in the Sampling and Analysis Plan (SAP) included as Appendix A of the Closure Plan, and the sampling results are discussed in Section 3.

After the Aeration Basin was cleaned, two temporary groundwater wells were installed in the bottom of the basin. Characterization sampling of the groundwater was conducted as detailed in the Sampling and Analysis Plan (SAP) included as Appendix A of the Closure Plan. Sampling results are discussed in Section 3. In addition, prior to demolition the Aeration Basin was also visually inspected by a Certified Engineer. Sample holes were bored to verify concrete depth. The presence, spacing, and type of rebar were evaluated. Core samples were also pulled to verify concrete depth and strength. These results were consistent with the earlier determination that the basin was a surface impoundment (see Appendix A, Structure Evaluation Report CD only). The Log Book and Daily Work Sheets are included in Appendix C (CD only). Photographs of the closure activities, including a description of each photograph and a map with photograph locations, are presented in Appendix D (CD only).

2.2.2 First Flush Basin and Process Wet Well

The fiberglass cover and other associated equipment leading into the First Flush Basin were cleaned by pressure washing. The rinse waters were discharged into the basin. Equipment associated with the Process Wet Well was also pressure washed with rinse water discharged into

the First Flush Basin. The cleaned equipment from both units was placed in a lined 40-cubic yard roll-off and disposed of off-site as non-hazardous waste (see Appendix B).

Residual wastewater and oils from the First Flush Basin and Process Wet Well were pumped into the wastewater treatment system for oil recovery and wastewater treatment. The Process Wet Well, First Flush Basin, and associated pumps/equipment were cleaned using a pressure washer to remove residual adhering solids. Low solids wash waters were transferred to the WWTP. High solids wash water was transferred to a temporary holding tank for characterization, followed by subsequent transportation and disposal at an off-site treatment facility.

Residual solids from the Process Wet Well were transferred by vac truck into the First Flush Basin. Solids from the associated Process Wet Well and First Flush Basin sumps were also transferred into the First Flush Basin. The solids were solidified on site using Terrae Bond Bed Ash and TerraBond-TS solidification agent. The solids were then loaded by backhoe into lined, covered roll-off boxes. The resulting solidified mixture was characterized as non-hazardous by TCLP, but designated as ignitable (D001) based on the characterization of the unsolidified sludge. The solidified mixture, approximately 200 cubic yards, was shipped off site for disposal by incineration. Hazardous waste manifests are included as Appendix E (CD only).

During the closure of the First Flush Basin, cracks were noted in the basin wall. In addition, the seal between the clay wastewater inlet line and the First Flush Basin had deteriorated. This below grade joint was located below the water table. Therefore, two additional subsurface soil and groundwater samples were collected as required in the Closure Plan. Characterization sampling was conducted as detailed in the Sampling and Analysis Plan (SAP) included in Appendix A of the Closure Plan. Sampling results are discussed in Section 3. In addition, the First Flush Basin and Process Wet Well were visually inspected by a Certified Engineer (see Appendix A). The Log Book and Daily Work Sheets are included in Appendix C. Photographs of the closure activities, including a description of each photograph and a map with photograph locations, are presented in Appendix D.

2.2.3 Process Lines

Influent and effluent lines to/from the Process Wet Well and First Flush Basin were flushed by hydro-blasting and vacuuming to the First Flush Basin. Low solids rinse waters were transferred to wastewater treatment. Higher solids mixtures were solidified for off-site disposal and placed into a lined, covered roll-off box. Solidified materials from the first round of cleaning were disposed of as D001 waste (see Appendix E).

Influent and effluent lines immediate to the First Flush Basin and Process Wet Well were videotaped after the first cleaning to determine the condition of the lines and the extent to which further cleaning might be required. Additional cleaning was then conducted with a steam cleaner. In some areas, historically plugged clean out ports were opened to allow cleaning of the full line. Dilute rinse waters from this final cleaning were transferred to the WWTP. The influent/effluent lines were videotaped after the second round of cleaning and confirmed to be

visually free of waste materials (see Appendix F); two runs of line were selected for representative sampling. Rinse waters were flushed through the full length of these lines. A sample of the water utilized as rinsate water was collected and analyzed to ensure that it did not cross contaminate the final rinsate samples. Characterization sampling was conducted as detailed in the Sampling and Analysis Plan (SAP) included in Appendix A of the Closure Plan. Sampling results are discussed in Section 3.

When the influent/effluent line rinsate sample was determined to be clean, the remaining underground lines were sealed with non-shrinking grout. Non-hazardous residual waters or rinse waters were treated on site in the new WWTP. Ancillary equipment was recycled as scrap. A sample of the water utilized as rinsate water was collected and analyzed to ensure that it did not cross contaminate the final rinsate samples. Characterization sampling was conducted as detailed in the Sampling and Analysis Plan (SAP) included in Appendix A of the Closure Plan. Sampling results are discussed in Section 3.

Figure 2-2 presents the underground piping drawings for the facility. Historically, most of the process wastewater was routed via underground clay piping to either the Wet Well or the First Flush areas. Drain Line 1 runs from Area 14 to the First Flush Basin, approximately 330 feet in length. Drain Line 3 is a short line, approximately 30 feet in length, that runs from east of area 6/12 over to the First Flush Basin inlet sump. Drain Line 5, approximately 85 feet in length, runs from Area 5 and connects with Drain Line 3. Drain Line 4 is a subsection of Drain Line 5, encompassing the 20 feet from the midpoint of Drain Line 5 to Drain Line 3. These lines were jet flushed at 2000 psi until no significant solids, odor, or oils were observed flowing into the First Flush basin inlet sump. Drain Line 9, approximately 60 feet in length, runs from Area 9 to Drain Line 2. This line was jetted approximately 6 times. Drain Line 2, approximately 460 feet in length, runs from Area 14 to the First Flush Basin. Drain Line 6, approximately 42 feet, runs from the Area 7 to Drain Line 7. Drain Line 7, approximately 150 feet, runs from Area 2 to Area 7 and ties into Line 8. Line 8, approximately 24 feet, adjoins Drain Line 7 and runs to Drain Line 2.

In advance of the closure of the Wet Well and First Flush Basin, the facility undertook a project to convert all wastewater flow to aboveground piping. This project extended over a period of three years. The wastewater line project included the flushing of lines to the Wet Well or First Flush Basin and sealing of the process area drain with concrete grout. In some cases, the process area drain was also subsequently covered with a stainless steel sump as part of the new wastewater conveyance system.

Upon completion of cleanout of the Wet Well and First Flush basin, Clean Harbors began inspecting and cleaning of pipelines. In order to ensure appropriate cleanout of wastewater residuals and solids, Clean Harbors utilized a combination of cleanout ports and the inlet lines to the Wet Well and First Flush Basin for cleaning. In some locations, previously closed cleanout points were reopened or lines were broken for top entry to allow for cleanout of the total line. Video cameras were used during the initial cleanout to inspect for breaks or other defects in the clay lines prior to cleanout. The lines were cleaned with both a water jet and vac truck, and also with steam. Caution was used to ensure that the water pressure used for cleaning did not exceed

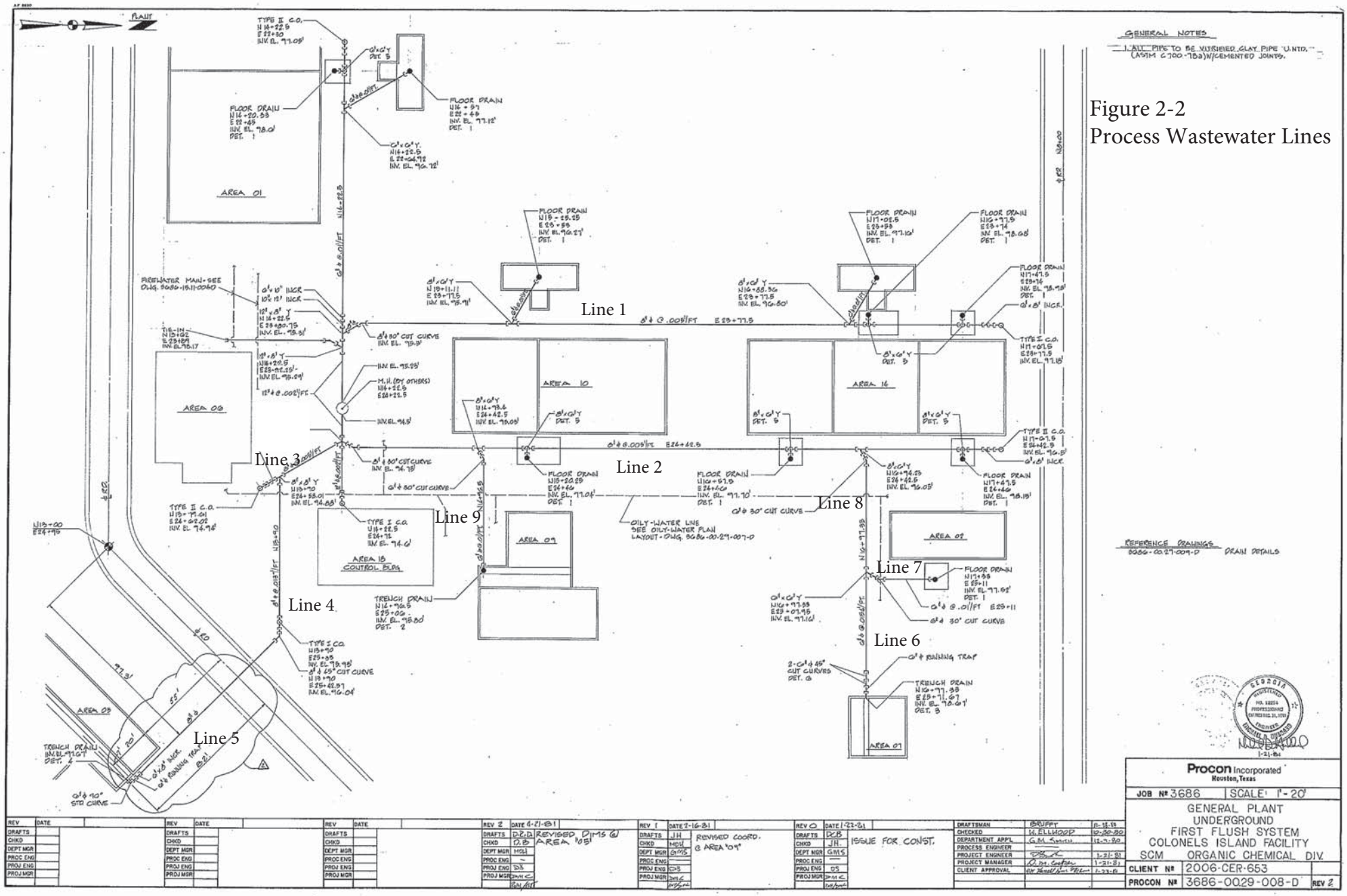


Figure 2-2
Process Wastewater Lines

Procon Incorporated, Houston, Texas	
JOB № 3686	SCALE: 1" = 20'
GENERAL PLANT UNDERGROUND FIRST FLUSH SYSTEM COLONELS ISLAND FACILITY SCM ORGANIC CHEMICAL DIV.	
CLIENT №	2006-CER-653
PROCON №	3686-00.29-008-D REV 2

REV	DATE	DRAFTS	CHKD	DEPT MGR	PROC ENG	PROJ ENG	PROJ MGR
2	6-21-81	D.B.D	D.B	HGH	—	DJS	DMC
1	2-16-81	J.H.	MDH	GMS	—	CJS	DMC
0	1-22-81	DCB	JH	GMS	—	DJS	DMC

REVISED DIMS @ AREA "01"
REVISED COORD. @ AREA "04"
ISSUE FOR CONST.

DRAFTSMAN	BRUPPT	8-15-79
CHECKED	W. ELLWOOD	10-30-80
DEPARTMENT APPR.	G.M. Sparks	12-9-80
PROCESS ENGINEER	—	
PROJECT ENGINEER	D.B.	1-21-81
PROJECT MANAGER	D.M. Crafton	1-21-81
CLIENT APPROVAL	for Harold Mann Walker	1-22-81

the design pressure of the clay lines. Lines were jetted and steamed multiple times until no significant solids, odor, or oil were observed flowing into the First Flush Basin or Wet Well inlet sump. PID and LEL measurements were also taken at pipe opens to help evaluate the effectiveness of the cleaning process. The lines were also evaluated using a video camera to inspect for residual solids or breaches in the piping. A pipe cleaning rinsate sample (FR-01) was pulled representative of a 214 foot length of piping from Area 6 to the Wet Well. A second pipe cleaning rinsate sample (FR-02A) was pulled from Drain Line 1 to the First Flush Basin. Characterization sampling was conducted as detailed in the Sampling and Analysis Plan (SAP) included in Appendix A of the Closure Plan. Sampling results are discussed in Section 3.

Some representative photos and video clips from the final inspection of the underground lines are included in Appendix F. In general, the condition of the lines and joints was good. Some construction debris, gravel, and solids were observed in sections of the underground lines. Minor cracking was observed in several areas. Two major breaches were observed and selected for biased sampling. These breaches are shown in JPG15, JPG23, JPG24, and JPG25. JPG 15 is a location where a pipe was driven through the clay line. JPG 23, JPG24, and JPG25 show an area of significant spiral cracking where the second biased sample was taken. Samples SB-13 and MW-30 were collected where the pipe was driven through the clay line. SB-14 and MW-31 were collected at these breech locations. Figures 3-2 and 3-3 present detections at these sampling locations. Characterization sampling was conducted as detailed in the Sampling and Analysis Plan (SAP) included in Appendix A of the Closure Plan. Sampling results are discussed in Section 3.

Two joints were selected for representative sampling of soils to confirm the condition of the joint seals in the First Flush Basin and Process Wet Well area. These joints were excavated and the condition of the joints was documented in the daily logbook. A grab soil sample was pulled immediately under each joint (SB-15 and SB-16). Figure 3-2 presents detections at these sampling locations. The joints were in good physical condition and the risk assessment determined that soil was not a media of concern, so no further investigation of pipe joints was required. Characterization sampling of soils associated with joints was conducted as detailed in the Sampling and Analysis Plan (SAP) included in Appendix A of the Closure Plan. Sampling results are discussed in Section 3.

2.3 INTEGRITY ASSESSMENT

The Process Wet Well and First Flush Basin have been evaluated and determined to be tanks **as installed** as defined by RCRA (see Appendix A). The inspector also conducted a visual inspection for cracks or other defects that could have resulted in leakage. As noted in the United Consulting Report on page 3, cracks were identified in the First Flush Basin. At one crack in the northeast wall of the northernmost chamber groundwater was seeping through the crack from outside the tank. Ten other cracks, mainly narrow and vertical were observed. There was no visual confirmation (groundwater seepage) to confirm whether these observed cracks represented leak points. As noted in the United Consulting Report on page 4, vertical cracks were noted at the midpoint of both long walls of the Process Wet Well. The inspector noted that he did not believe the vertical cracks were leak points. In addition, cracks and breaches were observed

associated with the underground wastewater lines. Samples were taken per the Closure Plan at line breaches. There were no detections above screening levels in the samples collected at the line breaches. Both spiral and horizontal cracking was observed at numerous locations along the underground pipelines but there was no visual evidence that the clay pipe was leaking at these locations. Much of this out-of-service underground line is inaccessible to soil sampling since it is within active operations areas; for instance beneath the active above ground process line pipe racks and closely bordered by storage and process area containment structures. As Figure 3-4 illustrates, the existing groundwater monitoring program includes numerous wells in close proximity to these areas. The potentiometric surface overlay (June 2017) illustrates that such wells are in place downgradient of these out-of-service lines.

3. CONFIRMATORY SAMPLING

In addition to the physical inspection of the basins, sampling of soil and groundwater adjacent to the basins was performed in compliance with 40 CFR Part 264, Subparts G and K. Sampling methods and sample handling procedures were completed in accordance with relevant USEPA and GA EPD guidance documents. In addition, the sampling was conducted as described in the Closure Plan and associated SAP.

3.1 CONFIRMATORY ACTIVITIES

After the Aeration Basin, Process Wet Well, and First Flush Basin were emptied and cleaned, a visual inspection was performed to assess the competency of the concrete basins and the likelihood of past releases to the adjacent soil and groundwater. The inspection was performed by United Consulting and the inspection report is included in Appendix A. Based on the findings of these activities, soil and groundwater sampling was biased toward areas where defects were identified in the concrete structures.

3.2 GENERAL SAMPLING DESCRIPTION

The following paragraphs provide an overview of the sampling activities. The SAP (Closure Plan, Appendix A) discusses sampling in greater detail.

3.2.1 Soil Sampling

Surface soil sampling (0-4 inches) was conducted on the banks of each of the four Aeration Basin berm walls to determine if overfill or spills have occurred. Soil borings were advanced on each side of the Aeration Basin (4 borings) and on two sides each of the First Flush Basin and Process Wet Well (a total of 4 borings for the combined area) using direct push technology to the top of the saturated zone. Samples were collected just above the saturated zone unless evidence (stained soils, odor, PID readings) suggested an alternate sampling depth. The floors of all three basins are below groundwater level so no soil sampling was required underneath the basins. Biased sampling of soils occurred when cracks were identified in the First Flush Basin, as directed by the Closure Plan. In addition, soil samples were collected beneath two joints that were selected for representative sampling to confirm the condition of the joint seals in the process lines leading to/from the First Flush Basin and Process Wet Well. Groundwater samples were collected as described in the approved Closure Plan beneath the Aeration Basin (described in Section 3.2.2.1 below) as soil samples could not be collected beneath the Aeration Basin. The floor of the Aeration Basin was located more than two feet below the mean water table. Excess soil cuttings were drummed and managed as investigation-derived waste. All soil samples were submitted to a certified laboratory for target compound list (TCL) VOC and SVOC analysis.

3.2.2 Groundwater Sampling

Groundwater monitoring well installation and sampling were conducted as detailed below.

3.2.2.1 Groundwater Monitoring Well Installation

Permanent wells were installed with selected screen lengths which straddled the top of the shallow aquifer. After installation and development, each of the wells was purged and sampled as described below. Figure 3-1 presents the permanent groundwater monitoring well design. Appendix G (CD only) provides the monitoring well installation and purge logs.

Groundwater wells were installed on each side of the Aeration Basin. Since the Aeration Basin was installed below groundwater level and had an extensive footprint, groundwater samples were collected immediately beneath the Aeration Basin at two locations. A total of four groundwater wells were installed on accessible sides of the Process Wet Well (two wells) and First Flush Basin (two wells). Because the Process Wet Well and First Flush Basin were installed below the groundwater table and due to their small footprint/accessibility, it was not practicable to collect a groundwater sample directly beneath each basin.

The new monitoring wells were installed to depths of approximately 10-ft bgs using a Geoprobe® drill rig equipped with augers. Monitoring wells were constructed of 2-in. internal diameter Schedule 40 polyvinyl chloride with 5 ft. of 0.010 slot screen, unless boring logs indicated that a change in screen size was necessary to access specific vertical zones. A filter pack design consisted of Morie size 0 sand pack or equivalent, with the sand pack installed from the base of the well to 2-ft above the top of the screen. A minimum 2-ft bentonite seal was installed above the sand pack. The remaining area of the borehole was filled with a bentonite/cement grout mix. The wells were completed at the ground surface with an 8-in. flush-mount manhole lid and a 3 ft. by 3 ft. concrete pad. Following completion of well installation, a record of monitoring well construction was completed.

After the wells were installed, each well was topographically surveyed by a licensed surveyor to determine its map coordinates using the Real Time Kinematic Global Positioning System (GPS). Wells were surveyed to a vertical accuracy of 0.010 US survey feet using the 1988 North American Datum and a horizontal accuracy to within 0.10-ft tied to site datum (1983 State Plane Coordinate System, Georgia East Zone). The elevations for the natural ground surface (not the top of the grout collar), the highest point on the riser casing rim of the uncapped well casing, and the protective casing for each well were surveyed. A survey mark was indicated by a small groove or permanent marking in the well riser casing

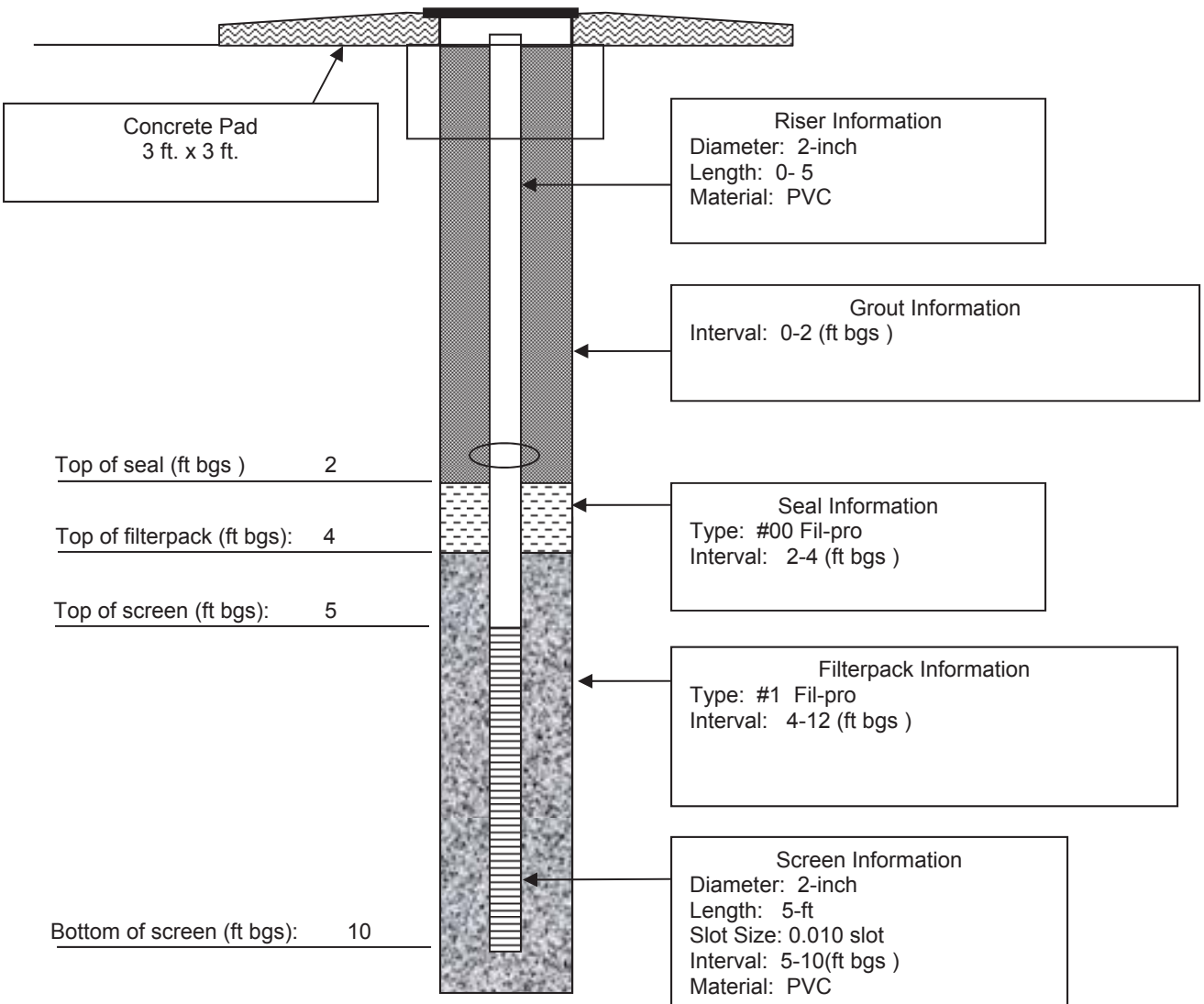
3.2.2.2 Monitoring Well Development

Newly installed monitoring wells were developed using surging and pumping techniques. Development was not implemented until the well seal had cured and settled. Prior to well development, water levels and well depths were measured using an electronic water level indicator graduated to 0.01 ft., and the volume of standing water in the well was calculated. Appendix G (CD only) provides the monitoring well installation and purge logs.

During well development, field parameters, including pH, specific conductance, temperature, oxidation/reduction potential, dissolved oxygen, and turbidity, were monitored at 5-minute

Figure 3-1
Monitoring Well Construction Design

EA Engineering, Science, and Technology, Inc. Project Name/ Project No.: Pinova Approvals: Pinova: _____ Clean Harbors: Location: : Brunswick, Georgia	Monitoring Well ID No.: **MW-21** (403403.4 N 849130.2 E NAD83) Water Table: 7.4



Notes: All features not to scale.
Actual Northing, Easting and well construction detail to be finalized after completion of installation.

intervals throughout the development process using a multi-parameter water quality monitor with flow-thru cell (Horiba Flow Cell U-22 or similar) and water level indicator. Water quality parameters and water levels were recorded on well development logs.

3.2.2.3 Monitoring Well Sampling

Groundwater samples were collected from the new wells after completion of well development. Groundwater sampling was performed as described in the SAP (Closure Plan, Appendix A) and groundwater samples were analyzed for pH and TCL VOCs.

3.2.3 Rinsate Sampling

When the Aeration Basin, Process Wet Well, and First Flush Basin, including components, were washed to the extent that the high pressure low volume washer would remove the residual material, the final rinsate was collected to determine the presence of waste by analysis for pH, VOCs, and SVOCs. The rinsate was determined to be clean when the pH was between 4 and 10 and VOC/SVOC results were less than or equal to the tapwater value presented in the USEPA Region IV Regional Screening Level Tables (Appendix H). A sample of the water to be utilized as rinsate water was collected and analyzed to ensure that it did not cross contaminate the final rinsate samples. The SAP (Closure Plan, Appendix A) discusses rinsate sampling in greater detail.

3.2.4 Analytical Procedures and Requirements

Soil and groundwater samples were collected using clean nitrile gloves and placed in laboratory supplied bottle ware containing appropriate preservatives, as defined in the SAP. Quality assurance/quality control (QA/QC) samples (trip blanks, equipment blanks, duplicates, and matrix spike/matrix spike duplicate sample sets) were collected as detailed in the SAP (Closure Plan, Appendix A).

Sample containers were labeled, tracked via chain of custody forms, and packed and delivered to the offsite laboratory for analysis within 24 hours to meet all holding time requirements. Soil and groundwater samples were placed on ice in sample coolers immediately after collection to ensure proper preservation. Temperature blanks were included in sample coolers to document laboratory receipt temperature. QA/QC samples (trip blanks, rinsate blanks, duplicates, and matrix spike/matrix spike duplicate sample sets) were collected as detailed in the SAP (Closure Plan, Appendix A). Soil and groundwater samples were shipped offsite to Analytical Environmental Services, Inc., (AES) located in Atlanta, Georgia.

3.3 BASIN SPECIFIC SAMPLING RESULTS

The following paragraphs provide the specific basin sampling activities and results. The complete analytical packages are provided in Appendix I (CD only).

3.3.1 Aeration Basin Sampling Results

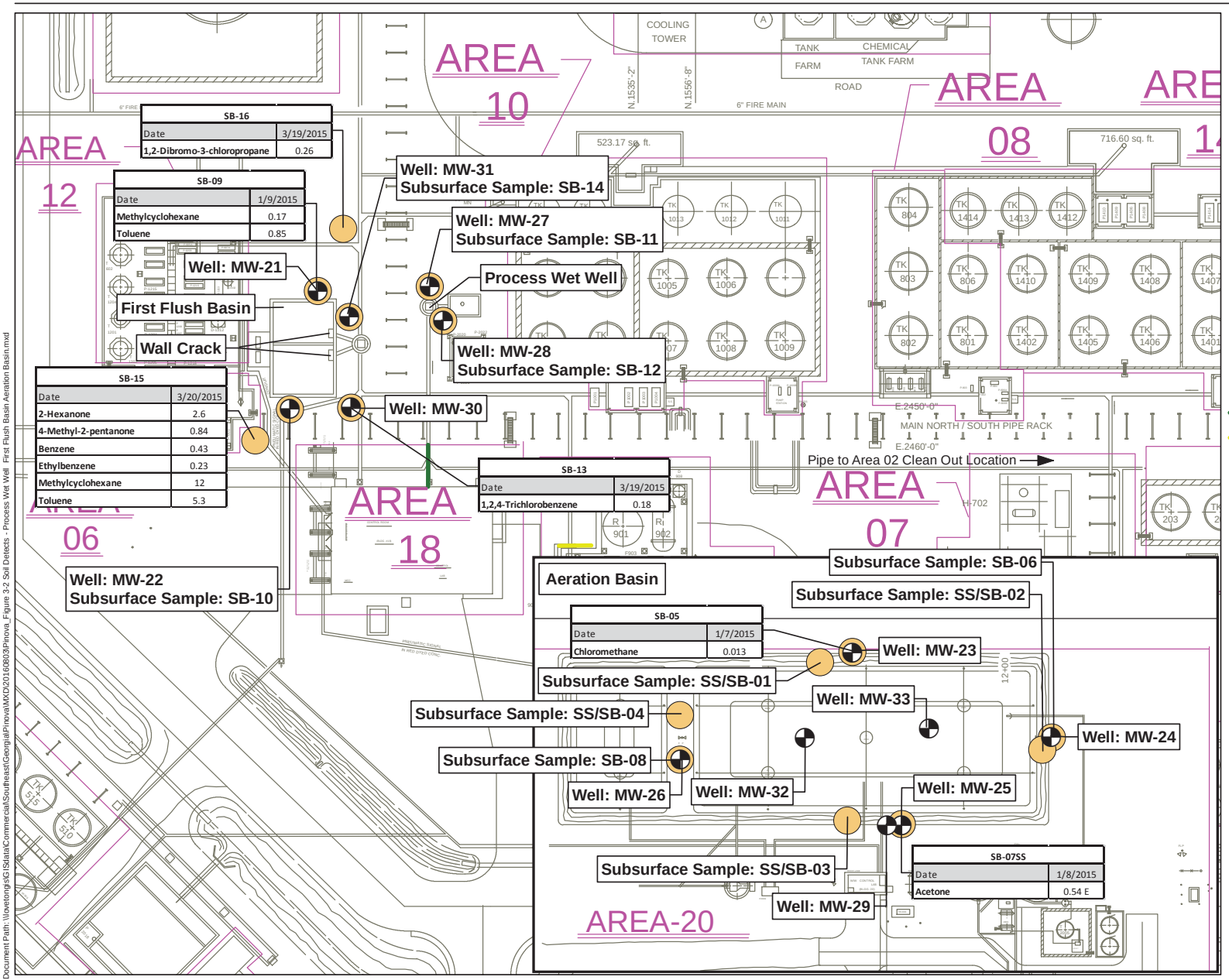
The Aeration Basin soil sampling locations are shown on Figure 3-2; groundwater sampling locations are shown on Figure 3-3. Table 3-1 presents the surface soil (SS/SB-01 to SS/SB-04) and subsurface soil (SB-05 to SB-08) results. Table 3-2 presents the groundwater (MW-23 to MW-26, MW-29, MW-32, and MW-33) results. There were no exceedances of USEPA residential soil screening levels, tapwater screening levels or ecological screening levels detected in any sample. Table 3-3 presents the groundwater samples of water infusing into the Aeration Basin during cleaning activity (A-Basin-W-001 and A-Basin-W-002) and the final rinsate sample collected from the Aeration Basin after final cleaning was completed (FR-03-Basin). There were no exceedances of the USEPA tapwater screening levels detected in any samples.

3.3.2 Process Wet Well and First Flush Basin Sampling Results

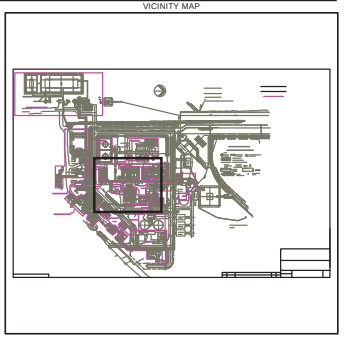
The Process Wet Well and First Flush Basin soil and groundwater sampling locations are shown on Figure 3-2 and Figure 3-3, respectively. Cracks in the First Flush Basin wall were detected after the basin had been cleaned. Additional soil samples (SB-13 and SB-14) and groundwater samples (MW-30 and MW-31) were collected in the vicinity of these cracks, as required by the Closure Plan. Table 3-1 presents the subsurface soil (SB-09 to SB-16) results. There was one exceedance of USEPA residential soil screening levels (1,2-dibromo-3-chloropropane at 0.26 mg/kg) in sample SB-16. Table 3-2 presents the groundwater (MW-21, MW-22, MW-27, MW-28, MW-30, and MW-31) results. Benzene was detected above the USEPA tapwater screening level (5.0 µg/L) in MW-21 (130 µg/L), MW-27 (7.6 µg/L), and MW-31 (5.4 µg/L). Table 3-3 presents the final rinsate samples collected from the First Flush Basin and Process Wet Well after final cleaning was completed. An initial rinsate sample (FR-02-First Flush) was collected and analyzed to determine how much additional cleaning and flushing of the process lines was required. After the additional cleaning, a second rinsate sample was collected (FR-02-A-First Flush) to document pipe flushing and cleaning. Samples were collected from the First Flush Basin and Process Wet Well after cleaning to document the adequacy of the cleaning activities (FR-03 First Flush Pit and FR-04 Wet Well Pit). There were no exceedances of the USEPA Tapwater Screening Levels detected in the final pipe rinsate sample, First Flush Basin, and Process Wet Well samples.

3.3.3 Process Wet Well and First Flush Basin Additional Delineation

Paragraph 20(d) of the Consent Decree, requires that the Closure Report make a recommendation of (1) No Further Action, (2) Interim Measures, (3) Post Closure Care, or (4) Collection of additional confirmatory data to delineate which of the three courses of action would be appropriate. When the initial Closure Report was submitted in May 2015, the initial sampling indicated that, with respect to the Process Wet Well and the First Flush Basin, collection of additional confirmatory data was needed to delineate which of the three courses was appropriate. Delineation was required to



VICINITY MAP



Legend

- New Monitoring Well

Soil Sample Locations

- Subsurface Sample Location

Pipe Line

- Clean Out Point
- Open Lines

Notes:
Monitoring Wells will be within 3 ft of first flush basin and/or process wet well.

All results in mg/kg.

Map Date: August 2016

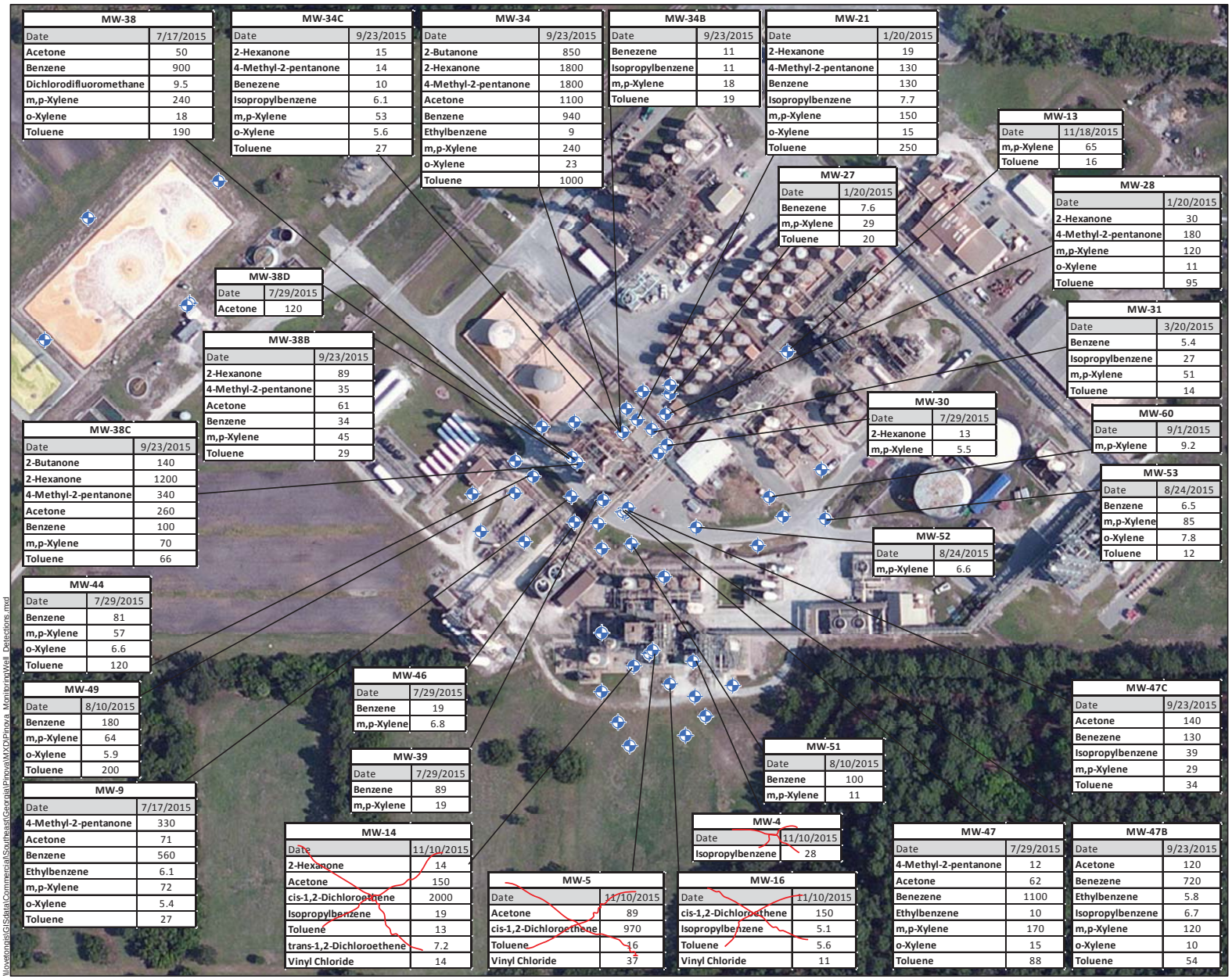
N

0 25 50

Feet

FIGURE 3-2
Soil Detections
Process Wet Well, First Flush Basin, and Aeration Basin
Brunswick, Georgia

Document Path: \\oxetongis\GIS\data\Commercial\Southeast\Georgia\Pinova\MXD\20160803\Pinova_Figure 3-2 Soil Detects - Process Wet Well First Flush Basin Aeration Basin.mxd



Legend

Existing Monitoring Well

Map Date: July 2016

Note: All analyte results in mg/kg

Aerial: Google Earth 2014

N

0 50 100
Feet

Figure 3-3
Monitoring Well Detections Map
July 20, 2016
Brunswick, Georgia

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Table 3-1
Soil Sampling Results

		Location	Aeration Basin									First Flush and Process Wet Well								
		Sample Name:	SS/SB-01	SS/SB-02	SS/SB-03	SS/SB-04	SB-05	SB-06	SB-07	SB-07SS	SB-08	SB-09	SB-10	SB-11	SB-12	SB-13	SB-14	SB-15	SB-15 DUP	SB-16
		Sample Date:	1/9/2015	1/9/2015	1/9/2015	1/9/2015	1/7/2015	1/7/2015	1/8/2015	1/8/2015	1/8/2015	1/9/2015	1/9/2015	1/9/2015	1/9/2015	3/19/2015	3/19/2015	3/20/2015	3/20/2015	3/20/2015
Analyte	**Screening Criteria**	**Unit**																		
VOCS																				
1,1,1-Trichloroethane	810	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	0.6	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
1,1,2-Trichloroethane	0.15	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
1,1-Dichloroethane	3.6	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
1,1-Dichloroethene	23	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	5.8	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.18	0.0033 U	0.21 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	0.0053	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.26
1,2-Dibromoethane	0.036	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
1,2-Dichlorobenzene	180	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
1,2-Dichloroethane	0.46	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
1,2-Dichloropropane	1	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
1,3-Dichlorobenzene	180	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
2-Butanone	2700	mg/kg	0.038 U	0.042 U	0.035 U	0.042 U	0.035 U	0.038 U	0.028 U	0.036 U	0.036 U	1.6 U	0.039 U	1.8 U	1.6 U	1.7 U	0.033 U	2.1 U	2 U	2 U
2-Hexanone	20	mg/kg	0.0075 U	0.0085 U	0.007 U	0.0085 U	0.0071 U	0.0076 U	0.0056 U	0.0072 U	0.0072 U	0.32 U	0.0077 U	0.35 U	0.32 U	0.33 U	0.0066 U	2.6	2	0.39 U
4-Methyl-2-pentanone	530	mg/kg	0.0075 U	0.0085 U	0.007 U	0.0085 U	0.0071 U	0.0076 U	0.0056 U	0.0072 U	0.0072 U	0.32 U	0.0077 U	0.35 U	0.32 U	0.33 U	0.0066 U	0.84	0.6	0.39 U
Acetone	6100	mg/kg	0.075 U	0.085 U	0.07 U	0.085 U	0.071 U	0.076 U	0.056 U	0.54 E	0.072 U	3.2 U	0.077 U	3.5 U	3.2 U	3.3 U	0.066 U	4.2 U	4 U	3.9 U
Benzene	1.2	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.43	0.37	0.2 U
Bromodichloromethane	0.29	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Bromoform	67	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Bromomethane	0.68	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Carbon disulfide	77	mg/kg	0.0075 U	0.0085 U	0.007 U	0.0085 U	0.0071 U	0.0076 U	0.0056 U	0.0072 U	0.0072 U	0.32 U	0.0077 U	0.35 U	0.32 U	0.33 U	0.0066 U	0.42 U	0.4 U	0.39 U
Carbon tetrachloride	0.65	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Chlorobenzene	28	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Chloroethane	1400	mg/kg	0.0075 U	0.0085 U	0.007 U	0.0085 U	0.0071 U	0.0076 U	0.0056 U	0.0072 U	0.0072 U	0.32 U	0.0077 U	0.35 U	0.32 U	0.33 U	0.0066 U	0.42 U	0.4 U	0.39 U
Chloroform	0.32	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Chloromethane	11	mg/kg	0.0075 U	0.0085 U	0.007 U	0.0085 U	0.013	0.0076 U	0.0056 U	0.0072 U	0.0072 U	0.32 U	0.0077 U	0.35 U	0.32 U	0.33 U	0.0066 U	0.42 U	0.4 U	0.39 U
cis-1,2-Dichloroethene	16	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
cis-1,3-Dichloropropene	1.8	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Cyclohexane	650	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Dibromochloromethane	0.73	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Dichlorodifluoromethane	8.7	mg/kg	0.0075 U	0.0085 U	0.007 U	0.0085 U	0.0071 U	0.0076 U	0.0056 U	0.0072 U	0.0072 U	0.32 U	0.0077 U	0.35 U	0.32 U	0.33 U	0.0066 U	0.42 U	0.4 U	0.39 U
Ethylbenzene	5.8	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.23	0.22	0.2 U
Freon-113	4000	mg/kg	0.0075 U	0.0085 U	0.007 U	0.0085 U	0.0071 U	0.0076 U	0.0056 U	0.0072 U	0.0072 U	0.32 U	0.0077 U	0.35 U	0.32 U	0.33 U	0.0066 U	0.42 U	0.4 U	0.39 U
Isopropylbenzene	190	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Methyl acetate	7800	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.28
Methyl tert-butyl ether	47	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Methylcyclohexane	650	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.17	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	12	11	0.2 U
Methylene chloride	35	mg/kg	0.015 U	0.017 U	0.014 U	0.017 U	0.014 U	0.015 U	0.011 U	0.014 U	0.014 U	0.64 U	0.015 U	0.71 U	0.65 U	0.67 U	0.013 U	0.84 U	0.8 U	0.78 U
o-Xylene	65	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Styrene	600	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Tetrachloroethene	8.1	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Toluene	490	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.85	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	5.3	4.8	0.39
trans-1,2-Dichloroethene	160	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	1.8	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Trichloroethene	0.41	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Trichlorofluoromethane	73	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
Vinyl chloride	0.059	mg/kg	0.0075 U	0.0085 U	0.007 U	0.0085 U	0.0071 U	0.0076 U	0.0056 U	0.0072 U	0.0072 U	0.32 U	0.0077 U	0.35 U	0.32 U	0.33 U	0.0066 U	0.42 U	0.4 U	0.39 U
SVOCS																				
1,1´-Biphenyl	4.7	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
1,4-Dichlorobenzene	2.6	mg/kg	0.0038 U	0.0042 U	0.0035 U	0.0042 U	0.0035 U	0.0038 U	0.0028 U	0.0036 U	0.0036 U	0.16 U	0.0039 U	0.18 U	0.16 U	0.17 U	0.0033 U	0.21 U	0.2 U	0.2 U
2,4,5-Trichlorophenol	620	mg/kg	1.8 U	1.8 U	1.8 U	1.8 U	2.1 U	2 U	2 U	2.2 U	1.9 U	2 U	1.9 U	2 U	11 U	2 U	2 U	21 U	21 U	20 U
2,4,6-Trichlorophenol	6.2	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
2,4-Dichlorophenol	18	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
2,4-Dimethylphenol	120	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
2,4-Dinitrophenol	12	mg/kg	1.8 U	1.8 U	1.8 U	1.8 U	2.1 U	2 U	2 U	2.2 U	1.9 U	2 U	1.9 U	2 U	11 U	2 U	2 U	21 U	21 U	20 U
2,4-Dinitrotoluene	1.7	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
2,6-Dinitrotoluene	0.36	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
2-Chloronaphthalene	630	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
2-Chlorophenol	39	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
2-Methylnaphthalene	23	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
2-Nitroaniline	61	mg/kg	1.8 U	1.8 U	1.8 U	1.8 U	2.1 U	2 U	2 U	2.2 U	1.9 U	2 U	1.9 U	2 U	11 U	2 U	2 U	21 U	21 U	20 U
3,3´-Dichlorobenzidine	1.2	mg/kg	0.69 U	0.7 U	0.7 U	0.69 U	0.83 U	0.78 U	0.8 U	0.87 U	0.76 U	0.8 U	0.74 U	0.79 U	4.2 U	0.8 U	0.8 U	8.3 U	8.3 U	7.8 U
3,4-Methylphenol	620	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
4,6-Dinitro-2-methylphenol	0.49	mg/kg	1.8 U	1.8 U	1.8 U	1.8 U	2.1 U	2 U	2 U	2.2 U	1.9 U	2 U	1.9 U	2 U	11 U	2 U	2 U	21 U	21 U	20 U
4-Chloro-3-methylphenol	620	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
4-Chloroaniline	2.7	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
4-Nitroaniline	25	mg/kg	1.8 U	1.8 U	1.8 U	1.8 U	2.1 U	2 U	2 U	2.2 U	1.9 U	2 U	1.9 U	2 U	11 U	2 U	2 U	21 U	21 U	20 U
Acenaphthene	350	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Acenaphthylene	350	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Acetophenone	780	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U

Table 3-1
Soil Sampling Results

		Location	Aeration Basin									First Flush and Process Wet Well								
		Sample Name:	SS/SB-01	SS/SB-02	SS/SB-03	SS/SB-04	SB-05	SB-06	SB-07	SB-07SS	SB-08	SB-09	SB-10	SB-11	SB-12	SB-13	SB-14	SB-15	SB-15 DUP	SB-16
		Sample Date:	1/9/2015	1/9/2015	1/9/2015	1/9/2015	1/7/2015	1/7/2015	1/8/2015	1/8/2015	1/8/2015	1/9/2015	1/9/2015	1/9/2015	1/9/2015	3/19/2015	3/19/2015	3/20/2015	3/20/2015	3/20/2015
Analyte	**Screening Criteria**	**Unit**																		
Anthracene	1700	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Atrazine	2.3	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Benz(a)anthracene	0.15	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Benzaldehyde	780	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Benzo(a)pyrene	0.015	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Benzo(b)fluoranthene	0.15	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Benzo(g,h,i)perylene	170	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Benzo(k)fluoranthene	1.5	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Bis(2-chloroethoxy)methane	18	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Bis(2-chloroethyl)ether	0.23	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Bis(2-chloroisopropyl)ether	4.9	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Bis(2-ethylhexyl)phthalate	38	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Butyl benzyl phthalate	280	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Caprolactam	3100	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Chrysene	15	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Dibenz(a,h)anthracene	0.015	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Dibenzofuran	7.2	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Diethyl phthalate	4900	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Di-n-butyl phthalate	620	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Di-n-octyl phthalate	62	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Di-n-octyl phthalate	620	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Fluoranthene	230	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Fluorene	230	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Hexachlorobenzene	0.33	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Hexachlorobutadiene	6.2	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Hexachlorocyclopentadiene	37	mg/kg	0.68 U	0.69 U	0.69 U	0.68 U	0.82 U	0.77 U	0.79 U	0.85 U	0.74 U	0.79 U	0.73 U	0.78 U	4.1 U	0.79 U	0.79 U	8.2 U	8.2 U	7.7 U
Hexachloroethane	4.3	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Indeno(1,2,3-cd)pyrene	0.15	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Isophorone	560	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Naphthalene	3.8	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Nitrobenzene	5.1	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
N-Nitrosodi-n-propylamine	0.076	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
N-Nitrosodiphenylamine	110	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
o-Cresol	310	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Pentachlorophenol	0.99	mg/kg	1.8 U	1.8 U	1.8 U	1.8 U	2.1 U	2 U	2 U	2.2 U	1.9 U	2 U	1.9 U	2 U	11 U	2 U	2 U	21 U	21 U	20 U
Phenanthrene	170	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Phenol	1800	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U
Pyrene	170	mg/kg	0.34 U	0.34 U	0.34 U	0.34 U	0.41 U	0.39 U	0.39 U	0.43 U	0.37 U	0.39 U	0.36 U	0.39 U	2.1 U	0.39 U	0.39 U	4.1 U	4.1 U	3.9 U

Notes:
Screening Criteria = EPA Regional Screening Level Residential Soil, modified based on key-update Jan2015
mg/kg = Milligrams per kilogram
U = Not detected
E = Exceeds calibration
Gray shaded values exceed the screening level

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Result Unit	Sample ID:	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-2[a]
			Date:	5/20/1992	5/20/1992 Dupe	1/20/2005	1/30/2007	4/20/2009	6/18/2010	11/22/2010	3/9/2011	5/26/2011	11/22/2011	5/30/2012	11/20/2012	5/22/2013	11/18/2013	5/20/2014	11/12/2014	5/28/2015	11/10/2015	12/15/2016	3/24/2017	5/20/1992
1,1,1-Trichloroethane	200	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,1,2,2-Tetrachloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,1,2-Trichloroethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,1-Dichloroethene	7	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,2,4-Trichlorobenzene	70	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,2-Dibromo-3-chloropropane	0.2	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,2-Dibromoethane	0.05	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,2-Dichlorobenzene	600	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,2-Dichloroethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,2-Dichloropropane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,3-Dichlorobenzene	600	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
1,4-Dichlorobenzene	75	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
2-Butanone		ug/L	74	67	< 100	< 10	< 120	< 1.2	< 1.0	< 3.8	< 3.8	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50 U	< 50 U	-
2-Hexanone		ug/L	-	-	< 100	< 3.0	< 70	< 0.70	< 0.69	< 5.0	< 5.0	< 10	<10	<10	<10	<10	<10	<10	< 10	< 10	< 10	< 10 U	< 10 U	-
4-Methyl-2-pentanone		ug/L	-	-	< 100	< 10.0	< 150	< 1.5	< 1.1	< 10	< 10	< 10	<10	<10	<10	<10	<10	<10	< 10	< 10	< 10	< 10 U	< 10 U	-
Acetone		ug/L	680	630	420	< 10	5400	4.6	15	77 U	< 11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50 U	< 50 U	-
Benzene	5	ug/L	< 5.0	< 5.0	< 5.0	1.4 J	< 35	< 0.35	< 0.2	< 2.7	< 2.7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5.0
Bromodichloromethane	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Bromoform	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Bromomethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Carbon disulfide		ug/L	33	24	< 250	< 4.5	< 48	< 0.48	< 0.54	7.2 J	< 2.4	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	63
Carbon tetrachloride	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Chlorobenzene	100	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10 U	< 10 U	-
Chloroform	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Chloromethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10 U	< 10 U	-
cis-1,2-Dichloroethene	70	ug/L	< 5.0	< 5.0	< 5.0	< 1.0	< 41	< 0.41	0.44	< 2.2	< 2.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	9.1	< 5.0	< 5.0	< 5.0	1.7 J	< 5 U	< 5.0
cis-1,3-Dichloropropene		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Cyclohexane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Dibromochloromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Dichlorodifluoromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10 U	< 10 U	-
Ethylbenzene	700	ug/L	< 5.0	< 5.0	< 5.0	< 1.5	< 43	< 0.43	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5.0
Freon-113		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10 U	< 10 U	-
Isopropylbenzene		ug/L	-	-	-	-	-	-	-	-	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	-
m,p-Xylene	10,000	ug/L	-	-	< 10	< 1.5	< 85	< 0.85	< 0.48	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	-
Methyl acetate		ug/L	-	-	-	-	-	-	-	-	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	-
Methyl tert-butyl ether		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Methylcyclohexane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Methylene chloride	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
o-Xylene	10,000	ug/L	-	-	< 5	< 1.0	< 39	< 0.39	2.0	< 2.5	< 2.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	-
Styrene	100	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Tetrachloroethene	5	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5.0
Toluene	1000	ug/L	< 5.0	< 5.0	15	1.0 J	< 43	< 0.43	0.46	< 3.0	< 3.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5.0
trans-1,2-Dichloroethene	100	ug/L	< 5.0	< 5.0	< 5.0	< 1.0	< 47	< 0.47	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5.0
trans-1,3-Dichloropropene		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Trichloroethene	5	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5.0
Trichlorofluoromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	-
Vinyl chloride	2	ug/L	< 10.0	< 10.0	< 5.0	< 2.0	< 48	< 0.48	< 0.30	< 3.3	< 3.3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2 U	< 2 U	< 10.0

Notes
U : Not detected. Associated value is the reporting limit.
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or qualified as estimated during data verification.
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Result Unit	Sample ID:	MW-2[a]	MW-3[a]	MW-3[a]	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
			Date:	1/20/2005	5/20/1992	1/20/2005	5/20/1992	2/2/2005	4/20/2009	6/18/2010	11/22/2010	3/9/2011	5/26/2011	7/27/2011[b]	11/22/2011	11/22/2012 Dup	5/30/2012	11/20/2012	5/22/2013	11/18/2013	5/20/2014	11/12/2014	5/27/2015	11/10/2015
1,1,1-Trichloroethane	200	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	7	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	70	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	0.2	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	600	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	75	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L	< 20	-	< 200	-	< 100	< 12	< 1.2	59 J	< 3.8	150	69 J	< 50	< 50	< 50	< 50 U	< 50	< 50	< 50	< 50	< 50	< 50
2-Hexanone		ug/L	< 20	-	< 200	-	< 100	< 7.0	< 0.70	80 J	53	220	220	29	26 J	< 10	< 10 U	<10	<10	<10	< 10	< 10	< 10
4-Methyl-2-pentanone		ug/L	< 20	-	< 200	-	< 100	< 15	< 1.5	< 11	< 10	< 10	< 20	< 10	< 10	< 10	< 10 U	<10	<10	<10	< 10	< 10	< 10
Acetone		ug/L	< 50	-	< 500	-	< 250	< 10	15	1200 J	270	7800	1200	76	77 J	< 50	< 50 U	< 50	< 50	< 50	< 50	< 50	< 50
Benzene	5	ug/L	< 1.0	< 5.0	< 10	< 100	< 5.0	< 3.5	0.39 J	< 2.0 U	< 2.7	< 2.7	< 5.4	< 5.0	< 5.0	<5.0	< 5.0 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromodichloromethane	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	< 50	26	< 500	-	< 250	< 4.8	< 0.48	< 5.4 U	4.4 J	< 2.4	< 4.8	< 5.0	< 5.0	<5.0	< 5.0 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	100	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	70	ug/L	< 1.0	< 5.0	< 10	< 100	49	12	6.8	59	22	42	< 4.4	16	15 J	6.7	< 5.0 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cis-1,3-Dichloropropene		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	ug/L	< 1.0	< 5.0	< 10	< 100	< 5.0	< 4.3	< 0.43	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Freon-113		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene		ug/L	-	-	-	-	-	-	-	-	-	-	-	7.7	8.0 J	11	23 J	16	15	18	20	< 5.0	28
m,p-Xylene	10,000	ug/L	< 2.0	-	< 20	-	< 10	< 8.5	< 0.85	< 4.8 U	< 5.0	< 5.0	<10	< 5.0	< 5.0	<5.0	< 5.0 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl acetate		ug/L	-	-	-	-	-	-	-	-	-	-	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylcyclohexane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	10,000	ug/L	< 1.0	-	< 10	-	< 5.0	< 3.9	< 0.39	< 2.7 U	< 2.5	< 2.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Styrene	100	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	1000	ug/L	< 1.0	< 5.0	< 10	< 100	6.0	< 4.3	< 0.43	< 2.7 U	< 3.0	9.0 J	7.0 J	12	10 J	6.7	< 5.0 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,2-Dichloroethene	100	ug/L	< 1.0	< 5.0	< 10	< 100	< 5.0	< 4.7	< 0.47	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,3-Dichloropropene		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichlorofluoromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	ug/L	< 1.0	< 10.0	< 10	< 200	< 5.0	< 4.8	< 0.48	< 3.0 U	< 3.3	< 3.3	< 6.6	3.4	3.2 J	3.4	< 2.0 U	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Result Unit	Sample ID:	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5
			Date:	2/2/2005	4/20/2009	6/18/2010	11/22/2010	3/9/2011	5/26/2011	11/22/2011	11/22/2011 Dup	5/30/2012	5/30/2012 Dup	11/20/2012	11/20/2012 Dup	5/22/2013	11/18/2013	5/21/2014	11/12/2014	5/28/2015	11/10/2015	11/10/2015 Dup
1,1,1-Trichloroethane	200	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	7	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	70	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	0.2	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	5	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	600	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	75	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L		< 200	< 12	< 1.2	< 10 U	< 3.8	< 3.8	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-Hexanone		ug/L		< 200	< 7.0	< 0.70	< 6.9 U	< 5.0	< 5.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-pentanone		ug/L		< 200	< 15	< 1.5	< 11	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone		ug/L		< 500	22.0	7.7	290 J	320	250	240	210 J	120	140	63	53	85	91	51	100	62	79	89
Benzene	5	ug/L		< 10	< 3.5	< 0.35	< 2.0 U	< 2.7	< 2.7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromodichloromethane	80	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	80	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L		< 500	< 4.8	0.94 J	< 5.4 U	4.0 J	< 2.4	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride	5	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	100	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	80	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	5	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	70	ug/L		12	120	18	230	140	380	390	420	720	810	770	790	660	830	670	540	810	950	970
cis-1,3-Dichloropropene		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	ug/L		< 10	< 4.3	< 0.43	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Freon-113		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene		ug/L		-	-	-	-	-	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
m,p-Xylene	10,000	ug/L		< 20	< 8.5	< 0.85	< 4.8 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl acetate		ug/L		-	-	-	-	-	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 U	10 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylcyclohexane		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	5	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	10,000	ug/L		< 10	< 3.9	< 0.39	5.3 J	< 2.5	< 2.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Styrene	100	ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	ug/L		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	1000	ug/L		16	13	1.4	13 J	9.1 J	14	19	18 J	21	20	13	14	15	15	14	13	13	16	16
trans-1,2-Dichloroethene	100	ug/L		< 10	< 4.7	< 0.47	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,3-Dichloropropene		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	ug/L		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichlorofluoromethane		ug/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	ug/L		< 10	13	1.4	14 J	11	< 3.3	21	19 J	33	30	35	36	58	44	38	45	36	34	37

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Sample ID:	MW-6[a]	MW-7[a]	MW-8[a]	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-10	MW-10	MW-10	MW-10	MW-11[a]	MW-12[a]	MW-13	MW-13	MW-13	MW-13
		Date:	1/20/2005	1/20/2005	1/20/2005	2/2/2005	4/20/2005	1/30/2006	1/30/2007	4/20/2009	7/17/2015	7/26/2016	8/23/2016	1/20/2005	1/30/2007	4/20/2009	7/17/2015	1/20/2005	1/20/2005	1/20/2005	1/30/2007	4/20/2009	6/18/2010
		Result Unit																					
1,1,1-Trichloroethane	200	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,1,2-Trichloroethane	5	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,1-Dichloroethene	7	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,2,4-Trichlorobenzene	70	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	0.2	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,2-Dichlorobenzene	600	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,2-Dichloroethane	5	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,2-Dichloropropane	5	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,3-Dichlorobenzene	600	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
1,4-Dichlorobenzene	75	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
2-Butanone		ug/L	< 1000	< 20	< 100	2600	23000	-	< 2.0	< 1.2	< 50 U	< 50 U	< 50 U	< 20	< 2.0	< 1.2	< 50 U	< 20	< 20	< 20	< 10	< 6.0	< 1.2
2-Hexanone		ug/L	< 1000	< 20	< 100	< 200	1400	< 10	< 0.60	< 0.70	< 10 U	< 10 U	< 10 U	< 20	< 0.60	< 0.70	< 10 U	< 20	< 20	< 20	< 3.0	< 3.5	< 0.70
4-Methyl-2-pentanone		ug/L	< 1000	< 20	< 100	200	1600	-	< 2.0	< 1.5	330	< 10 U	< 10 U	< 20	< 2.0	< 1.5	< 10 U	< 20	< 20	< 20	< 10.0	< 7.5	< 1.5
Acetone		ug/L	< 2500	< 50	< 250	2800	31000	49	< 2.0	4.6 J	71	< 50 U	< 50 U	< 50	< 2.0	< 1.0	< 50 U	< 50	< 50	62	< 10	28	6.3
Benzene	5	ug/L	< 50	< 1.0	< 5.0	21	68	3.5	< 0.2	1.9	560	18	< 5 U	< 1.0	0.2 J	< 0.35	< 5 U	< 1.0	< 1.0	1.0 J	3.1 J	1.8 J	< 0.35
Bromodichloromethane	80	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Bromoform	80	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Bromomethane		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Carbon disulfide		ug/L	< 2500	< 50	< 250	< 500	< 500	< 1.0	< 0.9	< 0.48	< 5 U	< 5 U	< 5 U	< 50	1.4 J	< 0.48	< 5 U	< 50	< 50	< 50	< 4.5	< 2.4	< 0.48
Carbon tetrachloride	5	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Chlorobenzene	100	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	< 10 U	< 10 U	< 10 U	-	-	-	< 10 U	-	-	-	-	-	-
Chloroform	80	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Chloromethane	5	ug/L	-	-	-	-	-	-	-	-	< 10 U	< 10 U	< 10 U	-	-	-	< 10 U	-	-	-	-	-	-
cis-1,2-Dichloroethene	70	ug/L	< 50	< 1.0	< 5.0	< 10	< 10	< 1.0	< 0.2	< 0.41	< 5 U	< 5 U	< 5 U	< 1.0	< 0.2	< 0.41	< 5 U	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 0.41
cis-1,3-Dichloropropene		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Cyclohexane		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Dibromochloromethane		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Dichlorodifluoromethane		ug/L	-	-	-	-	-	-	-	-	< 10 U	< 10 U	< 10 U	-	-	-	< 10 U	-	-	-	-	-	-
Ethylbenzene	700	ug/L	< 50	< 1.0	< 5.0	< 10	< 10	< 1.0	< 0.3	< 0.43	6.1	< 5 U	< 5 U	< 1.0	< 0.3	< 0.43	< 5 U	< 1.0	< 1.0	< 1.0	< 1.5	< 0.43	< 0.43
Freon-113		ug/L	-	-	-	-	-	-	-	-	< 10 U	< 10 U	< 10 U	-	-	-	< 10 U	-	-	-	-	-	-
Isopropylbenzene		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
m,p-Xylene	10,000	ug/L	< 100	< 2.0	< 10	< 20	27	-	< 0.3	1.5	72	< 5 U	< 5 U	< 2.0	0.4 J	< 0.85	< 5 U	< 2.0	< 2.0	34	63.3	45	1.9
Methyl acetate		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Methyl tert-butyl ether		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Methylcyclohexane		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Methylene chloride	5	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
o-Xylene	10,000	ug/L	< 50	< 1.0	< 5	< 10	< 10	-	< 0.2	< 0.39	5.4	< 5 U	< 5 U	< 1.0	0.2 J	< 0.39	< 5 U	< 1.0	< 1.0	3.0	5.3	5.5	0.61 J
Styrene	100	ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Tetrachloroethene	5	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5 U	< 5.0	< 5.0	< 5.0	< 5 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	1000	ug/L	< 50	< 1.0	< 5.0	21	60	1.4	< 0.2	0.62 J	27	< 5 U	< 5 U	< 1.0	< 0.2	< 0.43	< 5 U	< 1.0	< 1.0	21	42.4	14	< 0.43
trans-1,2-Dichloroethene	100	ug/L	< 50	< 1.0	< 5.0	< 10	< 10	< 1.0	< 0.2	< 0.47	< 5 U	< 5 U	< 5 U	< 1.0	< 0.2	< 0.47	< 5 U	< 1.0	< 1.0	< 1.0	< 1.0	< 0.47	< 0.47
trans-1,3-Dichloropropene		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Trichloroethene	5	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5 U	< 5.0	< 5.0	< 5.0	< 5 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichlorofluoromethane		ug/L	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	-	-	-	< 5 U	-	-	-	-	-	-
Vinyl chloride	2	ug/L	< 50	< 1.0	< 5.0	< 10	< 10	< 1.0	< 0.4	< 0.48	< 2 U	< 2 U	< 2 U	< 1.0	< 0.4	< 0.48	< 2 U	< 1.0	< 1.0	< 1.0	< 2.0	< 2.4	< 0.48

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Sample ID:	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-14 (formerly TW-1)	MW-14 (formerly TW-1)	MW-14 (formerly TW-1)	MW-14 (formerly TW-1)	MW-14 (formerly TW-1)	MW-14 (formerly TW-1)	MW-14 (formerly TW-1)	MW-14 (formerly TW-1)	MW-14 (formerly TW-1)	MW-14 (formerly TW-1)	MW-14 (formerly TW-1)
		Date:	11/22/2010	3/9/2011	5/26/2011	11/22/2011	5/30/2012	11/20/2012	5/22/2013	11/18/2013	8/15/2012	5/22/2013	5/22/2013 Dup	11/18/2013	11/18/2013 Dup	5/21/2014	5/21/2014 Dup	11/12/2014	11/12/2014 Dup	5/28/2015	5/28/2015 Dup
		Result Unit																			
1,1,1-Trichloroethane	200	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	7	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	70	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	0.2	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	600	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	75	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L	< 5.0 U	< 3.8	< 3.8	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-Hexanone		ug/L	< 3.4 U	< 5.0	< 5.0	< 10	< 10	< 10	< 10	< 10	55 J	31	38	35	34	24	23	37 J	47	60	55
4-Methyl-2-pentanone		ug/L	< 5.5	< 10	< 10	< 10	< 10	< 10	< 10	< 10	22 J	< 10	12	< 10	< 10	< 10	< 10	13 J	14	20	19
Acetone		ug/L	37 J	150	110	< 50	55	< 50	94	< 50	250 J	350	260	350	360	190	170	250 J	360 J	500	570
Benzene	5	ug/L	< 1.0 U	< 2.7	< 2.7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromodichloromethane	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	< 2.7 U	2.6 J	< 2.4	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	100	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	70	ug/L	< 1.8 U	< 2.2	< 2.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	2,900	2,800	3,100	1,600	1,600	1,900	2,000	3,700	3,700	4,800	5,000
cis-1,3-Dichloropropene		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	ug/L	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.4 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Freon-113		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene		ug/L	-	-	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	33 J	16 J	22 J	20	24	12	15	21 J	21	18	18
m,p-Xylene	10,000	ug/L	37 J	47	43	79	72	110 J	77	65	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl acetate		ug/L	-	-	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.0	< 5.0	< 5.0
Methyl tert-butyl ether		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylcyclohexane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	10,000	ug/L	5.8 J	4.9 J	2.6 J	5.1	< 5.0	7.7 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Styrene	100	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	1000	ug/L	6.0 J	< 3.0	6.9 J	23	9.8	30 J	17.0	16.0	25 J	17	18	19	17	19	19	21 J	22	22	21
trans-1,2-Dichloroethene	100	ug/L	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7.9 J	7.9	11	6.5	5.8	< 5.0	5.6	11 J	13	16	15
trans-1,3-Dichloropropene		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichlorofluoromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	ug/L	< 1.5 U	< 3.3	< 3.3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	17 J	15	15	20	18	17	23	18 J	16	14	14

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Sample ID:	MW-14 (formerly TW-1)	MW-14	MW-15 (formerly TW-2)	MW-15 (formerly TW-2)	MW-15 (formerly TW-2)	MW-15 (formerly TW-2)	MW-15 (formerly TW-2)	MW-15 (formerly TW-2)	MW-15 (formerly TW-2)	MW-16 (formerly TB-2)	MW-16 (formerly TB-2)	MW-16 (formerly TB-2)	MW-16 (formerly TB-2)	MW-17 (formerly TB-3)	MW-17 (formerly TB-3)	MW-17 (formerly TB-3)	MW-17 (formerly TB-3)	MW-17 (formerly TB-3)	MW-18 (formerly TB-8)	MW-18 (formerly TB-8)	MW-18 (formerly TB-8)
		Date:	11/10/2015	3/24/2017	8/15/2012	5/22/2013	11/18/2013	5/20/2014	11/11/2014	5/27/2015	11/10/2015	11/19/2013 Dup	11/12/2014	5/27/2015	11/10/2015	11/19/2013	5/20/2014	11/11/2014	5/27/2015	11/10/2015	11/19/2013	5/20/2014	11/11/2014
		Result Unit																					
1,1,1-Trichloroethane	200	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane		ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	7	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	70	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	0.2	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	5	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	600	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	75	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L	< 50	< 50 U	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	-	< 50	< 50
2-Hexanone		ug/L	14	59	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	-	< 10	< 10
4-Methyl-2-pentanone		ug/L	< 10	19	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	-	< 10	< 10
Acetone		ug/L	150	170	70	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	-	< 50	< 50
Benzene	5	ug/L	< 5.0	.95 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
Bromodichloromethane	80	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	80	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	< 5.0	< 5 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
Carbon tetrachloride	5	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	100	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	< 10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	80	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	5	ug/L	-	< 10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	70	ug/L	2,000	1,800	140	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	440	230	100	150	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
cis-1,3-Dichloropropene		ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane		ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane		ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane		ug/L	-	< 10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	ug/L	< 5.0	2.7 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
Freon-113		ug/L	-	< 10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene		ug/L	19	17	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.1	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
m,p-Xylene	10,000	ug/L	< 5.0	1.3 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
Methyl acetate		ug/L	< 5.0	< 5 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
Methyl tert-butyl ether		ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylcyclohexane		ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	5	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	10,000	ug/L	< 5.0	< 5 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
Styrene	100	ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	ug/L	< 5.0	< 5 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
Toluene	1000	ug/L	13	23	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.6	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
trans-1,2-Dichloroethene	100	ug/L	7.2	7.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
trans-1,3-Dichloropropene		ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	ug/L	< 5.0	< 5 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0
Trichlorofluoromethane		ug/L	-	< 5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	ug/L	14	< 2 U	4.8	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	12	13	6.5	11	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	-	< 2.0	< 2.0

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Result Unit	MW-18 (formerly TB-8)	MW-18 (formerly TB-8)	MW-19 (formerly TB-9)	MW-19 (formerly TB-9)	MW-19 (formerly TB-9)	MW-19 (formerly TB-9)	MW-19 (formerly TB-9)	MW-20 (formerly TB-10)	MW-20 (formerly TB-10)	MW-20 (formerly TB-10)	MW-20 (formerly TB-10)	MW-20 (formerly TB-10)	MW-21	MW-22	MW-22	MW-22	MW-22	MW-23	MW-24	MW-25	MW-26
Sample ID:			MW-18 (formerly TB-8)	MW-18 (formerly TB-8)	MW-19 (formerly TB-9)	MW-19 (formerly TB-9)	MW-19 (formerly TB-9)	MW-19 (formerly TB-9)	MW-19 (formerly TB-9)	MW-20 (formerly TB-10)	MW-20 (formerly TB-10)	MW-20 (formerly TB-10)	MW-20 (formerly TB-10)	MW-20 (formerly TB-10)	MW-21	MW-22	MW-22	MW-22	MW-22	MW-23	MW-24	MW-25	MW-26
Date:			5/27/2015	11/10/2015	11/19/2013	5/20/2014	11/11/2014	5/27/2015	11/10/2015	11/19/2013	5/20/2014	11/11/2014	5/27/2015	11/10/2015	1/20/2015	1/20/2015	1/20/2015 Dup	12/14/2016	3/25/2017	1/20/2015	1/20/2015	1/20/2015	1/20/2015
1,1,1-Trichloroethane	200	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2,2-Tetrachloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2-Trichloroethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethene	7	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trichlorobenzene	70	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromo-3-chloropropane	0.2	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	0.05	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichlorobenzene	600	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloroethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloropropane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,3-Dichlorobenzene	600	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	75	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Butanone		ug/L	< 50	< 50	-	< 50	< 50	< 50	< 50	-	< 50	< 50	< 50	< 50	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
2-Hexanone		ug/L	< 10	< 10	-	< 10	< 10	< 10	< 10	-	< 10	< 10	< 10	< 10	19	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
4-Methyl-2-pentanone		ug/L	< 10	< 10	-	< 10	< 10	< 10	< 10	-	< 10	< 10	< 10	< 10	130	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Acetone		ug/L	< 50	< 50	-	< 50	< 50	< 50	< 50	-	< 50	< 50	< 50	< 50	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Benzene	5	ug/L	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	130	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromodichloromethane	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromoform	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromomethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon disulfide		ug/L	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon tetrachloride	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chlorobenzene	100	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Chloroform	80	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloromethane	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
cis-1,2-Dichloroethene	70	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,3-Dichloropropene		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Cyclohexane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromochloromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichlorodifluoromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	700	ug/L	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Freon-113		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Isopropylbenzene		ug/L	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	7.7	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
m,p-Xylene	10,000	ug/L	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	150	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methyl acetate		ug/L	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methyl tert-butyl ether		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylcyclohexane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	5	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	10,000	ug/L	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	15	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Styrene	100	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Tetrachloroethene	5	ug/L	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Toluene	1000	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	250	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
trans-1,2-Dichloroethene	100	ug/L	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
trans-1,3-Dichloropropene		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichloroethene	5	ug/L	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichlorofluoromethane		ug/L	-	-	-	-	-	-	-	-	-	-	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Vinyl chloride	2	ug/L	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Sample ID:	MW-27	MW-27	MW-27	MW-27	MW-28	MW-28	MW-29	MW-30	MW-30	MW-30	MW-31	MW-31	MW-31	MW-31	MW-31	MW-32	MW-33	MW-33A	MW-34	MW-34A	MW-34A
		Date:	1/20/2015	7/27/2016	8/23/2016	12/14/2016	1/20/2015	7/27/2016	1/20/2015	3/20/2015	7/29/2015	3/24/2017	3/20/2015	7/27/2016	8/23/2016	12/14/2016	3/24/2017	4/21/2015	4/21/2015	4/28/2015	7/8/2015	7/25/2016	8/23/2016
		Result Unit																					
1,1,1-Trichloroethane	200	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2,2-Tetrachloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2-Trichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethene	7	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trichlorobenzene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromo-3-chloropropane	0.2	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	0.05	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloropropane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,3-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	75	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Butanone		ug/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	31 J	< 50 U	78	95	69	850	< 50 U	360
2-Hexanone		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	14	< 10 U	< 10 U	13	< 10 U	< 10 U	130	150	41	170	< 10 U	< 10 U	< 10 U	1800	2600	2200
4-Methyl-2-pentanone		ug/L	< 10 U	< 10 U	15	< 10 U	30	98	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	92	65	8.4 J	100	100	120	91	1800	2900	1700
Acetone		ug/L	< 50 U	< 50 U	< 50 U	46 J	180	79	< 50 U	< 50 U	< 50 U	46 J	< 50 U	86	< 50 U	52	48 J	1000	4000	1800	1100	< 50 U	1300
Benzene	5	ug/L	7.6	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	14	5.4	20	22	4.8 J	24	< 5 U	< 5 U	< 5 U	940	840	760
Bromodichloromethane	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromoform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromomethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon disulfide		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon tetrachloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chlorobenzene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Chloroform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloromethane	5	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
cis-1,2-Dichloroethene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Cyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromochloromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichlorodifluoromethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	700	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	2.5 J	< 5 U	< 5 U	< 5 U	< 5 U	0.87 J	< 5 U	< 5 U	< 5 U	9	< 5 U	< 5 U
Freon-113		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Isopropylbenzene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	6.2	27	16	< 5 U	< 5 U	5.2	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	6.7
m,p-Xylene	10,000	ug/L	29	< 5 U	< 5 U	1.6 J	120	87	< 5 U	7.6	5.5	26	39	46	46	22	33	5.3	14	11	240	310	250
Methyl acetate		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methyl tert-butyl ether		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylcyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	10,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	11	7.9	< 5 U	< 5 U	< 5 U	3.8 J	< 5 U	5.1	< 5 U	3.2 J	5.2	< 5 U	< 5 U	< 5 U	23	< 5 U	27
Styrene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Tetrachloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Toluene	1000	ug/L	20	< 5 U	< 5 U	< 5 U	95	75	< 5 U	< 5 U	< 5 U	9.4	14	51	51	12	42	15	37	26	1000	1000	710
trans-1,2-Dichloroethene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
trans-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichlorofluoromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Vinyl chloride	2	ug/L	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Sample ID:	MW-34A	MW-34A	MW-34B	MW-34B	MW-34B	MW-34C	MW-34C	MW-34C	MW-35	MW-35	MW-35	MW-36	MW-37	MW-37	MW-37	MW-38	MW-38A	MW-38A	MW-38A	MW-38A	MW-38A
		Date:	12/13/2016	3/25/2017	9/23/2015	7/26/2016	8/23/2016	9/23/2015	7/26/2016	8/23/2016	7/8/2015	12/14/2016	3/25/2017	7/8/2015	7/8/2015	7/27/2016	12/14/2016	7/17/2015	7/25/2016	12/13/2016	12/13/2016 Dup	3/26/2017	3/26/2017 Dup
		Result Unit																					
1,1,1-Trichloroethane	200	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2,2-Tetrachloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2-Trichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethene	7	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trichlorobenzene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromo-3-chloropropane	0.2	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	0.05	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloropropane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,3-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	75	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Butanone		ug/L	710 J	260 J	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	12 J	13 J	< 50 U	< 50 U
2-Hexanone		ug/L	4500	2400	< 10 U	< 10 U	< 10 U	15	24	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
4-Methyl-2-pentanone		ug/L	4700	2600	< 10 U	< 10 U	< 10 U	14	42	13	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	270	260	150	150
Acetone		ug/L	4600 J	1300	< 50 U	< 50 U	< 50 U	< 50 U	570	770	< 50 U	8.4 J	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	50	< 50 U	48 J	38 J	< 50 U	38 J
Benzene	5	ug/L	1600	1200	11	< 5 U	< 5 U	10	16	10	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	900	1300	1200	1300	1300	1400
Bromodichloromethane	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromoform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromomethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon disulfide		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	59	65	< 5 U	< 5 U	1.4 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	1.2 J
Carbon tetrachloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chlorobenzene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	36
Chloroethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Chloroform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloromethane	5	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
cis-1,2-Dichloroethene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Cyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromochloromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichlorodifluoromethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	700	ug/L	< 5 U	13 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	9.5	< 5 U	14	15	17	12
Freon-113		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Isopropylbenzene		ug/L	< 5 U	18 J	11	8	15	6.1	6.6	7.5	< 5 U	2.1 J	2 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	7.5	7	8	6.4
m,p-Xylene	10,000	ug/L	550	260	18	17	9.8	53	34	30	< 5 U	< 5 U	< 5 U	21	< 5 U	< 5 U	< 5 U	240	230	230	220	300	210
Methyl acetate		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methyl tert-butyl ether		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylcyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	10,000	ug/L	< 5 U	37 J	< 5 U	< 5 U	< 5 U	5.6	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	18	< 5 U	23	22	32	23
Styrene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Tetrachloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Toluene	1000	ug/L	1500	1000	19	< 5 U	< 5 U	27	31	15	< 5 U	< 5 U	< 5 U	14	< 5 U	< 5 U	< 5 U	190	99	100	97	170	150
trans-1,2-Dichloroethene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
trans-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichlorofluoromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Vinyl chloride	2	ug/L	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Sample ID:	MW-38B	MW-38B	MW-38B	MW-38B	MW-38C	MW-38C	MW-38C	MW-38C	MW-38D	MW-38D	MW-38D	MW-39	MW-39	MW-39	MW-39	MW-40	MW-40	MW-41	MW-41	MW-42	MW-42
		Date:	9/23/2015	7/26/2016	12/13/2016	3/26/2017	9/23/2015	7/26/2016	12/13/2016	3/26/2017	10/8/2015	7/26/2016	12/13/2016	7/29/2015	7/27/2016	8/22/2016	3/24/2017	7/24/2015	11/10/2015	7/25/2015	11/10/2015	7/25/2015	11/10/2015
		Result Unit																					
1,1,1-Trichloroethane	200	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,1,2-Trichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,1-Dichloroethene	7	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,2,4-Trichlorobenzene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	0.2	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,2-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,2-Dichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,2-Dichloropropane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,3-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
1,4-Dichlorobenzene	75	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
2-Butanone		ug/L	< 50 U	< 50 U	5.7 J	< 50 U	140	< 50 U	13 J	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 10	< 50	< 10	< 50	< 10	< 50
2-Hexanone		ug/L	89	< 10 U	< 10 U	< 10 U	1200	340	200	35	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 25	< 10	< 25	< 10	< 25	< 10
4-Methyl-2-pentanone		ug/L	35	14	19	< 10 U	340	120	140	150	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	41	11	< 25	< 10	< 25	< 10	< 25	< 10
Acetone		ug/L	61	55	15 J	< 50 U	260	1400	120	36 J	120	67	23 J	< 50 U	< 50 U	< 50 U	91	< 50	< 50	< 50	< 50	< 50	< 50
Benzene	5	ug/L	34	140	400	370	100	49	170	170	< 5 U	< 5 U	< 5 U	89	1100	1200	720	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromodichloromethane	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Bromoform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Bromomethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Carbon disulfide		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	270	37	29	< 5 U	17	7.1	< 5 U	< 5 U	< 5 U	< 5 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Chlorobenzene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Chloroethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	-	-	-	-	-	-
Chloroform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Chloromethane	5	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	-	-	-	-	-	-
cis-1,2-Dichloroethene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0
cis-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Cyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Dibromochloromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Dichlorodifluoromethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	-	-	-	-	-	-
Ethylbenzene	700	ug/L	< 5 U	< 5 U	4.4 J	< 5 U	< 5 U	< 5 U	2.4 J	2.2 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	7.7	6	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0
Freon-113		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	-	-	-	-	-	-
Isopropylbenzene		ug/L	< 5 U	< 5 U	4.6 J	14 J	< 5 U	< 5 U	3.6 J	4.1 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	4 J	< 5.0	< 5.0	-	< 5.0	-	< 5.0
m,p-Xylene	10,000	ug/L	45	33	66	77	70	31	22	30	< 5 U	< 5 U	< 5 U	19	150	140	14	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl acetate		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Methylcyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Methylene chloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
o-Xylene	10,000	ug/L	< 5 U	< 5 U	7.2	22 J	< 5 U	< 5 U	3.3 J	5.1	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	10	4.2 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Styrene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Tetrachloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0
Toluene	1000	ug/L	29	33	93	98	66	35	21	33	< 5 U	< 5 U	< 5 U	< 5 U	77	40	2.7 J	1.5 J	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0
trans-1,2-Dichloroethene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0
trans-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Trichloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 1.0	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0
Trichlorofluoromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	-	-	-	-	-	-
Vinyl chloride	2	ug/L	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Sample ID:	MW-43	MW-43	MW-43	MW-44	MW-44	MW-44	MW-44	MW-44	MW-45	MW-45	MW-45	MW-46	MW-46	MW-46	MW-46	MW-46	MW-47	MW-47A	MW-47A	MW-47A	MW-47A
		Date:	7/29/2015	12/14/2016	3/24/2017	7/29/2015	7/27/2016	8/22/2016	12/15/2016	3/24/2017	7/29/2015	12/15/2016	3/24/2017	7/29/2015	7/27/2016	8/23/2016	12/13/2016	3/24/2017	7/29/2015	7/25/2016	12/12/2016	3/26/2017	3/26/2017 Dup
		Result Unit																					
1,1,1-Trichloroethane	200	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2,2-Tetrachloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2-Trichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethene	7	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trichlorobenzene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromo-3-chloropropane	0.2	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	0.05	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloropropane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,3-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	75	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Butanone		ug/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
2-Hexanone		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
4-Methyl-2-pentanone		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	4.5 J	4.3 J	12	160	14	< 10 U	< 10 U
Acetone		ug/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	9.4 J	< 50 U	< 50 U	< 50 U	< 50 U	7.7 J	28 J	62	< 50 U	33	< 50 U	< 50 U
Benzene	5	ug/L	< 5 U	< 5 U	< 5 U	81	130	180	180	280	< 5 U	20	71	19	43	93	56	180	1100	1200	1000	1100	920
Bromodichloromethane	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromoform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromomethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon disulfide		ug/L	< 5 U	< 5 U	1.4 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon tetrachloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chlorobenzene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Chloroform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloromethane	5	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
cis-1,2-Dichloroethene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Cyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromochloromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichlorodifluoromethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	700	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	2.2 J	4	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	0.58 J	10	< 5 U	< 5 U	13	< 5 U
Freon-113		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Isopropylbenzene		ug/L	< 5 U	< 5 U	1.8 J	< 5 U	< 5 U	< 5 U	< 5 U	1.6 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	0.84 J	< 5 U	< 5 U	< 5 U	4.6 J	< 5 U
m,p-Xylene	10,000	ug/L	< 5 U	< 5 U	< 5 U	57	67	74	48	93	< 5 U	< 5 U	3.4 J	6.8	< 5 U	< 5 U	3.8 J	12	170	260	260	220	< 5 U
Methyl acetate		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methyl tert-butyl ether		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylcyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	10,000	ug/L	< 5 U	< 5 U	< 5 U	6.6	8.3	8.8	5.2	9.8	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	1.4 J	15	< 5 U	16	22	44 J
Styrene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Tetrachloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Toluene	1000	ug/L	< 5 U	< 5 U	< 5 U	120	180	160	30	66	< 5 U	< 5 U	2.2 J	< 5 U	< 5 U	< 5 U	< 5 U	4 J	88	100	76	69	60 J
trans-1,2-Dichloroethene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
trans-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichlorofluoromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Vinyl chloride	2	ug/L	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Sample ID:	MW-47B	MW-47B	MW-47B	MW-47B	MW-47C	MW-47C	MW-47C	MW-47C	MW-47D	MW-47D	MW-47D	MW-48	MW-48	MW-49	MW-49	MW-49	MW-49	MW-49	MW-49	MW-50	MW-50
		Date:	9/23/2015	7/26/2016	12/12/2016	3/26/2017	9/23/2015	7/26/2016	12/12/2016	3/26/2017	10/8/2015	7/27/2016	12/13/2016	8/10/2015	12/14/2016	8/10/2015	8/10/2015 dup	7/27/2016	8/22/2016	12/15/2016	3/24/2017	8/10/2015	12/15/2016
		Result Unit																					
1,1,1-Trichloroethane	200	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2,2-Tetrachloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2-Trichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethene	7	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trichlorobenzene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromo-3-chloropropane	0.2	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	0.05	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloropropane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,3-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	75	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Butanone		ug/L	< 50 U	< 50 U	7.4	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
2-Hexanone		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	21	8.6 J	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
4-Methyl-2-pentanone		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	13	20	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Acetone		ug/L	120	< 50 U	68	75 J	140	59	16 J	42 J	< 50 U	390	29 J	< 50 U	< 50 U	< 50 U	< 50 U	100	360	19 J	< 50 U	< 50 U	< 50 U
Benzene	5	ug/L	720	1400	970	1100	130	360	430	390	< 5 U	< 5 U	1.2 J	< 5 U	< 5 U	170	180	170	< 5 U	160	61	< 5 U	< 5 U
Bromodichloromethane	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromoform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromomethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon disulfide		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon tetrachloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chlorobenzene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Chloroform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloromethane	5	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
cis-1,2-Dichloroethene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Cyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromochloromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichlorodifluoromethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	700	ug/L	9.8	< 5 U	13	14 J	< 5 U	< 5 U	3.9	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	3.2 J	3.1	< 5 U	< 5 U
Freon-113		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Isopropylbenzene		ug/L	4.3	< 5 U	4	15 J	39	14	13	20 J	< 5 U	< 5 U	3.5 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	1.7 J	< 5 U	< 5 U	< 5 U
m,p-Xylene	10,000	ug/L	160	300	240	300	29	54	41	41 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	57	64	74	< 5 U	11	33	< 5 U	< 5 U
Methyl acetate		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methyl tert-butyl ether		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylcyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	10,000	ug/L	10	< 5 U	22	33 J	< 5 U	6.4	7.8	21 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	5.9	7.2	< 5 U	3.6 J	3.2	< 5 U	< 5 U
Styrene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Tetrachloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Toluene	1000	ug/L	54	100	60	57	34	51	44	37 J	< 5 U	7	11	< 5 U	< 5 U	270	200	120	< 5 U	12	7	< 5 U	< 5 U
trans-1,2-Dichloroethene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
trans-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichlorofluoromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Vinyl chloride	2	ug/L	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Sample ID:	MW-51	MW-51	MW-51	MW-51R	MW-51R	MW-52	MW-52	MW-52	MW-52	MW-52	MW-53	MW-53	MW-53	MW-54	MW-55	MW-55	MW-56	MW-56	MW-57	MW-58	MW-59
		Date:	8/10/2015	7/27/2016	8/23/2016	2/24/2015	3/24/2017	8/10/2015	8/24/2015	12/15/2016	12/15/2016 Dup	3/24/2017	8/10/2015	8/24/2015	3/24/2017	8/24/2015	8/24/2015	3/24/2017	8/24/2015	3/24/2017	9/1/2015	9/1/2015	9/1/2015
		Result Unit																					
1,1,1-Trichloroethane	200	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2,2-Tetrachloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2-Trichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethene	7	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trichlorobenzene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromo-3-chloropropane	0.2	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	0.05	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloroethane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloropropane	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,3-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	75	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Butanone		ug/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
2-Hexanone		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
4-Methyl-2-pentanone		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Acetone		ug/L	< 50 U	< 50 U	< 50 U	< 50 U	23 J	< 50 U	< 50 U	22 J	20 J	29 J	55	< 50 U	44 J	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Benzene	5	ug/L	100	26	51	< 5 U	31	< 5 U	< 5 U	2 J	2.1 J	1.8 J	17	6.5	0.47 J	< 5 U	< 5 U	1.4 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromodichloromethane	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromoform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromomethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon disulfide		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon tetrachloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chlorobenzene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Chloroform	80	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloromethane	5	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
cis-1,2-Dichloroethene	70	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Cyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromochloromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichlorodifluoromethane		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	700	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	0.53 J	9.6	< 5 U	0.68 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Freon-113		ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Isopropylbenzene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	2.4 J	3.3 J	1.6 J	5.8	< 5 U	1.4 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
m,p-Xylene	10,000	ug/L	11	< 5 U	< 5 U	< 5 U	1.9 J	7.8	6.6	14	13	11	210	85	8.8	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methyl acetate		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methyl tert-butyl ether		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylcyclohexane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	10,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	0.68 J	< 5 U	< 5 U	2.3 J	2.2 J	1.5 J	14	7.8	2.3 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Styrene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Tetrachloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Toluene	1000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	0.94 J	< 5 U	< 5 U	4.3 J	4.8 J	2.4 J	26	12	1.6 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
trans-1,2-Dichloroethene	100	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
trans-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichloroethene	5	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichlorofluoromethane		ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Vinyl chloride	2	ug/L	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-2
Historical VOC Groundwater Data
Colonels Island Facility

Analyte	MCL	Result Unit	Sample ID: MW-60	MW-61	MW-61	MW-61	MW-62A	MW-62A	MW-62B	MW-63A	MW-63B	MW-64A	MW-64B	MW-65A	MW-65B	MW-66	MW-67	MW-67	MW-68
			Date: 9/1/2015	10/16/2015	11/10/2015	3/25/2017	3/25/2017	3/25/2017 Dup	3/25/2017	3/25/2017	3/25/2017	3/25/2017	3/25/2017	3/25/2017	3/25/2017	3/25/2017	3/25/2017	3/25/2017 Dup	3/25/2017
1,1,1-Trichloroethane	200	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2,2-Tetrachloroethane		ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2-Trichloroethane	5	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethane		ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethene	7	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trichlorobenzene	70	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromo-3-chloropropane	0.2	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	0.05	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloroethane	5	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloropropane	5	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,3-Dichlorobenzene	600	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	75	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Butanone		ug/L	< 50 U	< 50 U	< 50	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
2-Hexanone		ug/L	< 10 U	< 10 U	< 10	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
4-Methyl-2-pentanone		ug/L	< 10 U	< 10 U	< 10	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Acetone		ug/L	< 50 U	< 50 U	< 50	< 50 U	< 50 U	40 J	< 50 U	7.8 J	6.3 J	6 J	< 50 U	36 J	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Benzene	5	ug/L	< 5 U	< 5 U	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromodichloromethane	80	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromoform	80	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromomethane		ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon disulfide		ug/L	< 5 U	< 5 U	< 5.0	< 5 U	4.9 J	11 J	1.6 J	3.6 J	4.3 J	3.2 J	< 5 U	< 5 U	< 5 U	1.1 J	1.8 J	< 5 U	< 5 U
Carbon tetrachloride	5	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chlorobenzene	100	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroethane		ug/L	< 10 U	< 10 U	-	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Chloroform	80	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloromethane	5	ug/L	< 10 U	< 10 U	-	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
cis-1,2-Dichloroethene	70	ug/L	< 5 U	< 5 U	< 5.0	< 5 U	780	760	27	100	< 5 U	130	< 5 U	210	< 5 U	62	< 5 U	< 5 U	< 5 U
cis-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Cyclohexane		ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromochloromethane		ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichlorodifluoromethane		ug/L	< 10 U	< 10 U	-	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	700	ug/L	< 5 U	< 5 U	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Freon-113		ug/L	< 10 U	< 10 U	-	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Isopropylbenzene		ug/L	< 5 U	< 5 U	< 5.0	< 5 U	1.4 J	< 5 U	1.5 J	1.9 J	< 5 U	1.4 J	< 5 U	14 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
m,p-Xylene	10,000	ug/L	9.2	< 5 U	< 5.0	< 5 U	1.4 J	< 5 U	< 5 U	2.3 J	< 5 U	< 5 U	< 5 U	18 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methyl acetate		ug/L	< 5 U	< 5 U	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methyl tert-butyl ether		ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylcyclohexane		ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	5	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	10,000	ug/L	< 5 U	< 5 U	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Styrene	100	ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Tetrachloroethene	5	ug/L	< 5 U	< 5 U	< 5.0	< 5 U	27	26 J	< 5 U	< 5 U	< 5 U	1.3 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Toluene	1000	ug/L	< 5 U	< 5 U	< 5.0	< 5 U	7.8	< 5 U	< 5 U	1.8 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	1.4 J	< 5 U	< 5 U	< 5 U
trans-1,2-Dichloroethene	100	ug/L	< 5 U	< 5 U	< 5.0	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
trans-1,3-Dichloropropene		ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichloroethene	5	ug/L	< 5 U	< 5 U	< 5.0	< 5 U	5.8	< 5 U	3.8 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichlorofluoromethane		ug/L	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Vinyl chloride	2	ug/L	< 2 U	< 2 U	< 2.0	< 2 U	28	20	< 2 U	3	< 2 U	1.3 J	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U

Notes
U : Not detected. Associated value is the reporting li
Highlighted = Value exceeds USEPA MCLs.
J Result flagged by the laboratory as estimated, or
a - Monitoring well has ben properly abandoned

Table 3-3
Rinsate samples

			Location ID:	A-BASIN-W-001	A-BASIN-W-002	FR-01- WET WELL	FR-02- FIRST FLUSH	FR-02-A FIRST FLUSH	FR-03 FIRST FLUSH PIT	FR-04 WET WELL PIT	FR-03-BASIN
			Sample Name:	A-BASIN-W-001	A-BASIN-W-002	FR-01- WET WELL	FR-02- FIRST FLUSH	FR-02-A FIRST FLUSH	FR-03 FIRST FLUSH PIT	FR-04 WET WELL PIT	FR-03-BASIN
			Sample Date:	1/30/2015	1/30/2015	3/20/2015	3/20/2015	3/25/2015	3/26/2015	3/26/2015	4/28/2015
Analyte	**Screening Criteria**		**Unit**								
VOCS											
1,1,1-Trichloroethane	800	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	0.076	c	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	0.041	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	2.7	c	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	28	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	0.4	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	0.00033	c	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromoethane	0.0075	c	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	30	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.17	c*	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	0.44	c*	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	30	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	0.48	c	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	560	n	µg/L	50 U	50 U	50 U	300	50 U	50 U	50 U	50 U
2-Hexanone	38	n	µg/L	10 U	10 U	10 U	700	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	1200	n	µg/L	10 U	10 U	10 U	140	10 U	10 U	10 U	10 U
Acetone	14000	n	µg/L	770	600	85	690	200	50 U	50 U	130
Benzene	0.45	c*	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	0.13	c	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	9.2	c*	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	0.75	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	81	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	0.45	c	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	7.8	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	2100	n	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	0.22	c	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	19	n	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	3.6	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	0.47	c*	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cyclohexane	1300	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	0.17	c	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	20	n	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	1.5	c	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Freon-113	5500	n	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Isopropylbenzene	45	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
m,p-Xylene	NSL		µg/L	5 U	5 U	5.2	75	5.0	5 U	5 U	5 U
Methyl acetate	2000	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	14	c	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	1300	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	11	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-Xylene	19	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	120	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U

Table 3-3
Rinsate samples

Tetrachloroethene	4.1	n	µg/L	5 U	5 U	5 U	15	5 U	5 U	5 U	5 U
Toluene	1100	n	µg/L	25	39	5 U	43	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	36	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.47	c*	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	0.28	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	110	n	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	0.019	c	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
SVOCS											
1,1´-Biphenyl	0.083	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	120	n	µg/L	25 U	25 U	25 U	500 U	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	1.2	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	4.6	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	36	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	3.9	n	µg/L	25 U	25 U	25 U	500 U	25 U	25 U	25 U	25 U
2,4-Dinitrotoluene	0.24	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	0.048	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene	75	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
2-Chlorophenol	9.1	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	3.6	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
2-Nitroaniline	19	n	µg/L	25 U	25 U	25 U	200 U	25 U	25 U	25 U	25 U
2-Nitrophenol	3500		µg/L	10 U	10 U	10 U	500 U	10 U	10 U	10 U	10 U
3,3´-Dichlorobenzidine	0.12	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
3,4-Methylphenol	190	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
3-Nitroaniline	NSL		µg/L	25 U	25 U	25 U	500 U	25 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol	0.15	n	µg/L	25 U	25 U	25 U	500 U	25 U	25 U	25 U	25 U
4-Bromophenyl phenyl ether	NSL		µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	3	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
4-Chloroaniline	0.36	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	NSL		µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
4-Methylphenol	NSL		µg/L	54	100	10 U	200 U	10 U	10 U	10 U	10 U
4-Nitroaniline	3.8	c*	µg/L	25 U	25 U	25 U	500 U	25 U	25 U	25 U	25 U
4-Nitrophenol	828		µg/L	25 U	25 U	25 U	500 U	25 U	25 U	25 U	25 U
Acenaphthene	53	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Acenaphthylene	53	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Acetophenone	190	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Anthracene	180	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Atrazine	0.3	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Benz(a)anthracene	0.034	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Benzaldehyde	190	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	0.0034	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	0.034	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	12	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	0.34	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Bis(2-chloroethoxy)methane	5.9	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Bis(2-chloroethyl)ether	0.014	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Bis(2-chloroisopropyl)ether	0.36	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Bis(2-ethylhexyl)phthalate	5.6	c*	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U

Table 3-3
Rinsate samples

Butyl benzyl phthalate	16	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Caprolactam	990	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Carbazole	NSL		µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Chrysene	3.4	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Di-n-butyl phthalate	90	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	20	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	0.0034	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Dibenzofuran	0.79	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Diethyl phthalate	1500	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	3300		µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Fluoranthene	80	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Fluorene	29	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	0.049	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	0.3	c*	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	3.1	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Hexachloroethane	0.69	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	0.034	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Isophorone	78	c*	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
N-Nitrosodi-n-propylamine	0.011	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	12	c	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Naphthalene	0.17	c*	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Nitrobenzene	0.14	c*	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Pentachlorophenol	0.04	c	µg/L	25 U	25 U	25 U	500 U	25 U	25 U	25 U	25 U
Phenanthrene	12	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
Phenol	580	n	µg/L	40	61	10 U	200 U	10 U	10 U	10 U	10 U
Pyrene	12	n	µg/L	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U
pH	6.5 - 9.0		pH Units	9.45	9.44	6.00	6.00	6.00	6.00	6.00	6.00

Notes:
star-update Jan2015 or EPA Region 4 Freshwater Acute Screening Values,
µg/L = Micrograms per liter
U = Not detected
J = Estimated
-- = Not analyzed
NSL = No screening level
Gray shaded values exceed the screening level

determine the boundary of groundwater contamination above the MCL both in distance from the source and in depth. Groundwater flow at the site was believed to be generally southeasterly at approximately 32 feet per year with a southwesterly component due to potential tidal influence. The flat topography at the site, including low groundwater flow and the presence of multiple potential sources, required an attempt to bound all detections above the MCL in the First Flush Basin and Process Wet Well area in order to develop an understanding of the plume. The resulting delineation is presented in Section 3.3.3.1 and Section 3.4.2.2. In addition, during the benzene plume evaluation, approximately 8 inches of light non-aqueous phase liquid (LNAPL) were discovered in MW-27. The LNAPL had a distinct odor and was dark in color. The analysis conducted by the Facility indicated that the oil was primarily alpha-pinene. A more detailed discussion of the LNAPL findings is presented in Section 3.3.3.2.

3.3.3.1 Benzene Plume Delineation

At the conclusion of closure activities, groundwater samples were collected as described in the Closure Plan to demonstrate clean closure. Initial sampling activities started on January 20, 2015. Benzene was detected above the MCL in MW-21 and MW-27. Step out sampling activities were conducted through November 10, 2015, until the extent of the contaminant plume was bounded. Step out sampling was conducted in order to tightly define the boundaries of the plume and limit the scope of any potential future active remediation. Although benzene would more likely be found in shallow groundwater, three sets of paired wells were installed at depths of 15, 20, 30, and 45 feet bgs to define the vertical extent of the plume; other available site sampling data was utilized as well. Table 3-2 presents the historical VOC groundwater data for monitoring wells (currently existing and installed during step out activities). Section 3.4.2.2 presents an evaluation of the available benzene data.

3.3.3.2 LNAPL Findings

LNAPL has only been found in three wells: MW-27, MW-30, and MW-34. No LNAPLs were observed in any of the wells when first drilled and sampled for VOCs. On July 22, 2015, Enercon gauged the water levels in the wells installed by Clean Harbors and Brown and Caldwell near the First Flush Basin and Process Wet Well area for the purposes of developing a potentiometric map. In doing so, the geologist observed some LNAPL in three of the wells (MW-27, MW-30, and MW-34). The other wells appeared to be free of LNAPL. A sample was collected from the oil in MW-27 and sent for outside laboratory analysis (analysis included in Appendix I). Oil samples from MW-27, MW-30, and MW-34 were characterized by the Colonels Island internal laboratory.

Samples of the LNAPL from each of the three wells were analyzed by GC by the Symrise staff on July 27, 2015. Approximately 8 inches of LNAPL were present in MW-27. The LNAPL had a distinct odor and was dark in color. The analysis indicated that the LNAPL was primarily alpha-pinene. The LNAPL present in MW-30 was also determined to be primarily alpha-pinene. The LNAPL in MW-30 was less than one-half inch in thickness. The LNAPL in MW-34 was lighter in color and had less odor. Analysis of these samples indicated that they were a mixture of plant materials and likely associated with either the First Flush Basin or the associated underground wastewater lines. The LNAPL in MW-34 was also less than one-half inch in thickness.

All three wells were bailed weekly in July and August 2015. The LNAPL thickness in MW-30 and MW-34 quickly diminished to a light sheen. Absorbent socks were placed in these wells and routine bailing was discontinued. The recharge level of LNAPL in MW-27 continued to diminish. Bailing of this well has continued on a monthly basis.

LNAPL thickness in all three wells has continued to decrease over time with either bailing (MW-27) and the use of absorbent socks (MW-30 and MW-34).

On May 20, 2016, the wells were bailed for the final time by Clean Harbors. The following LNAPL levels were logged:

- MW-27: 0.18 feet
- MW-30: 0.07 feet
- MW-34: 0.05 feet

Monitoring of LNAPL has continued in 2017 as part of the quarterly groundwater monitoring program. In March of 2017, NewFields logged the following LNAPL levels:

- MW-27: 0.01 feet
- MW-30: 0.19 feet
- MW-34A: 0.02 feet

Two pig absorbent socks were installed in each well after sampling. The socks were removed in advance of the June monitoring event.

During the June 2017 quarterly monitoring event, no measurable LNAPL was noted in any of the wells.

3.4 DATA EVALUATION

Sample analytical results were compared to USEPA Region 4 Regional Screening Levels (Residential Screening Levels for soil and Tapwater Screening Levels for rinsate/groundwater). A complete set of USEPA human health and ecological screening level tables for soil and groundwater are found at Appendix H. The data evaluation was conducted as noted in the Consent Decree, Section 20(b) and includes the following:

- A summary of concentrations found in relation to USEPA RSLs and ecological screening values.
- Identification of pollution migration pathways (soil, sediment, surface water, groundwater, air, subsurface gas) if USEPA screening levels are exceeded.
- Identification of potential /actual receptors (human and ecological).

Closure will be considered complete when sample results (including confirmatory sample results where removal or remediation is required) meet appropriate cleanup criteria. This Closure Report has been prepared to document the closure activities, including the engineering inspection and sampling data, and has, consistent with Section 20(d) of the Consent Decree, provided a

recommendation for no further action, interim measures, post-closure care, and/or the collection of additional confirmatory sampling data. The data evaluation for the individual HWMUs are discussed in the following sections.

3.4.1 Aeration Basin

The Aeration Basin is a surface impoundment, and not a tank. This is validated by the Structure Evaluation Report (Appendix A). Surface, subsurface, and groundwater samples were collected at the Aeration Basin as described in the Closure Plan. There were no exceedances of USEPA screening levels detected in any of the samples collected at the Aeration Basin (see Tables 3-1 and 3-2). The rinsate samples collected at the conclusion of the Aeration Basin removal and cleaning activity did not have any exceedances of USEPA Tapwater Screening Levels or pH as noted in the Closure Plan (see Table 3-3). As there are no exceedances of USEPA screening levels, migratory pathway descriptions and identification of potential human and ecological receptors are not required.

3.4.2 First Flush Basin and Process Wet Well

The First Flush Basin and Process Wet Well were determined to be tanks as noted in the Structure Evaluation Report (Appendix A). Subsurface and groundwater samples were collected at the First Flush Basin and Process Wet Well as described in the Closure Plan. There was one exceedance of USEPA Residential Soil Screening Levels (1,2-dibromo-3-chloropropane at 0.26 mg/kg) in sample SB-16 (see Table 3-1). Benzene was detected above the USEPA Tapwater Screening Level in MW-21 (130 µg/L), MW-27 (7.6 µg/L), and MW-31 (5.4 µg/L) (see Table 3-2). The rinsate samples collected at the conclusion of the First Flush Basin and Process Wet Well cleaning activities did not have any exceedances of USEPA Tapwater Screening Levels or pH as noted in the Closure Plan (see Table 3-3).

3.4.2.1 Local Geologic and Hydrogeologic Setting

The Facility's topography is relatively flat with elevations ranging from 10 to 13 feet amsl. Due to the flat topography, surface runoff is controlled by drainage structures such as ditches and canals. General drainage is toward the tidal marshes to the west and south sides of the Site.

The surficial aquifer beneath the Facility generally consists of sandy sediments in the upper part of the aquifer, which become more clayey with depth. The finer sands and stiffer clays occur below a depth of about 40 feet bgs. The top of the underlying confining unit is estimated to occur at about 130 feet bgs based on deeper borings advanced on Colonels Island.

Historical information indicates that the upper 20 feet of sediment sequence for the surficial aquifer Facility-wide can be divided into five fairly distinct layers. First, a loose to very loose, dark-colored silty sand occurs at depths of 8 to 12 inches bgs. The second layer consists of a firm to dense, brown to dark brown, slightly silty fine sand, locally referred to as "hardpan," which occurs variably to depths of 10 to 18 inches bgs. Beneath this layer, at depths of 3 to 6 feet bgs, a loose to firm, gray-brown, slightly silty fine sand occurs, followed by the fourth layer which consists of a firm to very firm, brown to gray tan, slightly silty fine sand, also locally referred to as "hardpan," occurring

variably from depths between 3 to 6 feet bgs and 9 to 12 feet bgs. Beneath this zone of brown sediment is the fifth layer, composed of loose, light gray to gray, slightly silty to clayey fine sand that occurs to depths of 21 to 27 feet bgs. Limited lithology data collected during closure activities presents a simpler strata for the First Flush Basin and Process Wet Well area, consisting of three layers of medium sands, varying in color from the surface to 15 ft bgs., and a fine sand with silty clays from 15 to 20 ft bgs.

In general, the sediment layers composing the upper 20 feet of the surficial aquifer at the Site can be grouped into two types of lithology; a layer of firm sands extending to a depth of about 15 feet bgs, and a layer of loose fine sands extending to about 23 feet bgs.

The two "hardpan" zones are considered to be weakly-cemented organic-stained layers. These zones are the result of groundwater level fluctuation through the topsoil leaching organic material into the acidic sandy soils. The upper and lower layers represent the results of two different groundwater stands in the area of the Facility. The deeper hardpan layer is believed to be the same stratum that outcrops on the South Brunswick River bluff at the north end of Colonels Island.

Deeper subsurface materials underlying the Facility consist of firm to dense, gray, slightly silty to slightly clayey, fine to coarse sand with occasional thin silty clay seams occurring from depths of 20 to 40 feet bgs. From approximately 40 to 60 feet bgs, a very firm to very dense, light gray to gray slightly clayey, silty and slightly calcareous fine to coarse sand with some fine gravel occurs. The top of this layer has been observed at depths ranging from 39 to 42 feet bgs during drilling activities. A hard, light gray, slightly sandy and slightly calcareous silty clay with some fine gravel occurs from approximately 60 to 90 feet bgs. The base of the aquifer becomes more clayey with depth and the top of the upper confining unit is generally marked by clay beds.

The upper 40 feet of sediment based on lithological descriptions appears to contain the most permeable material within the aquifer. Increasing clay content in the remainder of the aquifer decreases the permeability of the aquifer materials. Therefore, it is probable that near the 40-foot bgs depth, the groundwater vertical movement becomes more laterally oriented and the vertical component is significantly decreased.

Based on the water level measurements from 2015 and 2016, groundwater was encountered in the surficial aquifer unit at elevations ranging from 7.41 to 9.94 feet North American Vertical Datum 1988 (NAVD 88). A comprehensive potentiometric map for the Facility is provided in Figure 3-4. Recent groundwater level measurements suggest that the groundwater gradient at the Facility is relatively flat (ranging from 0.0005 foot/foot to 0.0045 foot/foot, and averaging 0.0020 foot/foot in 2015). Slug tests were also completed in July 2015, resulting in a calculated hydraulic conductivity of 15.3 feet/day. Based on this hydraulic conductivity and a soil effective porosity of 30 percent, the approximate velocity of surficial aquifer groundwater flow at the Facility is about 38 feet/year.

The direction of groundwater flow in November 2015 was predominantly to the south and southeast, which is consistent with previous years. Since June 2010, groundwater flow has been consistently in a southerly direction, usually to the southeast or east-southeast, with an occasional component of flow to the southwest. Localized events, such as tidal influence and rainfall, undoubtedly impact

FIGURE 3-4
Facility Potentiometric Surface Map
June 21, 2017
Brunswick, Georgia

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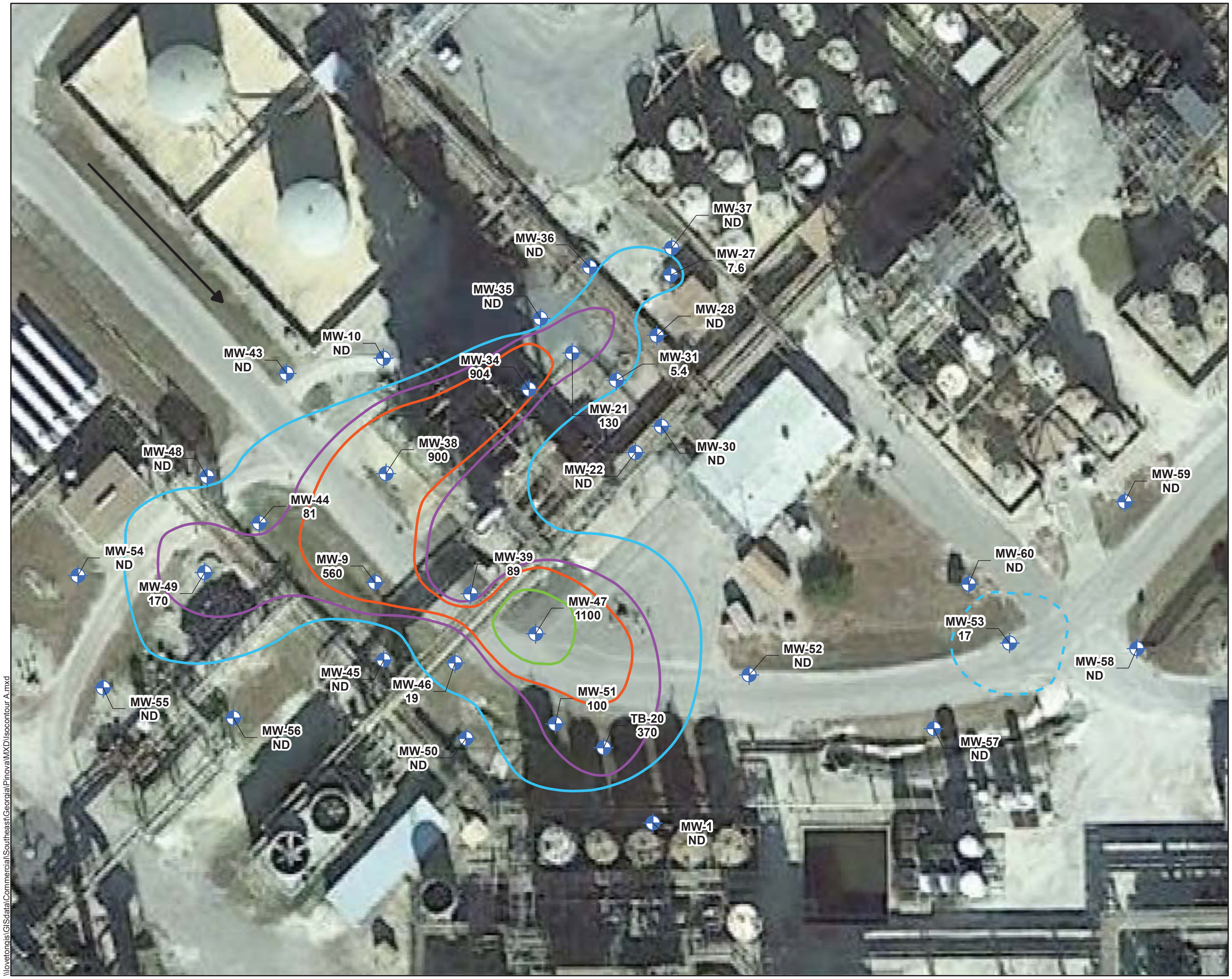
groundwater conditions at the Facility. However, as demonstrated by the last four years of data, these impacts are not significant enough to materially change the predominant flow regime or the related contaminant migration pathway.

3.4.2.2 Current Volume and Extent of Benzene Contamination in Groundwater

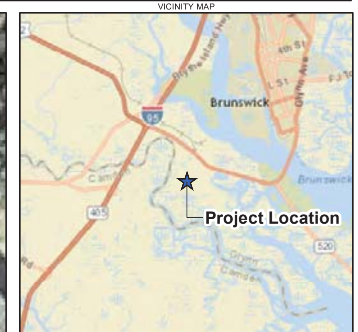
The areal extent of benzene in groundwater above the RLs is depicted in Figure 3-5 based on the post-closure sampling data. The benzene plume area above the RL occupies approximately 52,453 ft^2 (1.2 acres) with a volume of 698,867 ft^3. Based on vertical profile sampling using direct-push technology, the average depth of dissolved-phase contamination is 20 ft bgs. Figures 3-6, 3-7, and 3-8 provide lines of section and the cross sections of the benzene plume. Sampling conducted to date has defined the extent of the benzene contamination. Benzene was detected above the USEPA Tapwater Screening Levels in MW-9 (560 µg/L), MW-21 (130 µg/L), MW-27 (7.6 µg/L), MW-31 (5.4 µg/L), MW-34 (960 µg/L), MW-34B (11 µg/L), MW-34C (10 µg/L), MW-38 (900 µg/L), MW-38B (34 µg/L), MW-38C (100 µg/L), MW-39 (89 µg/L), MW-44 (81 µg/L), MW-46 (19 µg/L), MW-47 (1,100 µg/L), MW-47B (720 µg/L), MW-47C (130 µg/L), MW-49 (170 µg/L), MW-51 (100 µg/L), and MW-53 (17 µg/L) (see Table 3-2). The concentrations of benzene detected in the groundwater do not suggest a continuing source or ongoing release.

3.4.2.3 Current Extent of LNAPL in Groundwater

As discussed in Section 3.3.3.2, LNAPL has only been observed in three wells: MW-27, MW-30, and MW-34. No LNAPLs were observed in any of the wells when first drilled and sampled for VOCs. The LNAPL present in MW-27 and MW-30 was determined to be primarily alpha-pinene. The analysis LNAPL in MW-34 indicated that it was a mixture of plant materials and likely associated with either the First Flush Basin or the associated underground wastewater lines. LNAPL thickness in all three wells have continued to decrease with either bailing (MW-27) or the use of absorbent socks (MW-30 and MW-34).



VICINITY MAP



Legend

Monitoring Well Location (5-10 ft bgs)

Groundwater Flow

Benzene Concentration Contour (µg/L)

Dashed where inferred

- 5
- 100
- 500
- 1000

Notes:
ft - feet
ND - Non-detect
bgs - below ground surface
µg/L - micrograms per liter

Map Date: June 2016

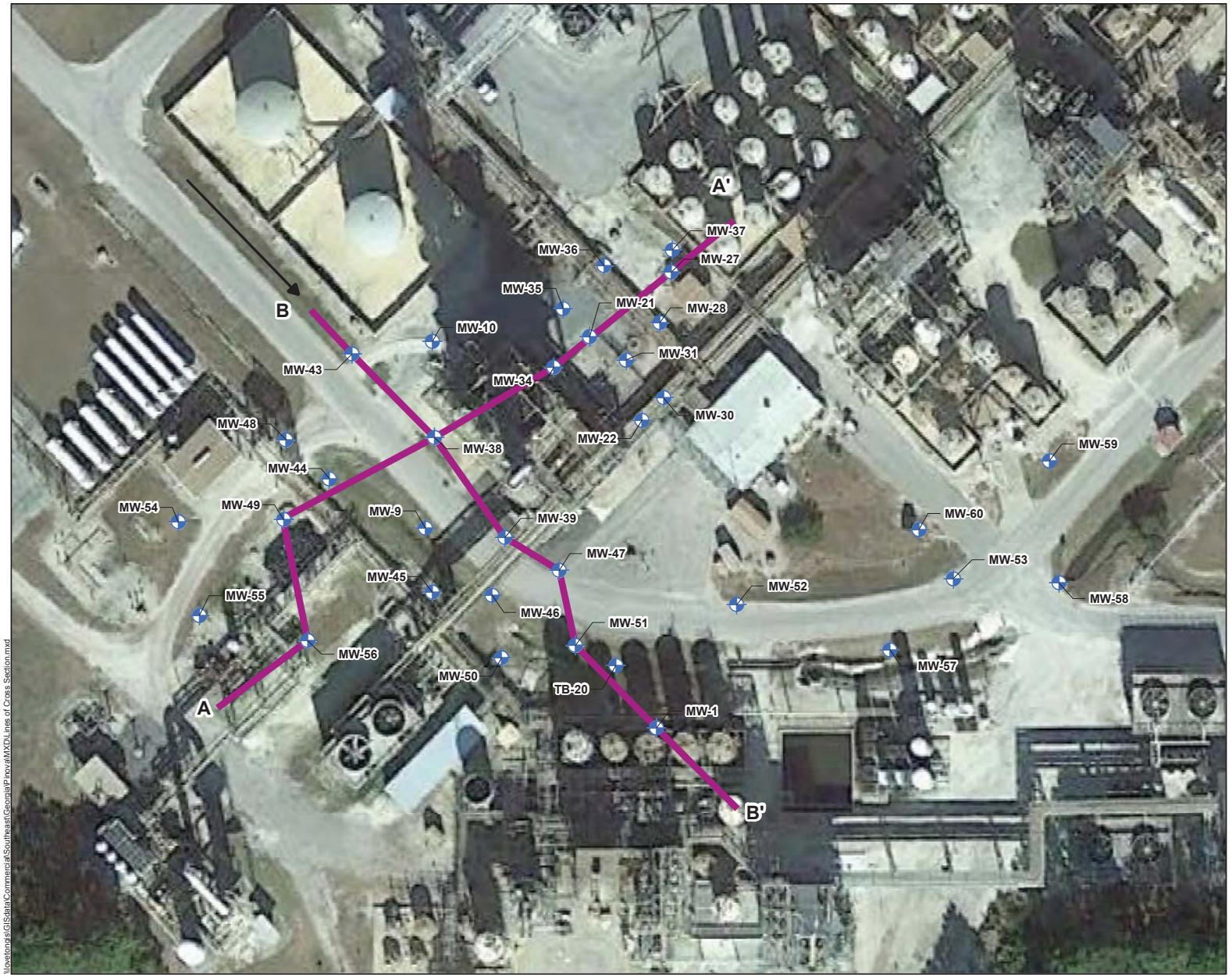
Aerial: Google Earth 2014

N

0 25 50
Feet

FIGURE 3-5
Areal Extent of Benzene Plume
Brunswick, Georgia

\\lovetongis\GISdata\Commercial\Southeast\Georgia\Pinova\MXD\Isocontour A.mxd



VICINITY MAP

Legend

- Monitoring Well Location
- Groundwater Flow
- Line of Cross Section

Map Date: June 2016

Aerial: Google Earth 2014

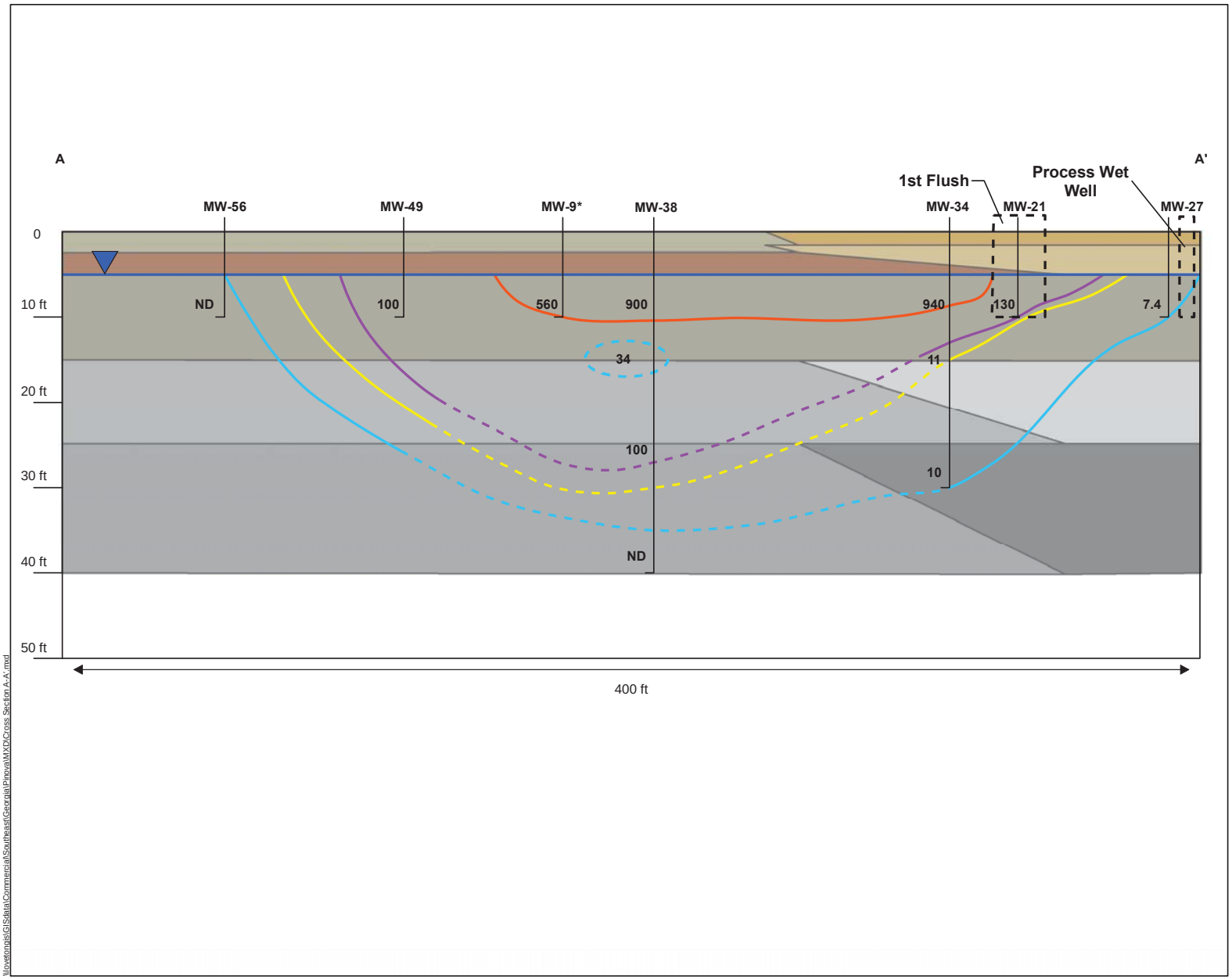
N

0 50 100

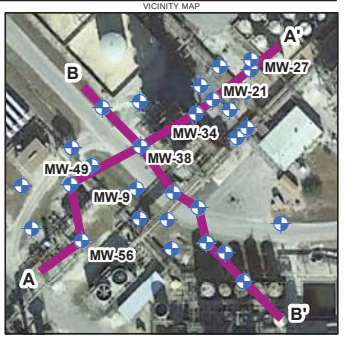
Feet

\\loveland\GIS\Data\Commercial\Southeast\Georgia\Projects\MXD\Lines of Cross Section.mxd

FIGURE **3-6**
Lines of Section for Benzene Plume
Brunswick, Georgia



VICINITY MAP



Legend

Water Table

Benzene Concentration (µg/L)

Dashed where inferred

- 5
- 50
- 100
- 500

Depth and Soil Type

- 0-2 ft - Dark Brown Medium Sand
- 0-3 ft - Grayish Brown Medium Sand
- 2-5 ft - Light Brown Medium Sand
- 3-5 ft - Dark Brown Medium Sand
- 5-15 ft - Gray Brown Medium Sand
- 15-25 ft - Dark Gray Silty Clay Fine Sand
- 15-25 ft - Dark Gray Fine to Medium Sand
- 25-40 ft - Dark Gray Medium Course Sand Clay Lens from 39.5 to 40 ft
- 25-40 ft - Dark Gray Medium to Course Sand Clay Lenses at 37 ft

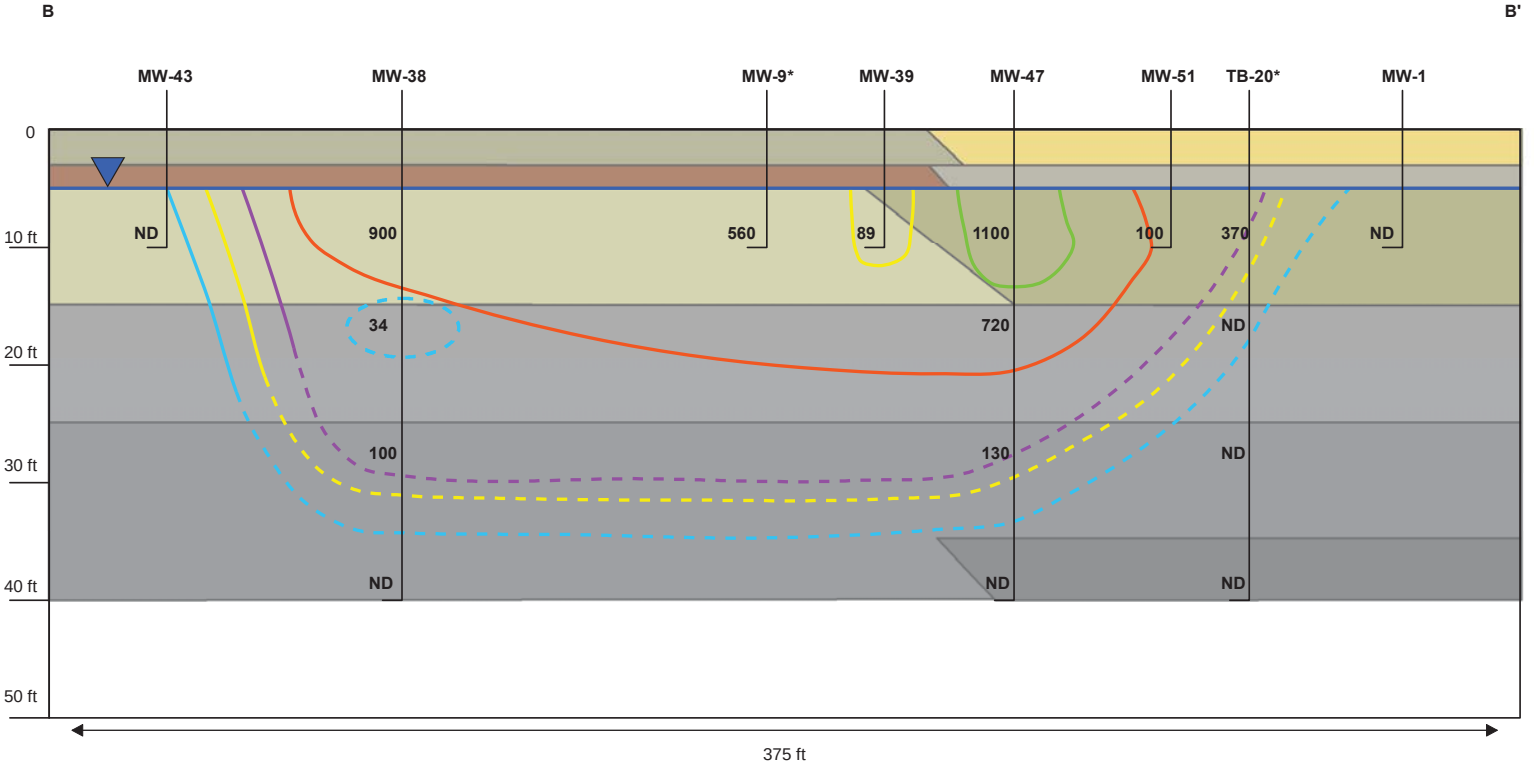
Notes: Vertical Exaggeration of 3x
* - Projected
Map Date: July 2016
Aerial: Google Earth 2014

0 25 50
Feet

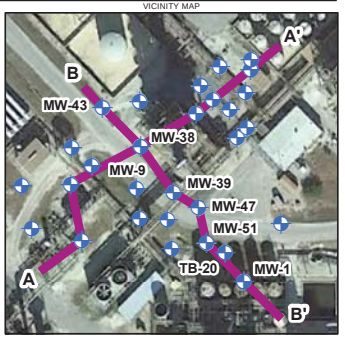
N

FIGURE 3-7
Cross Section A - A' for Benzene Plume
Brunswick, Georgia

\\lovetonnis\GIS\data\Commercial\Southeast\Georgia\Pinova\MXD\Cross Section A-A'.mxd



VICINITY MAP



Legend

Water Table

Benzene Concentration (µg/L)

Dashed where inferred

- 5
- 50
- 100
- 500
- 1000

Depth and Soil Type

- 0-3 ft - Grayish Brown Medium Sand
- 0-3 ft - Yellow Brown Medium Sand
- 3-5 ft - Dark Brown Fine to Medium Sand
- 3-5 ft - Grayish Brown Fine to Medium Sand
- 5-15 ft - Brownish Gray Medium Sand
- 5-15 ft - Brownish Gray Fine to Medium Sand
- 15-25 ft - Dark Gray Silty Clayey Fine Sand
- 25-40 ft - Dark Gray Medium 10 Course Sand 6-in Clay Lenses at 39.5 ft
- 35-40 ft - Dark Gray Fine Silty Sand Clay Lenses at 36 and 39 ft

Note: Vertical Exaggeration of 3x
* - Projected
Map Date: July 2016
Aerial: Google Earth 2014

0 25 50
Feet

N

\\lovetonnis\GIS\data\Commercial\Southeast\Georgia\Pinova\MXD\Cross Section B-B'.mxd

FIGURE 3-8
Cross Section B - B'
Brunswick, Georgia

3.4.2.4 Human Health Risk Assessment

A human health risk assessment (HHRA) was completed to evaluate risk associated with the samples exceeding USEPA screening levels. The HHRA evaluated potential human health concerns from exposure to soils and groundwater adjacent to and/or underlying two concrete basins that have been impacted by past use. To determine human health concerns, the HHRA evaluated potential sources of contamination and routes of migration based on current and potential future site uses. The HHRA identified commercial/industrial and construction workers as actual receptors and additionally evaluated future residents as potential receptors. The migration pathways evaluated for the construction worker were incidental ingestion of groundwater, dermal contact with groundwater, and inhalation of VOCs in a trench. The migration pathways evaluated for the commercial/industrial worker were ingestion of/dermal contact with groundwater as a potable water supply and inhalation of VOCs from groundwater. The migration pathways evaluated for the potential future residents were ingestion of/dermal contact with groundwater as a potable water supply and inhalation of VOCs while showering and other household activities. The HHRA followed USEPA guidance (1989 and 2014b) and utilized the four-step process: 1) data evaluation and hazard assessment, 2) exposure assessment, 3) toxicity assessment, and 4) risk characterization.

The HHRA noted that 1,2-dibromo-3-chloropropane was detected in only one out of sixteen soil samples and that soil was not considered a potential media of concern. Carcinogenic risk results were above the USEPA acceptable risk range of from 10^{-6} to 10^{-4} for the potential future resident based upon the use of groundwater as a tap water supply. Risk results were within the acceptable risk range for the commercial/industrial worker. The HHRA is included as Appendix J. The Process Wet Well and First Flush Basin do not meet the State preferred closure standard of 10^{-5} and thus, an IMP will be developed.

3.4.2.5 Screening Level Ecological Risk Assessment

A screening level ecological risk assessment (SLERA) was conducted to characterize and quantify potential environmental impacts of releases from the First Flush Basin and Process Wet Well. The SLERA characterized and quantified potential environmental impacts from residual chemicals in environmental media from site activities. The SLERA was conducted in accordance with the process for ecological risk assessments (ERAs) outlined in the document Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments (USEPA 1997) and other relevant USEPA guidance. The SLERA identified plants, soil invertebrates, amphibians, reptiles, birds, and mammals as potential receptors for contaminants found at the First Flush Basin and Process Wet Well. The primary contaminant transport mechanism is via overland flow into adjacent surface soil. Runoff and erosion may also transport chemicals into sediment or surface water and bioaccumulation is also a relevant transport pathway.

The SLERA evaluated surface soil samples that were analyzed for SVOCs and VOCs. There were no chemicals detected in surface soils. Therefore, there are no risks to ecological receptors. The Ecological Risk Assessment is included as Appendix K.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 AERATION BASIN

There were no exceedances of USEPA screening levels detected in any of the samples collected at the Aeration Basin. The rinsate samples collected at the conclusion of the Aeration Basin removal and cleaning activity did not have any exceedances of USEPA Tapwater Screening Levels or pH as noted in the Closure Plan. The Aeration Basin has met the requirements for clean closure, and no further action is required

The Aeration Basin has been backfilled and grass has been sown per the E&S Control plan. The five monitoring wells located at the Aeration Basin (MW-23, MW-24, MW-25, MW-26, and MW-29) were properly plugged and abandoned on 16 June 2017.

The wells were of similar construction, with 2-inch diameter PVC screen and riser, 2ft X 2ft concrete pads at the surface and steel "stick up" type well protectors. The deepest of the wells was 17 feet total depth, with the other four being 10 ft depth each. The same abandonment procedure was followed at each well. First, a direct push type rig ("rig") was moved over the concrete pad and the hammer drive of the rig used to break up the pad. When the concrete was sufficiently broken into chunks, it was removed from the well head area. The cable hoist of the rig was then used to pull the stick up protectors and the PVC well material from the well bore. After removing the well material, Betts then grouted the remaining open bore hole. The grout mix used was a slurry of Portland type cement and bentonite, mixed as per Georgia specs for this task. The cement was emplaced via a tremie pipe to the bottom of the hole and the cement was fed into the hole until it reached the surface. The tremie was then removed and the cement slurry was topped up. Local soils were used to back fill and level the remaining voids where the pads had been.

4.2 FIRST FLUSH BASIN AND PROCESS WET WELL AREA

1,2-Dibromo-3-chloropropane was detected above USEPA residential soil screening levels in sample SB-16 (0.26 mg/kg). Benzene in groundwater was detected above the USEPA Tapwater Screening Level in MW-9 (560 µg/L), MW-21 (130 µg/L), MW-27 (7.6 µg/L), MW-31 (5.4 µg/L), MW-34 (960 µg/L), MW-34B (11 µg/L), MW-34C (10 µg/L), MW-38 (900 µg/L), MW-38B (34 µg/L), MW-38C (100 µg/L), MW-39 (89 µg/L), MW-44 (81 µg/L), MW-46 (19 µg/L), MW-47 (1,100 µg/L), MW-47B (720 µg/L), MW-47C (130 µg/L), MW-49 (170 µg/L), MW-51 (100 µg/L), and MW-53 (17 µg/L). Risk results were within the acceptable risk range for the commercial/industrial worker and there are no risks to ecological receptors. Specifically, the risk assessment indicates that the First Flush Basin and Process Wet Well meet the 10^{-4} USEPA risk level, but do not meet the State preferred 10^{-5} risk level.

Because GA EPD generally considers all groundwater to be a drinking water source, Blue Jay/Symrise concluded that testing was warranted to address potential options for the destruction of benzene below its Tapwater Screening Level and the commensurate reduction in risk below the State

preferred risk level of 10^{-5}. Therefore, a Pilot Test Plan was developed to evaluate In-Situ Chemical Oxidation (ISCO) and the Pilot Test was initiated in July 2016.

4.2.1 Pilot Test Injection Well Plan

Groundwater is the only impacted medium that appears to warrant further remedial action. Groundwater is impacted with VOCs, with benzene the primary Chemical of Concern (COC) impacting First Flush Basin and Process Wet Well Area groundwater. To assess the effectiveness of a potential remedial measure for Site groundwater, a Pilot Test Injection Well Plan (Pilot Plan) was developed. The principal objective of this Pilot Plan is to conduct a pilot test to determine the feasibility of ISCO to reduce contaminant concentrations (primarily benzene, but also tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (c12DCE), and vinyl chloride (VC)) to acceptable risk levels. The goals of the Pilot Test are to determine: 1) the effective radii of influence (horizontal and vertical) in sandy soils at the Facility; 2) if injection volumes are capable of reaching areas beneath process areas/structures that are incompatible/inaccessible for direct injections; and 3) the requirements for hydraulic/injection controls at the perimeter of pilot study injection areas. PCE, TCE, c12DCE, and VC are the primary COCs in Area 5, which lies farther to the southeast of First Flush Basin and Process Wet Well Area.

The former First Flush Basin and Process Wet Well Area was selected for the Pilot Test as it has the required elements (e.g., process areas inaccessible to direct injection points due to overlying infrastructure, contaminants at varying depths for radius of influence determinations, and apparent preferential hydraulic pathways potentially requiring additional hydraulic/injection control points). In addition, as the primary contaminant, benzene can be more difficult to treat with ISCO compared to other contaminants present in Site groundwater, and represents a conservative compound for pilot test demonstration purposes. Specifically, a modified form of Fenton's Reagent (a mixture of hydrogen peroxide and iron catalyst, sometimes known as a catalyzed hydrogen peroxide or CHP; herein referred to as Fenton's Reagent) was selected as the injectant for the Pilot Test.

In mid-July 2016, the Pilot Test was initiated with the injection of approximately 27,000 gallons of Fenton's Reagent via nearly 50 temporary injection wells divided into three groups. The first group of wells was intended to determine if increased injection volume(s) can successfully treat contamination beneath process areas/buildings, the second group was intended to determine radii of influence (horizontal and vertical) at differing depths, and the third group was positioned to provide hydraulic/injection controls.

During injection activities, process and performance monitoring were conducted, the injection area and nearby drainage receptors were monitored/inspected for the presence of material surfacing (daylighting). Groundwater samples were collected daily from monitoring, vent, and injection wells within and adjacent to the Pilot Test area. The parameters measured included groundwater pH, dissolved iron, hydrogen peroxide concentration (which cumulatively reflected the distribution of the oxidant and characterized geochemical conditions to ensure they were appropriate), photoionization

detector headspace (which provided a semi-quantitative measurement of VOC concentration), and temperature.

Upon completion of the Pilot Test injections and a brief residence period for the Fenton's Reagent to diffuse through the subsurface and allow the expected oxidation to proceed, preliminary performance sampling was undertaken at 27 monitoring wells to evaluate the effectiveness of the injectant. The following conclusions were noted:

- Post-injection soil reactivity testing indicated that the iron/stabilizer system are important
- considerations in the injection process.
- Post-injection sampling of soils for TPH, COD, and VOCs indicate that soil loading is not likely to be a limiting factor in groundwater treatability. However, in some areas, adjustments to oxidant loading may be needed to account for potential pockets of LNAPL/TPH.
- While data indicates a reaction was occurring in the subsurface, benzene (the target COC) concentrations were largely unchanged.

A complete Pilot Test report was submitted in October 2016 shortly after the end of the 90-day Pilot Test period.

4.2.2 Pilot Test Injection Process

In preparation for the ISCO injections, Clean Harbors pumped MW-27, MW-30, and MW-34 completely dry on July 12, 2016 using a vacuum truck. The appearance of the removed water was clear and a flashpoint analysis indicated that the flashpoint was greater than 65^{o}C.

MW-27 was closely monitored after Fenton's Reagent was injected at the injection point closest to MW-27. After completion of the initial injection, an interface meter measured approximately one-tenth inch of LNAPL. The appearance of the LNAPL was light brown in color. The well was skimmed by vacuum truck for 45 minutes. An additional 190 gallons of Fenton's Reagent were then applied at the injection point closest to MW-27, which was monitored again on July 18, 2016. No LNAPL was present during this follow-up monitoring. MW-27 will be designated as a compliance monitoring well to confirm whether the LNAPL has been addressed.

Confirmatory groundwater sampling data for benzene and other organic constituents indicates that the initial injection was effective in achieving the desired dispersion of the Fenton's Reagent in the native soil/groundwater matrix in the former First Flush Basin and Process Wet Well area, but reactivity, appeared not to be indicative of the onset of effective treatment. An ISCO Pilot Test Report was submitted after completion of the Pilot Test injections and the confirmatory sampling/monitoring.

4.2.3 Recommended Action

Pursuant to Paragraph 20(d) of the Consent Decree Blue Jay/Symrise is recommending post-closure care for the Process Wet Well and First Flush Basin including ancillary equipment (underground wastewater lines) associated with the two aforementioned units.

4.2.4 Summary

- Groundwater is impacted with VOCs and benzene is the primary COC impacting groundwater in the former First Flush Basin, Process Wet Well, and associated auxiliary equipment (underground wastewater lines).
- Blue Jay/Symrise has undertaken a Pilot Test in the former First Flush Basin and Process Wet Well area to evaluate the effectiveness of ISCO in benzene degradation. The first phase of the Pilot Test was completed on July 22, 2016. Confirmatory groundwater sampling data to evaluate the effectiveness of ISCO and delineate contaminant concentrations in the First Flush Basin and Process Wet Well area were collected within approximately 30 days of the injection (the week of August 22, 2016).
- Confirmatory groundwater sampling data indicates that the initial injection was effective in the dispersion of Fenton's Reagent in the native soils but the overall reactivity appeared not to be indicative of the onset of effective treatment.
- All monitoring wells in the immediate vicinity of the wet well are ND or below the MCL for benzene.
- Blue Jay/Symrise will prepare and submit an application for post closure care for the Process Wet Well, First Flush Basin, and ancillary equipment (underground wastewater lines).

Appendix A

STRUCTURE EVALUATION REPORT
(included on CD)

Appendix B

BILLS OF LADING/SHIPPING MANIFESTS
(included on CD)

Appendix C

LOG BOOKS AND DAILY WORK SHEETS
(included on CD)

Appendix D

CLOSURE ACTIVITY PHOTOLOG
(included on CD)

Appendix E

HAZARDOUS WASTE MANIFESTS
(included on CD)

Appendix F

PIPE CLEANING VIDEO LOGS
(included on CD)

Appendix G

WELL INSTALLATION AND PURGE LOGS
(included on CD)

Appendix H

USEPA SCREENING LEVEL TABLES
(included on CD)

Appendix I

ANALYTICAL PACKAGES
(included on CD)

Appendix J

HUMAN HEALTH RISK ASSESSMENT
(included on CD)

Appendix K

ECOLOGICAL RISK ASSESSMENT
(included on CD)

Appendix L

PILOT STUDY INJECTION SUMMARY
(included on CD)

Attachment D

Sprayfield Data

Legend

- Soil Samples
- Monitoring Wells

0 50 100 200 Feet

Title

1991 Sprayfield Composite Sample Locations and MW-67

Project

Colonels Island
Brunswick, Georgia

NewFields
Two Midtown Plaza
1349 West Peachtree Street, Suite 2000
Atlanta, Georgia 30309
Tel: 404-347-9050 ~ Fax: 404-347-9080

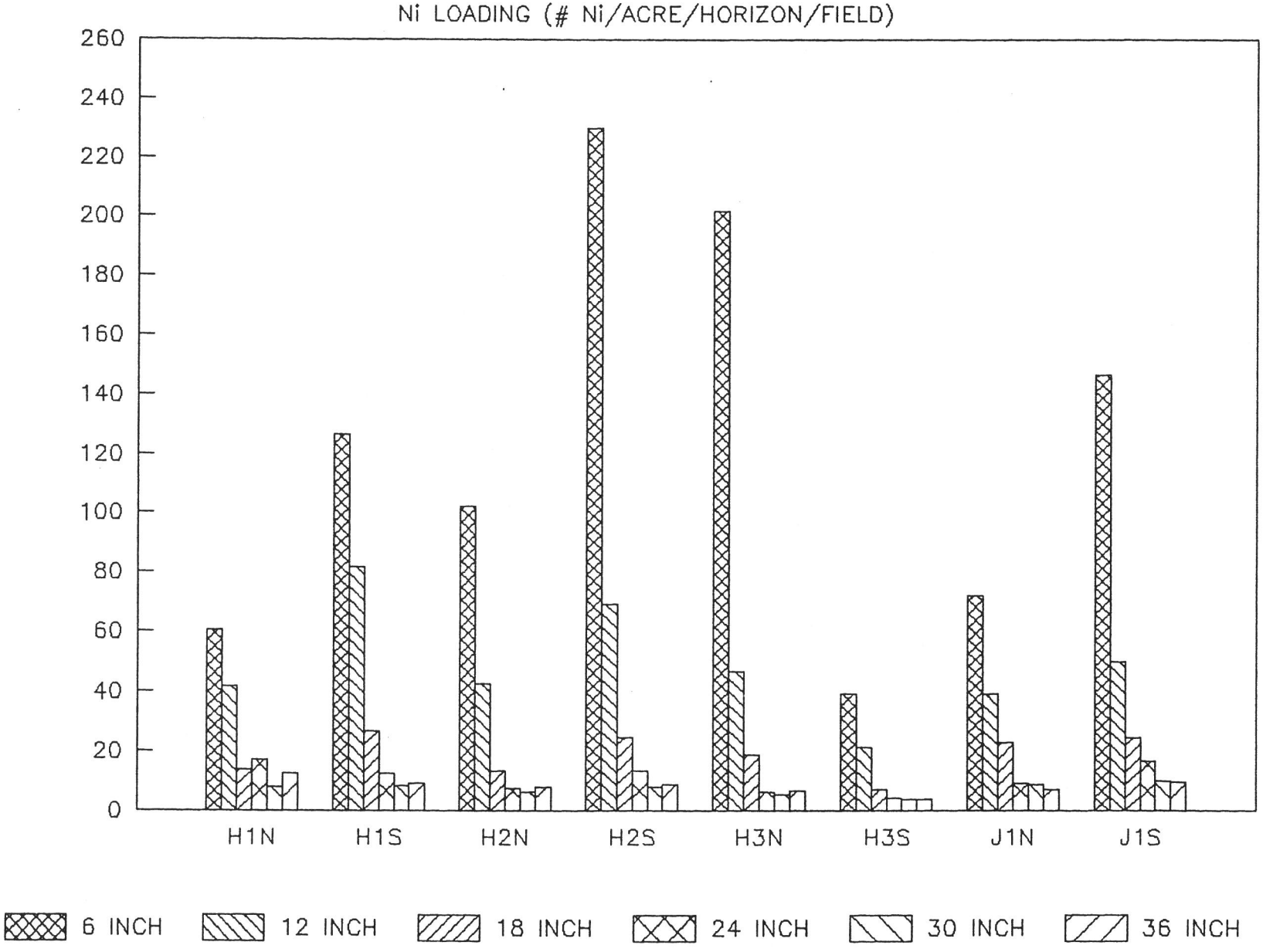
Date	06/10/2021	Rev. No.	1
MXD	/CIO/GIS/CIO.mxd	Figure No.	1

NICKEL CONCENTRATIONS FROM SPRAYFIELD SAMPLES TAKEN NOV 1991
(50 SAMPLE POINTS EACH COMPOSITED INTO ONE)

	HORIZON												
FIELD	A		B		C		D		E		F		TOTAL
	PPM	#/ACRE	PPM	#/ACRE	PPM	#/ACRE	PPM	#/ACRE	PPM	#/ACRE	PPM	#/ACRE	#/ACRE
H1N	21.82	60.36	15.03	41.57	4.89	13.53	6.11	16.90	2.76	7.63	4.51	12.47	152.47
H1S	45.75	126.55	29.50	81.60	9.58	26.50	4.50	12.45	2.95	8.16	3.20	8.85	264.10
H2N	36.98	102.29	15.34	42.43	4.86	13.44	2.62	7.25	2.16	5.97	2.89	7.99	179.38
H2S	83.11	229.89	24.98	69.10	8.86	24.51	4.74	13.11	2.78	7.69	3.08	8.52	352.81
H3N	72.92	201.70	16.87	46.66	6.83	18.89	2.15	5.95	1.95	5.39	2.26	6.25	284.85
H3S	14.07	38.92	7.67	21.22	2.57	7.11	1.47	4.07	1.22	3.37	1.24	3.43	78.11
J1N	26.03	72.00	14.15	39.14	8.20	22.68	3.19	8.82	3.11	8.60	2.57	7.11	158.36
J1S	53.01	146.63	18.00	49.79	8.90	24.62	6.00	16.60	3.58	9.90	3.43	9.49	257.02
MIN	14.07	38.92	7.67	21.22	2.57	7.11	1.47	4.07	1.22	3.37	1.24	3.43	78.11
AVG	44.21	122.29	17.69	48.94	6.84	18.91	3.85	10.64	2.56	7.09	2.90	8.01	215.89
MAX	83.11	229.89	29.50	81.60	9.58	26.50	6.11	16.90	3.58	9.90	4.51	12.47	352.81

EACH FIELD IS 180 FEET BY 330 FEET	=	59400 FT2	=> 1.36363 ACRES
EACH HORIZON IS 6 INCHES DEEP	=	29700 FT3	VOLUME PER 6 INCH HORIZON
DENSITY OF SOIL	=	127 #/FT3	TAKEN AT 3 SAMPLE POINTS
AMOUNT OF SOIL FOR EACH FIELD HORIZON	=	4E+06 #	
AMOUNT OF SOIL PER ACRE OF FIELD	=	3E+06	

NICKEL ANALYSIS OF SPRAYFIELDS



Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

June 17, 2020

Nick DiLuzio
Newfields
1349 West Peachtree Street
Suite 2000
Atlanta, GA 30309

RE: Project: Colonels Island-Revised Report
Pace Project No.: 2626719

Dear Nick DiLuzio:

Enclosed are the analytical results for sample(s) received by the laboratory on December 12, 2019. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Atlanta, GA
- Pace Analytical Services - Indianapolis

This replaces the December 23, 2019 final report. This report was reissued to remove samples 2626719-001 and -002 from the final report per client request. No other changes were made to this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Colonels Island-Revised Report
Pace Project No.: 2626719

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services Indianapolis
7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
West Virginia Certification #: 330
Wisconsin Laboratory #: 999788130
USDA Soil Permit #: P330-19-00257

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Colonels Island-Revised Report
Pace Project No.: 2626719

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2626719003	**MW-67**	Water	12/11/19 18:15	12/12/19 13:42

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Colonels Island-Revised Report
Pace Project No.: 2626719

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2626719003	**MW-67**	EPA 6020B	CSW	1	PASI-GA
		EPA 6020B	CSW	1	PASI-GA

PASI-GA = Pace Analytical Services - Atlanta, GA
PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island-Revised Report
Pace Project No.: 2626719

Method: **EPA 6020B**
Description: 6020B MET ICPMS
Client: Newfields
Date: June 17, 2020

General Information:
1 sample was analyzed for EPA 6020B by Pace Analytical Services Atlanta, GA. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island-Revised Report
Pace Project No.: 2626719

Method: **EPA 6020B**
Description: 6020B MET ICPMS, Dissolved
Client: Newfields
Date: June 17, 2020

General Information:
1 sample was analyzed for EPA 6020B by Pace Analytical Services Atlanta, GA. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island-Revised Report
Pace Project No.: 2626719

Sample: MW-67 **Lab ID: 2626719003** Collected: 12/11/19 18:15 Received: 12/12/19 13:42 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Nickel	ND	ug/L	5.0		1	12/13/19 15:53	12/16/19 13:38	7440-02-0	
6020B MET ICPMS, Dissolved	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Nickel, Dissolved	ND	ug/L	5.0		1	12/16/19 15:42	12/17/19 17:22	7440-02-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island-Revised Report
Pace Project No.: 2626719

QC Batch: 40481
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2626719003

METHOD BLANK: 184054 Matrix: Water
Associated Lab Samples: 2626719003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nickel	ug/L	ND	5.0	12/16/19 13:09	

LABORATORY CONTROL SAMPLE: 184055

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel	ug/L	100	104	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 184056 184057

Parameter	Units	2626684010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nickel	ug/L	ND	100	100	103	104	102	104	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island-Revised Report
Pace Project No.: 2626719

QC Batch: 40593
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET Dissolved
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2626719003

METHOD BLANK: 184754 Matrix: Water
Associated Lab Samples: 2626719003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nickel, Dissolved	ug/L	ND	5.0	12/17/19 17:11	

LABORATORY CONTROL SAMPLE: 184755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel, Dissolved	ug/L	100	105	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 184756 184757

Parameter	Units	2626800046 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nickel, Dissolved	ug/L	8.8	100	100	116	111	107	102	75-125	5	20	

SAMPLE DUPLICATE: 184769

Parameter	Units	92457170011 Result	Dup Result	RPD	Max RPD	Qualifiers
Nickel, Dissolved	ug/L	6.8J	6.7J		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Colonels Island-Revised Report
Pace Project No.: 2626719

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Colonels Island-Revised Report
Pace Project No.: 2626719

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2626719003	**MW-67**	EPA 3005A	40481	EPA 6020B	40506
2626719003	**MW-67**	EPA 3005A	40593	EPA 6020B	40624

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request D

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields m

WO# : 2626719

2626719

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Newfields	Report To:	Nick DiLuzio	Attention:	
Address:	1349 West Peachtree Street	Copy To:		Company Name:	
Atlanta, GA 30309				Address:	
Email:	ndiluzio@newfields.com	Purchase Order #:		Pace Quote:	
Phone:	(404)969-0731 Fax:	Project Name:	Colonels Island	Pace Project Manager:	maiya.parks@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	187.1.2

State / Location
GA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: Metals 6020 - Ni only	Hexavalent Chromium	Hexavalent Chromium	Metals 6020 - Ni only, Field	Residual Chlorine (Y/N)
1	Boiler-2-12-11-19-9-12	SW	G	12-11-19	1645				1	X											X			
2	Boiler-2-12-11-19-15-18	SW	G	"	1650				1	X											X			
3	MW-67	GW	G	12-11-19	1815				3	X		X							X			X		
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Patrick M. Grogen	12-12-19	1342	K. Wellington / PACE	12/12/19	1342	0.2	Y		Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Patrick M. Grogen

SIGNATURE of SAMPLER: Patrick M. Grogen

DATE Signed: 12-11-19

Client Name: _____

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Oth

WO#: 2626719

PM: MZP Due Date: 12/19/19

CLIENT: Neufields

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used T1-R083 Type of Ice: ☑ Wet Blue None

Cooler Temperature 0.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Samples on ice, cooling process has begun

Date and initials of person examining contents: KW 12/12/19

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☐N/A	11.
Sample Labels match COC:	☐Yes ☑No ☐N/A	12. (1) 500 mL Hex. Chrom. for sample id MW-67. Which is not present on COC.
-Includes date/time/ID/Analysis Matrix: S, W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed: KW Lot # of added preservative:
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

3000 W28

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

F-ALLC003rev.3, 11September2006

Attachment E

Boiler Area Data

Legend

Soil Samples

0 15 30 60 Feet

Title

Boiler Area Sample Location

Project

Colonels Island
Brunswick, Georgia

NewFields
Two Midtown Plaza
1349 West Peachtree Street, Suite 2000
Atlanta, Georgia 30309
Tel: 404-347-9050 ~ Fax: 404-347-9080

Date	06/10/2021	Rev. No.	1
MXD	/CIO/GIS/CIO.mxd	Figure No.	1

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 23, 2019

Nick DiLuzio
Newfields
1349 West Peachtree Street
Suite 2000
Atlanta, GA 30309

RE: Project: Colonels Island
Pace Project No.: 2626719

Dear Nick DiLuzio:
Enclosed are the analytical results for sample(s) received by the laboratory on December 12, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Colonels Island
Pace Project No.: 2626719

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services Indianapolis
7726 Moller Road, Indianapolis, IN 46268
Illinois Certification #: 200074
Indiana Certification #: C-49-06
Kansas/NELAP Certification #: E-10177
Kentucky UST Certification #: 80226
Kentucky WW Certification #: 98019
Michigan Department of Environmental Quality, Laboratory #9050
Ohio VAP Certification #: CL0065
Oklahoma Certification #: 9204
Texas Certification #: T104704355
West Virginia Certification #: 330
Wisconsin Certification #: 999788130
USDA Soil Permit #: P330-19-00257

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Colonels Island
Pace Project No.: 2626719

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2626719001	**Boiler-2-12-11-19-9-12**	Solid	12/11/19 16:45	12/12/19 13:42
2626719002	**Boiler-2-12-11-19-15-18**	Solid	12/11/19 16:50	12/12/19 13:42
2626719003	**MW-67**	Water	12/11/19 18:15	12/12/19 13:42

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110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Colonels Island
Pace Project No.: 2626719

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2626719001	**Boiler-2-12-11-19-9-12**	SM 2540G	WZE	1	PASI-I
		EPA 7196A	SWJ	1	PASI-I
2626719002	**Boiler-2-12-11-19-15-18**	SM 2540G	WZE	1	PASI-I
		EPA 7196A	SWJ	1	PASI-I
2626719003	**MW-67**	EPA 6020B	CSW	1	PASI-GA
		EPA 6020B	CSW	1	PASI-GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island
Pace Project No.: 2626719

Method: **EPA 6020B**
Description: 6020B MET ICPMS
Client: Newfields
Date: December 23, 2019

General Information:
1 sample was analyzed for EPA 6020B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island
Pace Project No.: 2626719

Method: **EPA 6020B**
Description: 6020B MET ICPMS, Dissolved
Client: Newfields
Date: December 23, 2019

General Information:
1 sample was analyzed for EPA 6020B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island
Pace Project No.: 2626719

Method: **EPA 7196A**
Description: 7196 Chromium, Hexavalent
Client: Newfields
Date: December 23, 2019

General Information:
2 samples were analyzed for EPA 7196A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3060A with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island
Pace Project No.: 2626719

Sample: Boiler-2-12-11-19-9-12 **Lab ID: 2626719001** Collected: 12/11/19 16:45 Received: 12/12/19 13:42 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**13.6**	%	0.10		1		12/20/19 13:25		
7196 Chromium, Hexavalent	Analytical Method: EPA 7196A Preparation Method: EPA 3060A								
Chromium, Hexavalent	ND	mg/kg	2.3		1	12/18/19 11:27	12/19/19 14:43	18540-29-9	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island
Pace Project No.: 2626719

Sample: Boiler-2-12-11-19-15-18 **Lab ID: 2626719002** Collected: 12/11/19 16:50 Received: 12/12/19 13:42 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**22.7**	%	0.10		1		12/20/19 13:27		
7196 Chromium, Hexavalent	Analytical Method: EPA 7196A Preparation Method: EPA 3060A								
Chromium, Hexavalent	ND	mg/kg	2.5		1	12/18/19 11:27	12/19/19 14:46	18540-29-9	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island
Pace Project No.: 2626719

Sample: MW-67 **Lab ID: 2626719003** Collected: 12/11/19 18:15 Received: 12/12/19 13:42 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Nickel	ND	ug/L	5.0		1	12/13/19 15:53	12/16/19 13:38	7440-02-0	
6020B MET ICPMS, Dissolved	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Nickel, Dissolved	ND	ug/L	5.0		1	12/16/19 15:42	12/17/19 17:22	7440-02-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island
Pace Project No.: 2626719

QC Batch: 40481
QC Batch Method: EPA 3005A
Associated Lab Samples: 2626719003

Analysis Method: EPA 6020B
Analysis Description: 6020B MET

METHOD BLANK: 184054
Associated Lab Samples: 2626719003

Matrix: Water

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nickel	ug/L	ND	5.0	12/16/19 13:09	

LABORATORY CONTROL SAMPLE: 184055

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel	ug/L	100	104	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 184056 184057

Parameter	Units	2626684010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nickel	ug/L	ND	100	100	103	104	102	104	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island
Pace Project No.: 2626719

QC Batch: 40593
QC Batch Method: EPA 3005A
Associated Lab Samples: 2626719003

Analysis Method: EPA 6020B
Analysis Description: 6020B MET Dissolved

METHOD BLANK: 184754 Matrix: Water
Associated Lab Samples: 2626719003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nickel, Dissolved	ug/L	ND	5.0	12/17/19 17:11	

LABORATORY CONTROL SAMPLE: 184755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel, Dissolved	ug/L	100	105	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 184756 184757

Parameter	Units	2626800046 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nickel, Dissolved	ug/L	9.1	100	100	116	111	107	102	75-125	5	20	

SAMPLE DUPLICATE: 184769

Parameter	Units	92457170011 Result	Dup Result	RPD	Max RPD	Qualifiers
Nickel, Dissolved	ug/L	6.8J	6.7J		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island
Pace Project No.: 2626719

QC Batch: 539798 Analysis Method: SM 2540G
QC Batch Method: SM 2540G Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 2626719001, 2626719002

SAMPLE DUPLICATE: 2491176

Parameter	Units	2626719001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	13.6	14.4	6	5	R1

SAMPLE DUPLICATE: 2491177

Parameter	Units	50245165010 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.5	14.7	25	5	R1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island
Pace Project No.: 2626719

QC Batch: 539257 Analysis Method: EPA 7196A
QC Batch Method: EPA 3060A Analysis Description: 7196 Chromium, Hexavalent
Associated Lab Samples: 2626719001, 2626719002

METHOD BLANK: 2488814 Matrix: Solid
Associated Lab Samples: 2626719001, 2626719002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Hexavalent	mg/kg	ND	2.0	12/19/19 14:42	

LABORATORY CONTROL SAMPLE: 2488815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	970	963	99	80-120	

MATRIX SPIKE SAMPLE: 2488816

Parameter	Units	2626719001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	ND	1090	973	89	75-125	

MATRIX SPIKE SAMPLE: 2488817

Parameter	Units	2626719001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	ND	46.9	39.8	84	75-125	

SAMPLE DUPLICATE: 2488818

Parameter	Units	2626719002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	mg/kg	ND	ND		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Colonels Island
Pace Project No.: 2626719

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-GA	Pace Analytical Services - Atlanta, GA
PASI-I	Pace Analytical Services - Indianapolis

ANALYTE QUALIFIERS

R1	RPD value was outside control limits.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Colonels Island
Pace Project No.: 2626719

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2626719003	**MW-67**	EPA 3005A	40481	EPA 6020B	40506
2626719003	**MW-67**	EPA 3005A	40593	EPA 6020B	40624
2626719001	**Boiler-2-12-11-19-9-12**	SM 2540G	539798		
2626719002	**Boiler-2-12-11-19-15-18**	SM 2540G	539798		
2626719001	**Boiler-2-12-11-19-9-12**	EPA 3060A	539257	EPA 7196A	539601
2626719002	**Boiler-2-12-11-19-15-18**	EPA 3060A	539257	EPA 7196A	539601

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request D

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields m

WO# : 2626719

2626719

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Newfields	Report To:	Nick DiLuzio	Attention:	
Address:	1349 West Peachtree Street	Copy To:		Company Name:	
Atlanta, GA 30309				Address:	
Email:	ndiluzio@newfields.com	Purchase Order #:		Pace Quote:	
Phone:	(404)969-0731 Fax:	Project Name:	Colonels Island	Pace Project Manager:	maiya.parks@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	187.1.2

State / Location
GA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: Metals 6020 - Ni only	Hexavalent Chromium	Hexavalent Chromium	Metals 6020 - Ni only, Field	Residual Chlorine (Y/N)
1	Boiler-2-12-11-19-9-12	SW	G	12-11-19	1645				1	X											X			
2	Boiler-2-12-11-19-15-18	SW	G	"	1650				1	X											X			
3	MW-67	GW	G	12-11-19	1815				3	X		X							X			X		
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Patrick M Gregen	12-12-19	1342	K. Wellington / PACE	12/12/19	1342	02 Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Patrick M. Gregen

SIGNATURE of SAMPLER: Patrick M Gregen

DATE Signed: 12-11-19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
02	Y		Y

Client Name: _____

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Oth

WO#: 2626719
PM: MZP Due Date: 12/19/19
CLIENT: Neufields

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ y

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used T1-R083 Type of Ice: ☑ Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and initials of person examining contents: KW 12/12/19

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☐N/A	11.
Sample Labels match COC:	☐Yes ☑No ☐N/A	12. ~~Client~~ (1) 500 mL Hex. Chrom. for sample id MW-67. Which is not present on COC.
-Includes date/time/ID/Analysis Matrix: S, W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed: KW Lot # of added preservative:
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

3000 W28

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

F-ALLC003rev.3, 11September2006

Attachment F

Survey and
Environmental Covenant

ENGINEERING SERVICES, INC.
▪ Environmental ▪ Marine ▪ Civil ▪ Survey

P.O. Box 1256
Brunswick, GA 31521
Phone: (912) 265-7636
Fax: (912) 233-4580
www.emc-eng.com

November 19, 2018

Stefanie Leif
Glynn County Community Development
Planning Manager
1725 Reynolds St
Suite 200
Brunswick, GA 31520

RE: 209 SCM Road #2 – Colonels Island
Brunswick, Georgia 31523

Ms. Leif,

In order to meet the Environmental Protection Agency requirements for all RCRA permitted sites. The facility is required to provide a survey plat which shows the locations and dimensions of a closed waste management units and to be submitted to the local zoning authority. Please accept the attached survey for your records.

Regards,

Kenneth B Goodbread II

Kenneth B. Goodbread II
Project Manager

After Recording Return to:
Symrise Inc.
James Carson
209 SCM Road
Brunswick, GA 31523

CROSS-REFERENCE:
County: _____
Deed Book: _____
Page(s): _____

Environmental Covenant

This instrument is an Environmental Covenant executed pursuant to the Georgia Uniform Environmental Covenants Act, O.C.G.A. § 44-16-1 *et seq.*, as may be amended from time to time (hereinafter "Act"). This Environmental Covenant is entered into by the entities executing this Environmental Covenant and subjects the property identified below to the activity and/or use limitations and other requirements. This Environmental Covenant further grants such other rights in favor of EPD and Symrise Holding, Inc.. as set forth herein.

Fee Simple Owner(s)/Grantor(s):
Symrise Inc.
209 SCM Road
Brunswick, GA 31523

Grantee/Holder with the power to enforce:
Symrise Holding, Inc.
209 SCM Road
Brunswick, GA 31523

Grantee/Entity with express power to enforce:
State of Georgia
Department of Natural Resources
Environmental Protection Division
2 Martin Luther King Jr. Drive, SE
Suite 1456 East Tower
Atlanta, GA 30334

Property Subject

The property subject to this Environmental Covenant is a tract of approximately 189 acres of real property located at 209 SCM Road, Brunswick, Glynn County, Georgia, which is further identified by the tax parcel ID number(s) below (hereinafter "Property"). The Property was conveyed on April 30, 2010 to LyondellBasell Flavors & Fragrances, LLC; such conveyance is recorded in Deed Book 2718, Page 325, of the Glynn County deed records.

The tax parcel of the Property is 02-02253 of Glynn County, Georgia.

A legal description of the Property is attached as Exhibit A and a map of the Property is attached as Exhibit B.

Environmental Covenant Runs with the Land and is Perpetual

Pursuant to the Act, this Environmental Covenant shall run with the land and shall be perpetual unless terminated or amended pursuant to terms herein or in accordance with provisions of the Act. This Environmental Covenant shall be binding upon Symrise Inc. and Symrise Holding, Inc., and all successors, assigns and transferees of any interest in the Property or any portion thereof.

Administrative Records

This Environmental Covenant imposes activity and/or use limitations and other requirements on the Property that arise under corrective action performed and/or being performed at the Symrise Colonels Island facility/site. Records pertaining to this corrective action are available at the following EPD location(s):

Georgia Environmental Protection Division
Hazardous Waste Corrective Action Program
2 MLK Jr. Drive SE, Suite 1054 East
Atlanta, GA 30334
Monday-Friday 8:00 AM to 4:30 PM, excluding state holidays

Activity and Use Limitations. The Property is subject to the following activity and/or use limitations:

A. Groundwater Limitation. Groundwater in water-bearing zones from 0 to 100 feet below ground surface at the Property shall not be used for any purpose; provided, however, that this restriction does not apply to the collection of groundwater samples and the installation and use of groundwater monitoring, recovery, injection, or extraction wells and similar devices used for or related to the performance of groundwater assessment or remediation.

Other Requirements. The Property is subject to the following additional requirements.

A. Notice of Limitations and Requirements in Future Conveyances. Each instrument hereafter conveying any interest in the Property or any portion thereof that may affect the activity and use limitations described herein shall include a statement that the Property is subject to this Environmental Covenant (and any amendments thereto), the location (County, Deed Book and Page) in the deed records where this Environmental Covenant (and any amendments thereto) is recorded and a copy of this Environmental Covenant (and any amendments thereto).

B. Notice to EPD of Future Conveyances. Within thirty (30) days after each conveyance of a fee simple interest in the Property or any portion thereof, a notice shall be sent to EPD and Symrise Holding, Inc. The notice shall include the new owner's name, address, telephone number and other pertinent contact information, the date of the conveyance and the location (County, Deed Book and Page) where the conveyance is recorded, and, if the conveyance is a portion of the Property, a survey map showing the boundaries of the real property conveyed.

C. Notice of Change of Use. If such activity will materially affect any required monitoring or maintenance of any institutional or engineering controls described herein, the owner of the Property must provide to EPD thirty (30) days' advance written notice of the owner's intent to change the use of the Property or to apply for a building permit for construction at the Property.

Environmental Covenant Does Not Authorize Use Otherwise Prohibited

Pursuant to the Act, this Environmental Covenant shall not be construed to authorize a use of the Property that is otherwise prohibited by zoning, ordinance, local law or general law or by a recorded instrument that has priority over this Environmental Covenant.

Rights of Access and Enforcement

Authorized representatives of EPD and Symrise Holding, Inc. shall have the right to enter the Property at reasonable times in connection with implementation, compliance, or enforcement of this Environmental Covenant, including but not limited to the right to conduct inspections, examine related records, or to take samples.

This Environmental Covenant shall be enforceable by EPD, Symrise Holding, Inc. and other parties as provided in the Act. Such rights of access and enforcement herein shall not limit EPD's authority under other applicable law.

No Interest in Real Property in EPD

EPD's rights under this Environmental Covenant and the Act shall not be considered an interest in real property.

Recording of Environmental Covenant and Service on Other Persons

Within thirty (30) days after execution of this Environmental Covenant by the Director of EPD, Symrise Inc. shall record the Environmental Covenant in every county in which any portion of the Property is located in accordance with the law governing the recording and priority of interests in real property. Upon recording of the Environmental Covenant, Symrise Inc. shall provide in a manner deemed acceptable by EPD a copy of the executed, recorded Environmental Covenant to each of the persons or entities identified in O.C.G.A. § 44-16-7.

Representations and Warranties by Grantor(s). Symrise Inc. represents and warrants that all of the following are true and correct:

A. Symrise Inc. holds fee simple title to the Property.

B. Symrise Inc. has the authority to enter into this Environmental Covenant, has the authority to grant any rights granted by it within, has the ability to carry out the obligations described within and, based upon information and belief after reasonable inquiry, does not know of any anticipated material change in the practices, ownership, or authority of Symrise Inc. that will alter this representation and warranty.

C. The execution and delivery of this Environmental Covenant and carrying out the obligations described within will not conflict with any of the provisions of the organizational documents of Symrise Inc.

D. There are no persons with existing interests other than fee simple in the Property.

E. This Environmental Covenant does not authorize a use of the Property that is otherwise prohibited by zoning, ordinance, local law or general law or by a recorded instrument that has priority over this Environmental Covenant.

F. At least thirty (30) days prior to presenting this Environmental Covenant to EPD for execution, Symrise Inc. served a copy of the proposed final text of this Environmental Covenant on all persons or entities required to be noticed in accordance with O.C.G.A. § 44-16-7.

Submission of Required Documents and Communications

Documents and communications required by this Environmental Covenant shall be submitted to:

Georgia Environmental Protection Division
Branch Chief
Land Protection Branch
2 Martin Luther King Jr. Drive SE
Suite 1054 East Tower
Atlanta, GA 30334

With a copy to:

Jim Carson
Symrise Inc.
209 SCM Road
Brunswick, GA 31523

EPD's Environmental Covenants Registry

This Environmental Covenant and any amendment thereto or termination thereof may be included in EPD's registry for environmental covenants.

Severability

Should any provision of this Environmental Covenant be found by a court of competent jurisdiction to be invalid and/or unenforceable in any respect, the remaining provisions shall continue in full force and effect.

Effective Date

This Environmental Covenant shall be effective on the date the fully executed Environmental Covenant is recorded in accordance with O.C.G.A. § 44-16-8(a).

Grantor

Symrise Inc.

(Signature)

James Carson

Plant Manager

Signed in the presence of:

Unofficial Witness (*signature*)

Jake L. Williams

Unofficial Witness (*print name*)

State of Georgia
County of Glynn

This instrument was signed or attested before me this 3 day of August, 2021, by James Carson.

☑ Personally Known
☐ Produced Identification

Notary Public *(Signature)*

My Commission Expires: 02/22/2025

(NOTARY SEAL)

JADE BAXTER
NOTARY PUBLIC
JB
GLYNN COUNTY
STATE OF GEORGIA
MY COMMISSION EXPIRES FEB 22, 2025

Grantee

Symrise Holding, Inc.

(Signature)

Jens Obermueller

Vice President, General Counsel US

Signed in the presence of:

Unofficial Witness (*signature*)

Unofficial Witness (*print name*)

State of New Jersey
County of Bergen

This instrument was signed or attested before me this 5th day of August, 2021, by Jens Obermueller.

[X] Personally Known
[ ] Produced Identification

Notary Public *(Signature)*

My Commission Expires:

MARICELA LOPEZ
NOTARY PUBLIC
STATE OF NEW JERSEY
NOTARY ID 2271180
MY COMMISSION EXPIRES JANUARY 16, 2026

(NOTARY SEAL)

For the Environmental Protection Division, Department of Natural Resources, State of Georgia, this _____ day of _____, 20_____:

_____
(Signature)

[Name]
Director, Environmental Protection Division

Signed in the presence of:

_____
Unofficial Witness (*signature*)

_____
Unofficial Witness (*print name*)

State of Georgia
County of Fulton

This instrument was signed or attested before me this ___ day of_____ _ , 20__, by [Name].

_____Personally Known
_____Produced Identification

_____
Notary Public *(Signature)*

My Commission Expires:

(NOTARY SEAL)_____

Exhibit A
Legal Description of Property

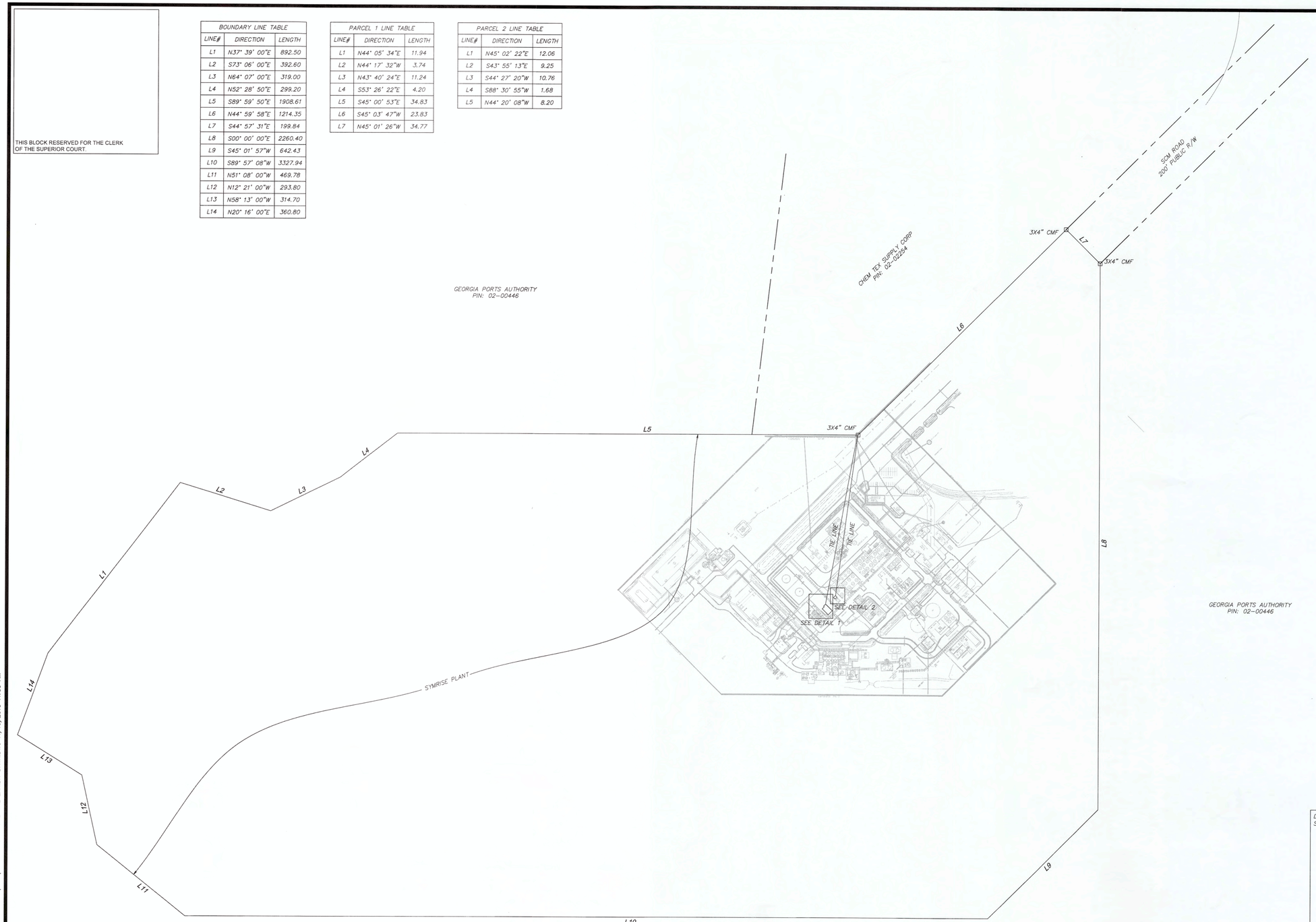
Exhibit B
Map of Property

THIS BLOCK RESERVED FOR THE CLERK OF THE SUPERIOR COURT.

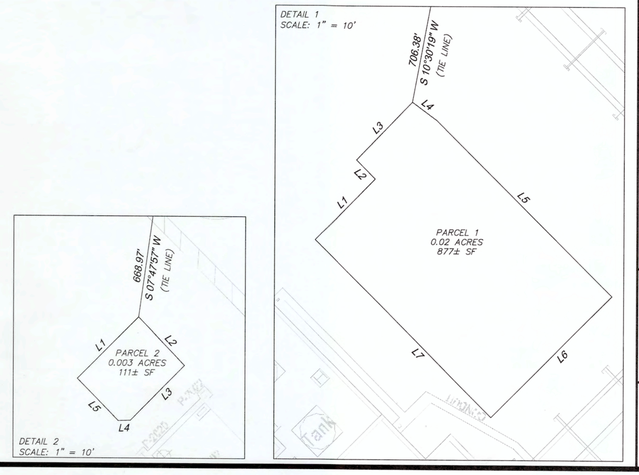
BOUNDARY LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	N37° 39' 00"E	892.50
L2	S73° 06' 00"E	392.60
L3	N64° 07' 00"E	319.00
L4	N52° 28' 50"E	299.20
L5	S89° 59' 50"E	1908.61
L6	N44° 59' 58"E	1214.35
L7	S44° 57' 31"E	199.84
L8	S00° 00' 00"E	2260.40
L9	S45° 01' 57"W	642.43
L10	S89° 57' 08"W	3327.94
L11	N51° 08' 00"W	469.78
L12	N12° 21' 00"W	293.80
L13	N58° 13' 00"W	314.70
L14	N20° 16' 00"E	360.80

PARCEL 1 LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	N44° 05' 34"E	11.94
L2	N44° 17' 32"W	3.74
L3	N43° 40' 24"E	11.24
L4	S53° 26' 22"E	4.20
L5	S45° 00' 53"E	34.83
L6	S45° 03' 47"W	23.83
L7	N45° 01' 26"W	34.77

PARCEL 2 LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	N45° 02' 22"E	12.06
L2	S43° 55' 13"E	9.25
L3	S44° 27' 20"W	10.76
L4	S88° 30' 55"W	1.68
L5	N44° 20' 08"W	8.20



NOTES
1. THIS IS NOT A BOUNDARY SURVEY AND SHALL NOT BE USED FOR TRANSFER OF TITLE.
2. EXTERIOR BOUNDARY SHOWN ON SHEET 1 TAKEN FROM ALTA/NSPS LAND TITLE FOR RENESSENZ PROJECT BY PIRKLE & ASSOCIATES DATED 02/18/11, EXTERIOR BOUNDARY IS SHOWN FOR RELATING ENVIRONMENTAL IMPACT AREA TO EXISTING PROPERTY LOCATION. INTERIOR BOUNDARY IMPROVEMENTS TAKEN FROM SHEET 2, AND IS SHOWN FOR ILLUSTRATION PURPOSES ONLY, IS NOT FIELD VERIFIED.
3. THE SPECIFIC PURPOSE OF THIS SURVEY IS TO SHOW LIMITS OF ENVIRONMENTAL IMPACT AREA.
4. ENVIRONMENTAL IMPACT AREAS CAPPED WITH CONCRETE.



NO.	REVISION DESCRIPTION	BY	DATE
-	-	-	-

GEORGIA REGISTERED No. 000223 PROFESSIONAL LAND SURVEYOR MATTHEW G. JENNINGS 11-19-18

GEORGIA CERTIFICATE OF AUTHORIZATION Land Surveying Firm No. 000051 EMC Engineering Services, Inc.

200' 100' 0' 200'
GRAPHIC SCALE: 1" = 200'

EMC ENGINEERING SERVICES, INC.
504 Gloucester Street
Brunswick, GA 31520
Ph: (912) 262-7636
Fax: (912) 233-4580
brunswick@emc-eng.com
www.emc-eng.com
CIVIL
MARINE
ENVIRONMENTAL
OFFICE LOCATIONS: ALBANY, ATLANTA, AUGUSTA, BRUNSWICK, COLUMBUS, SAVANNAH, STATESBORO, AND VALDOSTA

SPECIFIC PURPOSE SURVEY

SYMRISE INC - SCM ROAD #2

27TH G.M. DISTRICT
GLYNN COUNTY, GEORGIA
Prepared for:
NEW FIELDS

PROJECT NO.:	18-5043
DRAWN BY:	KLO
DESIGNED BY:	-
SURVEYED BY:	JH
SURVEY DATE:	10/18/2018
CHECKED BY:	MGJ
SCALE:	1" = 200'
DATE:	11/19/2018

SHEET 1 OF 1

O:\2018\18-5043 SYMRISE INC. - COLONELS ISLAND MONITORING WELLS\DWG\18-5043 ENVIRONMENTAL EXHIBIT DATA.DWG 11/19/2018 11:35 AM

Attachment G

Well Inspection Checklist

NewFields

Well ID	DTW	Date/Time	Well ID Visible	Concrete Pad Intact	Well Cap Intact and Water Tight	Water in Vault	Ponded Water around Well Pad	Well Locked or Bolted Down	Well Casing in Good Condition?	Measuring Point mark on PVC well casing visible?	Sediment present in well?	Comments

Well ID	DTW	Date/Time	Well ID Visible	Concrete Pad Intact	Well Cap Intact and Water Tight	Water in Vault	Ponded Water around Well Pad	Well Locked or Bolted Down	Well Casing in Good Condition?	Measuring Point mark on PVC well casing visible?	Sediment present in well?	Comments

Inspected by: _____ Date:_____

Corrective Action(s) Required? (Yes/No):_____

If Yes, describe necessary corrective actions:

_____

_____

_____

Description/Date of Corrective Action(s) Performed:

_____

_____

_____

Attachment H

Appendix IX
Laboratory Reports

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 14, 2020

Nick DiLuzio
Newfields
1349 West Peachtree Street
Suite 2000
Atlanta, GA 30309

RE: Project: Colonels Island/App. IX
Pace Project No.: 2630497

Dear Nick DiLuzio:

Enclosed are the analytical results for sample(s) received by the laboratory on March 27, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet
- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Atlanta, GA
- Pace Analytical Services - New Orleans

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Pace Analytical Services New Orleans
California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services National
12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

Pace Analytical Services Charlotte
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Pace Analytical Services Charlotte
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2630497001	**MW-68-032520**	Water	03/26/20 14:50	03/27/20 08:45
2630497002	**MW-67-032520**	Water	03/26/20 17:15	03/27/20 08:45
2630497003	**Trip Blank**	Water	03/26/20 00:00	03/27/20 08:45

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SAMPLE ANALYTE COUNT

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630497001	**MW-68-032520**	EPA 8151	LEL	5	PAN
		EPA 8011	JMS1	3	PASI-C
		EPA 8081B	SEM	22	PASI-C
		EPA 8082A	SEM	8	PASI-C
		EPA 6020B	CSW	16	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 8270E	PKS	149	PASI-C
		EPA 8260D	CL	66	PASI-C
		EPA 9034	LJL	1	PASI-N
		EPA 9012B	CJH1	1	PASI-A
2630497002	**MW-67-032520**	EPA 8151	LEL	5	PAN
		EPA 8011	JMS1	3	PASI-C
		EPA 8081B	SEM	22	PASI-C
		EPA 8082A	SEM	8	PASI-C
		EPA 6020B	CSW	16	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 8270E	PKS	149	PASI-C
		EPA 8260D	CL	66	PASI-C
		EPA 9034	LJL	1	PASI-N
		EPA 9012B	CJH1	1	PASI-A
2630497003	**Trip Blank**	EPA 8260D	CL	66	PASI-C

PAN = Pace National - Mt. Juliet
PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Atlanta, GA
PASI-N = Pace Analytical Services - New Orleans

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PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Date: April 14, 2020

MW-68-032520 (Lab ID: 2630497001)

- Chlorinated Acid Herbicides (GC) by Method 8151 - Dilution due to sample volume.

MW-67-032520 (Lab ID: 2630497002)

- Chlorinated Acid Herbicides (GC) by Method 8151 - Dilution due to sample volume.

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PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Method: **EPA 8151**
Description: Chlorinated Herb. (GC) 8151
Client: Newfields
Date: April 14, 2020

General Information:
2 samples were analyzed for EPA 8151 by Pace National Mt. Juliet. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Method: **EPA 8011**
Description: 8011 GCS EDB and DBCP
Client: Newfields
Date: April 14, 2020

General Information:
2 samples were analyzed for EPA 8011 by Pace Analytical Services Charlotte. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 8011 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Method: **EPA 8081B**
Description: 8081 OC Pesticides RVE
Client: Newfields
Date: April 14, 2020

General Information:
2 samples were analyzed for EPA 8081B by Pace Analytical Services Charlotte. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 533669

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92471456001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2848506)
  - 4,4'-DDT
  - Endosulfan sulfate
  - Endrin aldehyde
- MSD (Lab ID: 2848507)
  - 4,4'-DDT
  - Endosulfan sulfate
  - Endrin aldehyde

Additional Comments:

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Method: **EPA 8082A**
Description: 8082 GCS PCB RVE
Client: Newfields
Date: April 14, 2020

General Information:
2 samples were analyzed for EPA 8082A by Pace Analytical Services Charlotte. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Method: **EPA 6020B**
Description: 6020B MET ICPMS
Client: Newfields
Date: April 14, 2020

General Information:
2 samples were analyzed for EPA 6020B by Pace Analytical Services Atlanta, GA. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Method: **EPA 7470A**
Description: 7470 Mercury
Client: Newfields
Date: April 14, 2020

General Information:
2 samples were analyzed for EPA 7470A by Pace Analytical Services Atlanta, GA. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Method: **EPA 8270E**
Description: 8270E APP9 RV
Client: Newfields
Date: April 14, 2020

General Information:
2 samples were analyzed for EPA 8270E by Pace Analytical Services Charlotte. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 533664

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 2848487)
  - 1,3,5-Trinitrobenzene
  - 3,3'-Dimethylbenzidine

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2848487)
  - Benzal chloride
  - p-Phenylenediamine

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Method: **EPA 8270E**
Description: 8270E APP9 RV
Client: Newfields
Date: April 14, 2020

QC Batch: 533664

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2630497002

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 2848488)
  - Benzal chloride
  - p-Phenylenediamine
- MSD (Lab ID: 2848489)
  - Benzal chloride
  - p-Phenylenediamine

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2848488)
  - Hexachloropropene
  - Isosafrole
  - Pentachlorobenzene
  - a,a-Dimethylphenylethylamine
- MSD (Lab ID: 2848489)
  - Isosafrole
  - a,a-Dimethylphenylethylamine

Additional Comments:

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PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Method: **EPA 8260D**
Description: 8260D MSV Low Level
Client: Newfields
Date: April 14, 2020

General Information:
3 samples were analyzed for EPA 8260D by Pace Analytical Services Charlotte. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Method: **EPA 9034**
Description: 9034 Sulfide, Titration
Client: Newfields
Date: April 14, 2020

General Information:
2 samples were analyzed for EPA 9034 by Pace Analytical Services New Orleans. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Method: **EPA 9012B**
Description: 9012B Cyanide, Total
Client: Newfields
Date: April 14, 2020

General Information:
2 samples were analyzed for EPA 9012B by Pace Analytical Services Asheville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 9012B with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 534452

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2630443017,92471611001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2852241)
  - Cyanide
- MSD (Lab ID: 2852240)
  - Cyanide
- MSD (Lab ID: 2852242)
  - Cyanide

R1: RPD value was outside control limits.

- MSD (Lab ID: 2852240)
  - Cyanide

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-68-032520 **Lab ID: 2630497001** Collected: 03/26/20 14:50 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Chlorinated Herb. (GC) 8151	Analytical Method: EPA 8151 Preparation Method: 8151A Pace National - Mt. Juliet								
2,4-D	ND	ug/L	8.00		4	03/31/20 16:57	04/02/20 06:17	94-75-7	
Dinoseb	ND	ug/L	8.00		4	03/31/20 16:57	04/02/20 06:17	88-85-7	
2,4,5-T	ND	ug/L	8.00		4	03/31/20 16:57	04/02/20 06:17	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	8.00		4	03/31/20 16:57	04/02/20 06:17	93-72-1	
Surrogates									
2,4-DCAA (S)	88.0	%	14.0-158		4	03/31/20 16:57	04/02/20 06:17	19719-28-9	
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011 Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.021		1	04/01/20 10:04	04/01/20 20:50	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.021		1	04/01/20 10:04	04/01/20 20:50	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	101	%	60-140		1	04/01/20 10:04	04/01/20 20:50	301-79-56	
8081 OC Pesticides RVE	Analytical Method: EPA 8081B Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Aldrin	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	309-00-2	
alpha-BHC	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	319-84-6	
beta-BHC	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	319-85-7	
delta-BHC	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20		1	04/01/20 09:07	04/06/20 17:56	57-74-9	
4,4'-DDD	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	72-54-8	
4,4'-DDE	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	72-55-9	
4,4'-DDT	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	50-29-3	
Dieldrin	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	60-57-1	
Endosulfan I	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	959-98-8	
Endosulfan II	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	1031-07-8	
Endrin	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	72-20-8	
Endrin aldehyde	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	7421-93-4	
Heptachlor	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 17:56	118-74-1	
Methoxychlor	ND	ug/L	0.15		1	04/01/20 09:07	04/06/20 17:56	72-43-5	
Toxaphene	ND	ug/L	0.20		1	04/01/20 09:07	04/06/20 17:56	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	84	%	10-130		1	04/01/20 09:07	04/06/20 17:56	877-09-8	
Decachlorobiphenyl (S)	81	%	10-130		1	04/01/20 09:07	04/06/20 17:56	2051-24-3	
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50		1	03/31/20 15:55	04/01/20 22:28	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50		1	03/31/20 15:55	04/01/20 22:28	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50		1	03/31/20 15:55	04/01/20 22:28	11141-16-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-68-032520 **Lab ID: 2630497001** Collected: 03/26/20 14:50 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50		1	03/31/20 15:55	04/01/20 22:28	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50		1	03/31/20 15:55	04/01/20 22:28	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50		1	03/31/20 15:55	04/01/20 22:28	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50		1	03/31/20 15:55	04/01/20 22:28	11096-82-5	
Surrogates									
Decachlorobiphenyl (S)	86	%	10-130		1	03/31/20 15:55	04/01/20 22:28	2051-24-3	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 18:46	7440-36-0	
Arsenic	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 18:46	7440-38-2	
Barium	**193**	ug/L	5.0		1	04/01/20 21:38	04/06/20 18:46	7440-39-3	
Beryllium	**0.83**	ug/L	0.50		1	04/01/20 21:38	04/06/20 18:46	7440-41-7	
Cadmium	ND	ug/L	0.50		1	04/01/20 21:38	04/06/20 18:46	7440-43-9	
Chromium	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 18:46	7440-47-3	
Cobalt	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 18:46	7440-48-4	
Copper	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 18:46	7440-50-8	
Lead	ND	ug/L	1.0		1	04/01/20 21:38	04/06/20 18:46	7439-92-1	
Nickel	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 18:46	7440-02-0	
Selenium	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 18:46	7782-49-2	
Silver	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 18:46	7440-22-4	
Thallium	ND	ug/L	1.0		1	04/01/20 21:38	04/06/20 18:46	7440-28-0	
Tin	ND	ug/L	20.0		1	04/01/20 21:38	04/06/20 18:46	7440-31-5	
Vanadium	ND	ug/L	10.0		1	04/01/20 21:38	04/06/20 18:46	7440-62-2	
Zinc	**59.2**	ug/L	10.0		1	04/01/20 21:38	04/06/20 18:46	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	ug/L	0.20		1	04/10/20 08:14	04/10/20 13:16	7439-97-6	
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Acenaphthene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	83-32-9	
Acenaphthylene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	208-96-8	
Acetophenone	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	98-86-2	
2-Acetylaminofluorene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	53-96-3	v1
4-Aminobiphenyl	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	92-67-1	
Aniline	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	62-53-3	
Anthracene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	120-12-7	
Aramite	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	140-57-8	
Atrazine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	1912-24-9	
Benzal chloride	ND	ug/L	50.0		1	04/01/20 10:17	04/02/20 12:45	98-87-3	L2
Benzaldehyde	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	100-52-7	
Benzidine	ND	ug/L	50.0		1	04/01/20 10:17	04/02/20 12:45	92-87-5	v2
Benzo(a)anthracene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	56-55-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-68-032520 **Lab ID: 2630497001** Collected: 03/26/20 14:50 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Benzo(a)pyrene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	207-08-9	
Benzoic Acid	ND	ug/L	50.0		1	04/01/20 10:17	04/02/20 12:45	65-85-0	
Benzophenone	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	119-61-9	
Benzyl alcohol	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	100-51-6	
Biphenyl (Diphenyl)	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	85-68-7	
Caprolactam	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	105-60-2	v1
Carbazole	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	59-50-7	
4-Chloroaniline	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	106-47-8	
Chlorobenzilate	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	510-15-6	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	91-58-7	
2-Chlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	7005-72-3	
Chrysene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	218-01-9	
n-Decane	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	124-18-5	
Diallate	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	2303-16-4	
Dibenz(a,h)anthracene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	53-70-3	
Dibenzo(a,e)pyrene	ND	ug/L	50.0		1	04/01/20 10:17	04/02/20 12:45	192-65-4	
Dibenzofuran	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	132-64-9	
2,3-Dibromo-1-propanol phosph	ND	ug/L	50.0		1	04/01/20 10:17	04/02/20 12:45	126-72-7	v1
1,2-Dichlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	120-83-2	
2,6-Dichlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	87-65-0	
2,3-Dichloroaniline	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	608-27-5	
Diethylphthalate	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	84-66-2	
Dimethoate	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	60-51-5	v1
P-Dimethylaminoazobenzene	ND	ug/L	5.0		1	04/01/20 10:17	04/02/20 12:45	60-11-7	
7,12-Dimethylbenz(a)anthracene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	57-97-6	
3,3'-Dimethylbenzidine	ND	ug/L	25.0		1	04/01/20 10:17	04/02/20 12:45	119-93-7	L1,v2
2,4-Dimethylphenol	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	105-67-9	
a,a-Dimethylphenylethylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	122-09-8	
Dimethylphthalate	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	534-52-1	
1,3-Dinitrobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	99-65-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-68-032520 **Lab ID: 2630497001** Collected: 03/26/20 14:50 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
1,4-Dinitrobenzene	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	100-25-4	v1
2,4-Dinitrophenol	ND	ug/L	50.0		1	04/01/20 10:17	04/02/20 12:45	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	117-84-0	
Dinoseb	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	88-85-7	v1
Diphenylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	122-39-4	
Diphenyl ether (Phenyl ether)	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	101-84-8	
1,2-Diphenylhydrazine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	122-66-7	
Disulfoton	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	298-04-4	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0		1	04/01/20 10:17	04/02/20 12:45	117-81-7	
Ethyl methanesulfonate	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	62-50-0	
Famphur	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	52-85-7	
Fluoranthene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	206-44-0	
Fluorene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	77-47-4	
Hexachloroethane	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	67-72-1	
Hexachlorophene	ND	ug/L	100		1	04/01/20 10:17	04/02/20 12:45	70-30-4	v2
Hexachloropropene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	1888-71-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	193-39-5	
Isodrin	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	465-73-6	
Isophorone	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	78-59-1	
Isosafrole	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	120-58-1	
Kepone	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	143-50-0	v2
Methapyrilene	ND	ug/L	50.0		1	04/01/20 10:17	04/02/20 12:45	91-80-5	v1
3-Methylcholanthrene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	56-49-5	
4,4'-Methylene-bis(2-chloroani	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	101-14-4	
Methyl methanesulfonate	ND	ug/L	5.0		1	04/01/20 10:17	04/02/20 12:45	66-27-3	
1-Methylnaphthalene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	91-57-6	
2-Methyl-5-nitroaniline	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	99-55-8	v1
Methyl parathion	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	298-00-0	v1
2-Methylphenol(o-Cresol)	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	15831-10-4	
1-Naphthalenamine	ND	ug/L	5.0		1	04/01/20 10:17	04/02/20 12:45	134-32-7	
2-Naphthalenamine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	91-59-8	
Naphthalene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	91-20-3	
1,4-Naphthoquinone	ND	ug/L	5.0		1	04/01/20 10:17	04/02/20 12:45	130-15-4	
2-Nitroaniline	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	88-74-4	
3-Nitroaniline	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	99-09-2	
4-Nitroaniline	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	100-01-6	
Nitrobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	98-95-3	
2-Nitrophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	88-75-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-68-032520 **Lab ID: 2630497001** Collected: 03/26/20 14:50 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
4-Nitrophenol	ND	ug/L	50.0		1	04/01/20 10:17	04/02/20 12:45	100-02-7	
4-Nitroquinoline-n-oxide	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	56-57-5	
5-Nitro-o-toluidine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	99-55-8	v1
N-Nitrosodiethylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	55-18-5	
N-Nitrosodimethylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	62-75-9	
N-Nitroso-di-n-butylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	924-16-3	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	86-30-6	
N-Nitrosomethylethylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	10595-95-6	
N-Nitrosomorpholine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	59-89-2	
N-Nitrosopiperidine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	100-75-4	
N-Nitrosopyrrolidine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	930-55-2	
n-Octadecane	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	593-45-3	
O,O,O-Triethylphosphorothioate	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	126-68-1	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	108-60-1	
Parathion (Ethyl parathion)	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	56-38-2	v1
Pentachlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	608-93-5	
Pentachloroethane	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	76-01-7	
Pentachloronitrobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	82-68-8	
Pentachlorophenol	ND	ug/L	20.0		1	04/01/20 10:17	04/02/20 12:45	87-86-5	
Phenacetin	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	62-44-2	v1
Phenanthrene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	85-01-8	
Phenol	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	108-95-2	
p-Phenylenediamine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	106-50-3	L2
Phorate	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	298-02-2	
2-Picoline	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	109-06-8	
Pronamide	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	23950-58-5	
Pyrene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	129-00-0	
Pyridine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	110-86-1	
Safrole	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	94-59-7	
Sulfotepp (Thiodiphosphoric Ac	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	3689-24-5	
Terpineol	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	98-55-5	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	58-90-2	
Thionazin	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	297-97-2	
O-Toluidine	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	95-53-4	
1,2,4-Trichlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	88-06-2	
1,3,5-Trinitrobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/02/20 12:45	99-35-4	L1
Surrogates									
Nitrobenzene-d5 (S)	58	%	13-130		1	04/01/20 10:17	04/02/20 12:45	4165-60-0	
2-Fluorobiphenyl (S)	46	%	13-130		1	04/01/20 10:17	04/02/20 12:45	321-60-8	
Terphenyl-d14 (S)	68	%	25-130		1	04/01/20 10:17	04/02/20 12:45	1718-51-0	
Phenol-d6 (S)	44	%	10-130		1	04/01/20 10:17	04/02/20 12:45	13127-88-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-68-032520 **Lab ID: 2630497001** Collected: 03/26/20 14:50 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Surrogates									
2-Fluorophenol (S)	51	%	10-130		1	04/01/20 10:17	04/02/20 12:45	367-12-4	
2,4,6-Tribromophenol (S)	79	%	10-137		1	04/01/20 10:17	04/02/20 12:45	118-79-6	
8260D MSV Low Level	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Acetone	ND	ug/L	50.0		1		04/08/20 18:51	67-64-1	
Acetonitrile	ND	ug/L	50.0		1		04/08/20 18:51	75-05-8	
Acrolein	ND	ug/L	10.0		1		04/08/20 18:51	107-02-8	IH
Acrylonitrile	ND	ug/L	10.0		1		04/08/20 18:51	107-13-1	
Allyl chloride	ND	ug/L	2.0		1		04/08/20 18:51	107-05-1	
Benzene	ND	ug/L	1.0		1		04/08/20 18:51	71-43-2	
Bromodichloromethane	ND	ug/L	5.0		1		04/08/20 18:51	75-27-4	
Bromoform	ND	ug/L	5.0		1		04/08/20 18:51	75-25-2	
Bromomethane	ND	ug/L	5.0		1		04/08/20 18:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0		1		04/08/20 18:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0		1		04/08/20 18:51	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0		1		04/08/20 18:51	56-23-5	
Chlorobenzene	ND	ug/L	5.0		1		04/08/20 18:51	108-90-7	
Chloroethane	ND	ug/L	10.0		1		04/08/20 18:51	75-00-3	
Chloroform	ND	ug/L	5.0		1		04/08/20 18:51	67-66-3	
Chloromethane	ND	ug/L	10.0		1		04/08/20 18:51	74-87-3	
Chloroprene	ND	ug/L	5.0		1		04/08/20 18:51	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1		04/08/20 18:51	96-12-8	
Dibromochloromethane	ND	ug/L	5.0		1		04/08/20 18:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0		1		04/08/20 18:51	106-93-4	
Dibromomethane	ND	ug/L	5.0		1		04/08/20 18:51	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0		1		04/08/20 18:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0		1		04/08/20 18:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0		1		04/08/20 18:51	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	10.0		1		04/08/20 18:51	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0		1		04/08/20 18:51	75-71-8	
1,1-Dichloroethane	ND	ug/L	2.0		1		04/08/20 18:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0		1		04/08/20 18:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0		1		04/08/20 18:51	75-35-4	
trans-1,2-Dichloroethene	ND	ug/L	5.0		1		04/08/20 18:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0		1		04/08/20 18:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0		1		04/08/20 18:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0		1		04/08/20 18:51	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150		1		04/08/20 18:51	123-91-1	
Ethylbenzene	ND	ug/L	1.0		1		04/08/20 18:51	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0		1		04/08/20 18:51	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	1.0		1		04/08/20 18:51	87-68-3	
2-Hexanone	ND	ug/L	10.0		1		04/08/20 18:51	591-78-6	
Iodomethane	ND	ug/L	20.0		1		04/08/20 18:51	74-88-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-68-032520 **Lab ID: 2630497001** Collected: 03/26/20 14:50 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Isobutanol	ND	ug/L	100		1		04/08/20 18:51	78-83-1	
Methacrylonitrile	ND	ug/L	10.0		1		04/08/20 18:51	126-98-7	
Methylene Chloride	ND	ug/L	5.0		1		04/08/20 18:51	75-09-2	
Methyl methacrylate	ND	ug/L	2.0		1		04/08/20 18:51	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0		1		04/08/20 18:51	108-10-1	
Naphthalene	ND	ug/L	1.0		1		04/08/20 18:51	91-20-3	
Pentachloroethane	ND	ug/L	50.0		1		04/08/20 18:51	76-01-7	
Propionitrile	ND	ug/L	20.0		1		04/08/20 18:51	107-12-0	
Styrene	ND	ug/L	5.0		1		04/08/20 18:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0		1		04/08/20 18:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0		1		04/08/20 18:51	79-34-5	
Tetrachloroethene	ND	ug/L	5.0		1		04/08/20 18:51	127-18-4	
Toluene	ND	ug/L	1.0		1		04/08/20 18:51	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1		04/08/20 18:51	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0		1		04/08/20 18:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0		1		04/08/20 18:51	79-00-5	
Trichloroethene	ND	ug/L	5.0		1		04/08/20 18:51	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0		1		04/08/20 18:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0		1		04/08/20 18:51	96-18-4	
Vinyl acetate	ND	ug/L	10.0		1		04/08/20 18:51	108-05-4	
Vinyl chloride	ND	ug/L	2.0		1		04/08/20 18:51	75-01-4	
Xylene (Total)	ND	ug/L	1.0		1		04/08/20 18:51	1330-20-7	
m&p-Xylene	ND	ug/L	2.0		1		04/08/20 18:51	179601-23-1	
o-Xylene	ND	ug/L	1.0		1		04/08/20 18:51	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		04/08/20 18:51	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		04/08/20 18:51	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		04/08/20 18:51	2037-26-5	
9034 Sulfide, Titration	Analytical Method: EPA 9034 Pace Analytical Services - New Orleans								
Sulfide	ND	mg/L	1.0		1		04/01/20 09:08		
9012B Cyanide, Total	Analytical Method: EPA 9012B Preparation Method: EPA 9012B Pace Analytical Services - Asheville								
Cyanide	ND	mg/L	0.0080		1	04/05/20 18:05	04/05/20 21:33	57-12-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-67-032520 **Lab ID: 2630497002** Collected: 03/26/20 17:15 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Chlorinated Herb. (GC) 8151	Analytical Method: EPA 8151 Preparation Method: 8151A Pace National - Mt. Juliet								
2,4-D	ND	ug/L	8.00		4	03/31/20 16:57	04/02/20 06:31	94-75-7	
Dinoseb	ND	ug/L	8.00		4	03/31/20 16:57	04/02/20 06:31	88-85-7	
2,4,5-T	ND	ug/L	8.00		4	03/31/20 16:57	04/02/20 06:31	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	8.00		4	03/31/20 16:57	04/02/20 06:31	93-72-1	
Surrogates									
2,4-DCAA (S)	71.5	%	14.0-158		4	03/31/20 16:57	04/02/20 06:31	19719-28-9	
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011 Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.020		1	04/01/20 10:04	04/01/20 21:14	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.020		1	04/01/20 10:04	04/01/20 21:14	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	94	%	60-140		1	04/01/20 10:04	04/01/20 21:14	301-79-56	
8081 OC Pesticides RVE	Analytical Method: EPA 8081B Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Aldrin	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	309-00-2	
alpha-BHC	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	319-84-6	
beta-BHC	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	319-85-7	
delta-BHC	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20		1	04/01/20 09:07	04/06/20 18:11	57-74-9	
4,4'-DDD	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	72-54-8	
4,4'-DDE	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	72-55-9	
4,4'-DDT	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	50-29-3	
Dieldrin	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	60-57-1	
Endosulfan I	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	959-98-8	
Endosulfan II	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	1031-07-8	
Endrin	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	72-20-8	
Endrin aldehyde	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	7421-93-4	
Heptachlor	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050		1	04/01/20 09:07	04/06/20 18:11	118-74-1	
Methoxychlor	ND	ug/L	0.15		1	04/01/20 09:07	04/06/20 18:11	72-43-5	
Toxaphene	ND	ug/L	0.20		1	04/01/20 09:07	04/06/20 18:11	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	74	%	10-130		1	04/01/20 09:07	04/06/20 18:11	877-09-8	
Decachlorobiphenyl (S)	49	%	10-130		1	04/01/20 09:07	04/06/20 18:11	2051-24-3	
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50		1	03/31/20 15:55	04/02/20 21:12	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50		1	03/31/20 15:55	04/02/20 21:12	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50		1	03/31/20 15:55	04/02/20 21:12	11141-16-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-67-032520 **Lab ID: 2630497002** Collected: 03/26/20 17:15 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50		1	03/31/20 15:55	04/02/20 21:12	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50		1	03/31/20 15:55	04/02/20 21:12	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50		1	03/31/20 15:55	04/02/20 21:12	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50		1	03/31/20 15:55	04/02/20 21:12	11096-82-5	
Surrogates									
Decachlorobiphenyl (S)	36	%	10-130		1	03/31/20 15:55	04/02/20 21:12	2051-24-3	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 19:09	7440-36-0	
Arsenic	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 19:09	7440-38-2	
Barium	**15.8**	ug/L	5.0		1	04/01/20 21:38	04/06/20 19:09	7440-39-3	
Beryllium	ND	ug/L	0.50		1	04/01/20 21:38	04/06/20 19:09	7440-41-7	
Cadmium	ND	ug/L	0.50		1	04/01/20 21:38	04/06/20 19:09	7440-43-9	
Chromium	**7.1**	ug/L	5.0		1	04/01/20 21:38	04/06/20 19:09	7440-47-3	
Cobalt	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 19:09	7440-48-4	
Copper	**15.6**	ug/L	5.0		1	04/01/20 21:38	04/06/20 19:09	7440-50-8	
Lead	**1.9**	ug/L	1.0		1	04/01/20 21:38	04/06/20 19:09	7439-92-1	
Nickel	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 19:09	7440-02-0	
Selenium	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 19:09	7782-49-2	
Silver	ND	ug/L	5.0		1	04/01/20 21:38	04/06/20 19:09	7440-22-4	
Thallium	ND	ug/L	1.0		1	04/01/20 21:38	04/06/20 19:09	7440-28-0	
Tin	ND	ug/L	20.0		1	04/01/20 21:38	04/06/20 19:09	7440-31-5	
Vanadium	**16.4**	ug/L	10.0		1	04/01/20 21:38	04/06/20 19:09	7440-62-2	
Zinc	**186**	ug/L	10.0		1	04/01/20 21:38	04/06/20 19:09	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	ug/L	0.20		1	04/10/20 08:14	04/10/20 13:26	7439-97-6	
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Acenaphthene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	83-32-9	
Acenaphthylene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	208-96-8	
Acetophenone	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	98-86-2	
2-Acetylaminofluorene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	53-96-3	v1
4-Aminobiphenyl	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	92-67-1	
Aniline	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	62-53-3	
Anthracene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	120-12-7	
Aramite	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	140-57-8	
Atrazine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	1912-24-9	
Benzal chloride	ND	ug/L	50.0		1	04/01/20 10:17	04/01/20 19:58	98-87-3	L2,M0
Benzaldehyde	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	100-52-7	
Benzidine	ND	ug/L	50.0		1	04/01/20 10:17	04/01/20 19:58	92-87-5	v2
Benzo(a)anthracene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	56-55-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-67-032520 **Lab ID: 2630497002** Collected: 03/26/20 17:15 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Benzo(a)pyrene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	207-08-9	
Benzoic Acid	ND	ug/L	50.0		1	04/01/20 10:17	04/01/20 19:58	65-85-0	
Benzophenone	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	119-61-9	
Benzyl alcohol	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	100-51-6	
Biphenyl (Diphenyl)	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	85-68-7	
Caprolactam	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	105-60-2	v1
Carbazole	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	59-50-7	
4-Chloroaniline	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	106-47-8	
Chlorobenzilate	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	510-15-6	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	91-58-7	
2-Chlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	7005-72-3	
Chrysene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	218-01-9	
n-Decane	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	124-18-5	
Diallate	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	2303-16-4	
Dibenz(a,h)anthracene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	53-70-3	
Dibenzo(a,e)pyrene	ND	ug/L	50.0		1	04/01/20 10:17	04/01/20 19:58	192-65-4	
Dibenzofuran	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	132-64-9	
2,3-Dibromo-1-propanol phosph	ND	ug/L	50.0		1	04/01/20 10:17	04/01/20 19:58	126-72-7	
1,2-Dichlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	120-83-2	
2,6-Dichlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	87-65-0	
2,3-Dichloroaniline	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	608-27-5	
Diethylphthalate	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	84-66-2	
Dimethoate	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	60-51-5	v1
P-Dimethylaminoazobenzene	ND	ug/L	5.0		1	04/01/20 10:17	04/01/20 19:58	60-11-7	
7,12-Dimethylbenz(a)anthracene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	57-97-6	
3,3'-Dimethylbenzidine	ND	ug/L	25.0		1	04/01/20 10:17	04/01/20 19:58	119-93-7	L1
2,4-Dimethylphenol	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	105-67-9	
a,a-Dimethylphenylethylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	122-09-8	M1
Dimethylphthalate	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	534-52-1	
1,3-Dinitrobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	99-65-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-67-032520 **Lab ID: 2630497002** Collected: 03/26/20 17:15 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
1,4-Dinitrobenzene	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	100-25-4	v1
2,4-Dinitrophenol	ND	ug/L	50.0		1	04/01/20 10:17	04/01/20 19:58	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	117-84-0	
Dinoseb	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	88-85-7	v1
Diphenylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	122-39-4	
Diphenyl ether (Phenyl ether)	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	101-84-8	
1,2-Diphenylhydrazine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	122-66-7	
Disulfoton	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	298-04-4	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0		1	04/01/20 10:17	04/01/20 19:58	117-81-7	
Ethyl methanesulfonate	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	62-50-0	
Famphur	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	52-85-7	
Fluoranthene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	206-44-0	
Fluorene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	77-47-4	
Hexachloroethane	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	67-72-1	
Hexachlorophene	ND	ug/L	100		1	04/01/20 10:17	04/01/20 19:58	70-30-4	v2
Hexachloropropene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	1888-71-7	M1
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	193-39-5	
Isodrin	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	465-73-6	
Isophorone	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	78-59-1	
Isosafrole	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	120-58-1	M1
Kepone	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	143-50-0	v2
Methapyrilene	ND	ug/L	50.0		1	04/01/20 10:17	04/01/20 19:58	91-80-5	v1
3-Methylcholanthrene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	56-49-5	
4,4'-Methylene-bis(2-chloroani	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	101-14-4	
Methyl methanesulfonate	ND	ug/L	5.0		1	04/01/20 10:17	04/01/20 19:58	66-27-3	
1-Methylnaphthalene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	91-57-6	
2-Methyl-5-nitroaniline	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	99-55-8	v1
Methyl parathion	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	298-00-0	v1
2-Methylphenol(o-Cresol)	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	15831-10-4	
1-Naphthalenamine	ND	ug/L	5.0		1	04/01/20 10:17	04/01/20 19:58	134-32-7	
2-Naphthalenamine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	91-59-8	
Naphthalene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	91-20-3	
1,4-Naphthoquinone	ND	ug/L	5.0		1	04/01/20 10:17	04/01/20 19:58	130-15-4	
2-Nitroaniline	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	88-74-4	
3-Nitroaniline	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	99-09-2	
4-Nitroaniline	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	100-01-6	
Nitrobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	98-95-3	
2-Nitrophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	88-75-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-67-032520 **Lab ID: 2630497002** Collected: 03/26/20 17:15 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
4-Nitrophenol	ND	ug/L	50.0		1	04/01/20 10:17	04/01/20 19:58	100-02-7	
4-Nitroquinoline-n-oxide	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	56-57-5	
5-Nitro-o-toluidine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	99-55-8	v1
N-Nitrosodiethylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	55-18-5	
N-Nitrosodimethylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	62-75-9	
N-Nitroso-di-n-butylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	924-16-3	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	86-30-6	
N-Nitrosomethylethylamine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	10595-95-6	
N-Nitrosomorpholine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	59-89-2	
N-Nitrosopiperidine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	100-75-4	
N-Nitrosopyrrolidine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	930-55-2	
n-Octadecane	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	593-45-3	
O,O,O-Triethylphosphorothioate	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	126-68-1	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	108-60-1	
Parathion (Ethyl parathion)	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	56-38-2	v1
Pentachlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	608-93-5	M1
Pentachloroethane	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	76-01-7	
Pentachloronitrobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	82-68-8	
Pentachlorophenol	ND	ug/L	20.0		1	04/01/20 10:17	04/01/20 19:58	87-86-5	
Phenacetin	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	62-44-2	v1
Phenanthrene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	85-01-8	
Phenol	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	108-95-2	
p-Phenylenediamine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	106-50-3	L2,M0
Phorate	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	298-02-2	
2-Picoline	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	109-06-8	
Pronamide	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	23950-58-5	
Pyrene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	129-00-0	
Pyridine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	110-86-1	
Safrole	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	94-59-7	
Sulfotepp (Thiodiphosphoric Ac	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	3689-24-5	
Terpineol	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	98-55-5	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	58-90-2	
Thionazin	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	297-97-2	
O-Toluidine	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	95-53-4	
1,2,4-Trichlorobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	88-06-2	
1,3,5-Trinitrobenzene	ND	ug/L	10.0		1	04/01/20 10:17	04/01/20 19:58	99-35-4	L1
Surrogates									
Nitrobenzene-d5 (S)	61	%	13-130		1	04/01/20 10:17	04/01/20 19:58	4165-60-0	
2-Fluorobiphenyl (S)	57	%	13-130		1	04/01/20 10:17	04/01/20 19:58	321-60-8	
Terphenyl-d14 (S)	89	%	25-130		1	04/01/20 10:17	04/01/20 19:58	1718-51-0	
Phenol-d6 (S)	40	%	10-130		1	04/01/20 10:17	04/01/20 19:58	13127-88-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-67-032520 **Lab ID: 2630497002** Collected: 03/26/20 17:15 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Surrogates									
2-Fluorophenol (S)	52	%	10-130		1	04/01/20 10:17	04/01/20 19:58	367-12-4	
2,4,6-Tribromophenol (S)	81	%	10-137		1	04/01/20 10:17	04/01/20 19:58	118-79-6	
8260D MSV Low Level	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Acetone	ND	ug/L	50.0		1		04/08/20 19:09	67-64-1	
Acetonitrile	ND	ug/L	50.0		1		04/08/20 19:09	75-05-8	
Acrolein	ND	ug/L	10.0		1		04/08/20 19:09	107-02-8	IH
Acrylonitrile	ND	ug/L	10.0		1		04/08/20 19:09	107-13-1	
Allyl chloride	ND	ug/L	2.0		1		04/08/20 19:09	107-05-1	
Benzene	ND	ug/L	1.0		1		04/08/20 19:09	71-43-2	
Bromodichloromethane	ND	ug/L	5.0		1		04/08/20 19:09	75-27-4	
Bromoform	ND	ug/L	5.0		1		04/08/20 19:09	75-25-2	
Bromomethane	ND	ug/L	5.0		1		04/08/20 19:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0		1		04/08/20 19:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0		1		04/08/20 19:09	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0		1		04/08/20 19:09	56-23-5	
Chlorobenzene	ND	ug/L	5.0		1		04/08/20 19:09	108-90-7	
Chloroethane	ND	ug/L	10.0		1		04/08/20 19:09	75-00-3	
Chloroform	ND	ug/L	5.0		1		04/08/20 19:09	67-66-3	
Chloromethane	ND	ug/L	10.0		1		04/08/20 19:09	74-87-3	
Chloroprene	ND	ug/L	5.0		1		04/08/20 19:09	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1		04/08/20 19:09	96-12-8	
Dibromochloromethane	ND	ug/L	5.0		1		04/08/20 19:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0		1		04/08/20 19:09	106-93-4	
Dibromomethane	ND	ug/L	5.0		1		04/08/20 19:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0		1		04/08/20 19:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0		1		04/08/20 19:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0		1		04/08/20 19:09	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	10.0		1		04/08/20 19:09	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0		1		04/08/20 19:09	75-71-8	
1,1-Dichloroethane	ND	ug/L	2.0		1		04/08/20 19:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0		1		04/08/20 19:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0		1		04/08/20 19:09	75-35-4	
trans-1,2-Dichloroethene	ND	ug/L	5.0		1		04/08/20 19:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0		1		04/08/20 19:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0		1		04/08/20 19:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0		1		04/08/20 19:09	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150		1		04/08/20 19:09	123-91-1	
Ethylbenzene	ND	ug/L	1.0		1		04/08/20 19:09	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0		1		04/08/20 19:09	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	1.0		1		04/08/20 19:09	87-68-3	
2-Hexanone	ND	ug/L	10.0		1		04/08/20 19:09	591-78-6	
Iodomethane	ND	ug/L	20.0		1		04/08/20 19:09	74-88-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: MW-67-032520 **Lab ID: 2630497002** Collected: 03/26/20 17:15 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Isobutanol	ND	ug/L	100		1		04/08/20 19:09	78-83-1	
Methacrylonitrile	ND	ug/L	10.0		1		04/08/20 19:09	126-98-7	
Methylene Chloride	ND	ug/L	5.0		1		04/08/20 19:09	75-09-2	
Methyl methacrylate	ND	ug/L	2.0		1		04/08/20 19:09	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0		1		04/08/20 19:09	108-10-1	
Naphthalene	ND	ug/L	1.0		1		04/08/20 19:09	91-20-3	
Pentachloroethane	ND	ug/L	50.0		1		04/08/20 19:09	76-01-7	
Propionitrile	ND	ug/L	20.0		1		04/08/20 19:09	107-12-0	
Styrene	ND	ug/L	5.0		1		04/08/20 19:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0		1		04/08/20 19:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0		1		04/08/20 19:09	79-34-5	
Tetrachloroethene	ND	ug/L	5.0		1		04/08/20 19:09	127-18-4	
Toluene	ND	ug/L	1.0		1		04/08/20 19:09	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1		04/08/20 19:09	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0		1		04/08/20 19:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0		1		04/08/20 19:09	79-00-5	
Trichloroethene	ND	ug/L	5.0		1		04/08/20 19:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0		1		04/08/20 19:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0		1		04/08/20 19:09	96-18-4	
Vinyl acetate	ND	ug/L	10.0		1		04/08/20 19:09	108-05-4	
Vinyl chloride	ND	ug/L	2.0		1		04/08/20 19:09	75-01-4	
Xylene (Total)	ND	ug/L	1.0		1		04/08/20 19:09	1330-20-7	
m&p-Xylene	ND	ug/L	2.0		1		04/08/20 19:09	179601-23-1	
o-Xylene	ND	ug/L	1.0		1		04/08/20 19:09	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		04/08/20 19:09	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		1		04/08/20 19:09	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		04/08/20 19:09	2037-26-5	
9034 Sulfide, Titration	Analytical Method: EPA 9034 Pace Analytical Services - New Orleans								
Sulfide	ND	mg/L	1.0		1		04/01/20 09:08		
9012B Cyanide, Total	Analytical Method: EPA 9012B Preparation Method: EPA 9012B Pace Analytical Services - Asheville								
Cyanide	ND	mg/L	0.0080		1	04/05/20 18:05	04/05/20 21:34	57-12-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: Trip Blank **Lab ID: 2630497003** Collected: 03/26/20 00:00 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Acetone	ND	ug/L	50.0		1		04/08/20 18:33	67-64-1	
Acetonitrile	ND	ug/L	50.0		1		04/08/20 18:33	75-05-8	
Acrolein	ND	ug/L	10.0		1		04/08/20 18:33	107-02-8	IH
Acrylonitrile	ND	ug/L	10.0		1		04/08/20 18:33	107-13-1	
Allyl chloride	ND	ug/L	2.0		1		04/08/20 18:33	107-05-1	
Benzene	ND	ug/L	1.0		1		04/08/20 18:33	71-43-2	
Bromodichloromethane	ND	ug/L	5.0		1		04/08/20 18:33	75-27-4	
Bromoform	ND	ug/L	5.0		1		04/08/20 18:33	75-25-2	
Bromomethane	ND	ug/L	5.0		1		04/08/20 18:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0		1		04/08/20 18:33	78-93-3	
Carbon disulfide	ND	ug/L	5.0		1		04/08/20 18:33	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0		1		04/08/20 18:33	56-23-5	
Chlorobenzene	ND	ug/L	5.0		1		04/08/20 18:33	108-90-7	
Chloroethane	ND	ug/L	10.0		1		04/08/20 18:33	75-00-3	
Chloroform	ND	ug/L	5.0		1		04/08/20 18:33	67-66-3	
Chloromethane	ND	ug/L	10.0		1		04/08/20 18:33	74-87-3	
Chloroprene	ND	ug/L	5.0		1		04/08/20 18:33	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1		04/08/20 18:33	96-12-8	
Dibromochloromethane	ND	ug/L	5.0		1		04/08/20 18:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0		1		04/08/20 18:33	106-93-4	
Dibromomethane	ND	ug/L	5.0		1		04/08/20 18:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0		1		04/08/20 18:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0		1		04/08/20 18:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0		1		04/08/20 18:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	10.0		1		04/08/20 18:33	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0		1		04/08/20 18:33	75-71-8	
1,1-Dichloroethane	ND	ug/L	2.0		1		04/08/20 18:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0		1		04/08/20 18:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0		1		04/08/20 18:33	75-35-4	
trans-1,2-Dichloroethene	ND	ug/L	5.0		1		04/08/20 18:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0		1		04/08/20 18:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0		1		04/08/20 18:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0		1		04/08/20 18:33	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150		1		04/08/20 18:33	123-91-1	
Ethylbenzene	ND	ug/L	1.0		1		04/08/20 18:33	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0		1		04/08/20 18:33	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	1.0		1		04/08/20 18:33	87-68-3	
2-Hexanone	ND	ug/L	10.0		1		04/08/20 18:33	591-78-6	
Iodomethane	ND	ug/L	20.0		1		04/08/20 18:33	74-88-4	
Isobutanol	ND	ug/L	100		1		04/08/20 18:33	78-83-1	
Methacrylonitrile	ND	ug/L	10.0		1		04/08/20 18:33	126-98-7	
Methylene Chloride	ND	ug/L	5.0		1		04/08/20 18:33	75-09-2	
Methyl methacrylate	ND	ug/L	2.0		1		04/08/20 18:33	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0		1		04/08/20 18:33	108-10-1	
Naphthalene	ND	ug/L	1.0		1		04/08/20 18:33	91-20-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Sample: Trip Blank **Lab ID: 2630497003** Collected: 03/26/20 00:00 Received: 03/27/20 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Pentachloroethane	ND	ug/L	50.0		1		04/08/20 18:33	76-01-7	
Propionitrile	ND	ug/L	20.0		1		04/08/20 18:33	107-12-0	
Styrene	ND	ug/L	5.0		1		04/08/20 18:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0		1		04/08/20 18:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0		1		04/08/20 18:33	79-34-5	
Tetrachloroethene	ND	ug/L	5.0		1		04/08/20 18:33	127-18-4	
Toluene	ND	ug/L	1.0		1		04/08/20 18:33	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1		04/08/20 18:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0		1		04/08/20 18:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0		1		04/08/20 18:33	79-00-5	
Trichloroethene	ND	ug/L	5.0		1		04/08/20 18:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0		1		04/08/20 18:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0		1		04/08/20 18:33	96-18-4	
Vinyl acetate	ND	ug/L	10.0		1		04/08/20 18:33	108-05-4	
Vinyl chloride	ND	ug/L	2.0		1		04/08/20 18:33	75-01-4	
Xylene (Total)	ND	ug/L	1.0		1		04/08/20 18:33	1330-20-7	
m&p-Xylene	ND	ug/L	2.0		1		04/08/20 18:33	179601-23-1	
o-Xylene	ND	ug/L	1.0		1		04/08/20 18:33	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/08/20 18:33	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130		1		04/08/20 18:33	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		04/08/20 18:33	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

QC Batch: 1453446
QC Batch Method: 8151A
Analysis Method: EPA 8151
Analysis Description: Chlorinated Herb. (GC) 8151
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 2630497001, 2630497002

METHOD BLANK: R3514854-1 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4-D	ug/L	ND	2.00	04/01/20 23:18	
Dinoseb	ug/L	ND	2.00	04/01/20 23:18	
2,4,5-T	ug/L	ND	2.00	04/01/20 23:18	
2,4,5-TP (Silvex)	ug/L	ND	2.00	04/01/20 23:18	
2,4-DCAA (S)	%	73.8	14.0-158	04/01/20 23:18	

LABORATORY CONTROL SAMPLE & LCSD: R3514854-2 R3514854-3

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4-D	ug/L	5.00	3.60	3.19	72.0	63.8	50.0-120	12.1	20	
Dinoseb	ug/L	5.00	4.02	3.47	80.4	69.4	36.0-134	14.7	20	
2,4,5-T	ug/L	5.00	3.74	3.22	74.8	64.4	54.0-120	14.9	20	
2,4,5-TP (Silvex)	ug/L	5.00	3.78	3.34	75.6	66.8	50.0-125	12.4	20	
2,4-DCAA (S)	%				73.0	64.8	14.0-158			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

QC Batch: 45387
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630497001, 2630497002

METHOD BLANK: 209359 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/10/20 13:12	

LABORATORY CONTROL SAMPLE: 209360

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.6	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 209361 209362

Parameter	Units	2630497001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.5	2.5	99	98	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

QC Batch: 45188
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630497001, 2630497002

METHOD BLANK: 208212 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	04/06/20 18:35	
Arsenic	ug/L	ND	5.0	04/06/20 18:35	
Barium	ug/L	ND	5.0	04/06/20 18:35	
Beryllium	ug/L	ND	0.50	04/06/20 18:35	
Cadmium	ug/L	ND	0.50	04/06/20 18:35	
Chromium	ug/L	ND	5.0	04/06/20 18:35	
Cobalt	ug/L	ND	5.0	04/06/20 18:35	
Copper	ug/L	ND	5.0	04/06/20 18:35	
Lead	ug/L	ND	1.0	04/06/20 18:35	
Nickel	ug/L	ND	5.0	04/06/20 18:35	
Selenium	ug/L	ND	5.0	04/06/20 18:35	
Silver	ug/L	ND	5.0	04/06/20 18:35	
Thallium	ug/L	ND	1.0	04/06/20 18:35	
Tin	ug/L	ND	20.0	04/06/20 18:35	
Vanadium	ug/L	ND	10.0	04/06/20 18:35	
Zinc	ug/L	ND	10.0	04/06/20 18:35	

LABORATORY CONTROL SAMPLE: 208213

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	100	100	100	80-120	
Arsenic	ug/L	100	95.2	95	80-120	
Barium	ug/L	100	95.6	96	80-120	
Beryllium	ug/L	100	94.4	94	80-120	
Cadmium	ug/L	100	95.6	96	80-120	
Chromium	ug/L	100	98.7	99	80-120	
Cobalt	ug/L	100	95.7	96	80-120	
Copper	ug/L	100	97.0	97	80-120	
Lead	ug/L	100	94.8	95	80-120	
Nickel	ug/L	100	96.2	96	80-120	
Selenium	ug/L	100	94.5	95	80-120	
Silver	ug/L	100	96.5	97	80-120	
Thallium	ug/L	100	95.0	95	80-120	
Tin	ug/L	100	94.6	95	80-120	
Vanadium	ug/L	100	98.2	98	80-120	
Zinc	ug/L	100	99.3	99	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208214 208215

Parameter	Units	2630497001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	103	104	103	104	75-125	1	20	
Arsenic	ug/L	ND	100	100	101	102	100	101	75-125	1	20	
Barium	ug/L	193	100	100	298	297	105	104	75-125	0	20	
Beryllium	ug/L	0.83	100	100	95.5	95.7	95	95	75-125	0	20	
Cadmium	ug/L	ND	100	100	96.6	96.8	97	97	75-125	0	20	
Chromium	ug/L	ND	100	100	101	103	99	100	75-125	2	20	
Cobalt	ug/L	ND	100	100	95.2	96.0	95	96	75-125	1	20	
Copper	ug/L	ND	100	100	93.5	94.3	93	94	75-125	1	20	
Lead	ug/L	ND	100	100	91.5	92.0	91	92	75-125	1	20	
Nickel	ug/L	ND	100	100	93.8	94.4	94	94	75-125	1	20	
Selenium	ug/L	ND	100	100	95.9	101	92	97	75-125	5	20	
Silver	ug/L	ND	100	100	92.4	92.3	92	92	75-125	0	20	
Thallium	ug/L	ND	100	100	91.2	92.7	91	93	75-125	2	20	
Tin	ug/L	ND	100	100	97.2	98.6	97	99	75-125	1	20	
Vanadium	ug/L	ND	100	100	109	111	102	104	75-125	2	20	
Zinc	ug/L	59.2	100	100	157	158	98	98	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

QC Batch: 535147
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV Low Level
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 2630497001, 2630497002, 2630497003

METHOD BLANK: 2855656
Matrix: Water
Associated Lab Samples: 2630497001, 2630497002, 2630497003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	04/08/20 16:13	
1,1,1-Trichloroethane	ug/L	ND	5.0	04/08/20 16:13	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	04/08/20 16:13	
1,1,2-Trichloroethane	ug/L	ND	5.0	04/08/20 16:13	
1,1-Dichloroethane	ug/L	ND	2.0	04/08/20 16:13	
1,1-Dichloroethene	ug/L	ND	5.0	04/08/20 16:13	
1,2,3-Trichloropropane	ug/L	ND	5.0	04/08/20 16:13	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	04/08/20 16:13	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/08/20 16:13	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	04/08/20 16:13	
1,2-Dichlorobenzene	ug/L	ND	5.0	04/08/20 16:13	
1,2-Dichloroethane	ug/L	ND	5.0	04/08/20 16:13	
1,2-Dichloropropane	ug/L	ND	5.0	04/08/20 16:13	
1,3-Dichlorobenzene	ug/L	ND	1.0	04/08/20 16:13	
1,4-Dichlorobenzene	ug/L	ND	5.0	04/08/20 16:13	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	04/08/20 16:13	
2-Butanone (MEK)	ug/L	ND	50.0	04/08/20 16:13	
2-Hexanone	ug/L	ND	10.0	04/08/20 16:13	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/08/20 16:13	
Acetone	ug/L	ND	50.0	04/08/20 16:13	
Acetonitrile	ug/L	ND	50.0	04/08/20 16:13	
Acrolein	ug/L	ND	10.0	04/08/20 16:13	IH
Acrylonitrile	ug/L	ND	10.0	04/08/20 16:13	
Allyl chloride	ug/L	ND	2.0	04/08/20 16:13	
Benzene	ug/L	ND	1.0	04/08/20 16:13	
Bromodichloromethane	ug/L	ND	5.0	04/08/20 16:13	
Bromoform	ug/L	ND	5.0	04/08/20 16:13	
Bromomethane	ug/L	ND	5.0	04/08/20 16:13	
Carbon disulfide	ug/L	ND	5.0	04/08/20 16:13	
Carbon tetrachloride	ug/L	ND	5.0	04/08/20 16:13	
Chlorobenzene	ug/L	ND	5.0	04/08/20 16:13	
Chloroethane	ug/L	ND	10.0	04/08/20 16:13	
Chloroform	ug/L	ND	5.0	04/08/20 16:13	
Chloromethane	ug/L	ND	10.0	04/08/20 16:13	
Chloroprene	ug/L	ND	5.0	04/08/20 16:13	
cis-1,3-Dichloropropene	ug/L	ND	5.0	04/08/20 16:13	
Dibromochloromethane	ug/L	ND	5.0	04/08/20 16:13	
Dibromomethane	ug/L	ND	5.0	04/08/20 16:13	
Dichlorodifluoromethane	ug/L	ND	1.0	04/08/20 16:13	
Ethyl methacrylate	ug/L	ND	1.0	04/08/20 16:13	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

METHOD BLANK: 2855656 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002, 2630497003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	ND	1.0	04/08/20 16:13	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	04/08/20 16:13	
Iodomethane	ug/L	ND	20.0	04/08/20 16:13	
Isobutanol	ug/L	ND	100	04/08/20 16:13	
m&p-Xylene	ug/L	ND	2.0	04/08/20 16:13	
Methacrylonitrile	ug/L	ND	10.0	04/08/20 16:13	
Methyl methacrylate	ug/L	ND	2.0	04/08/20 16:13	
Methylene Chloride	ug/L	ND	5.0	04/08/20 16:13	
Naphthalene	ug/L	ND	1.0	04/08/20 16:13	
o-Xylene	ug/L	ND	1.0	04/08/20 16:13	
Pentachloroethane	ug/L	ND	50.0	04/08/20 16:13	
Propionitrile	ug/L	ND	20.0	04/08/20 16:13	
Styrene	ug/L	ND	5.0	04/08/20 16:13	
Tetrachloroethene	ug/L	ND	5.0	04/08/20 16:13	
Toluene	ug/L	ND	1.0	04/08/20 16:13	
trans-1,2-Dichloroethene	ug/L	ND	5.0	04/08/20 16:13	
trans-1,3-Dichloropropene	ug/L	ND	5.0	04/08/20 16:13	
trans-1,4-Dichloro-2-butene	ug/L	ND	10.0	04/08/20 16:13	
Trichloroethene	ug/L	ND	5.0	04/08/20 16:13	
Trichlorofluoromethane	ug/L	ND	5.0	04/08/20 16:13	
Vinyl acetate	ug/L	ND	10.0	04/08/20 16:13	
Vinyl chloride	ug/L	ND	2.0	04/08/20 16:13	
Xylene (Total)	ug/L	ND	1.0	04/08/20 16:13	
1,2-Dichloroethane-d4 (S)	%	94	70-130	04/08/20 16:13	
4-Bromofluorobenzene (S)	%	102	70-130	04/08/20 16:13	
Toluene-d8 (S)	%	98	70-130	04/08/20 16:13	

LABORATORY CONTROL SAMPLE: 2855657

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	49.8	100	70-130	
1,1,1-Trichloroethane	ug/L	50	44.0	88	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	46.0	92	70-130	
1,1,2-Trichloroethane	ug/L	50	45.0	90	70-130	
1,1-Dichloroethane	ug/L	50	43.2	86	70-130	
1,1-Dichloroethene	ug/L	50	45.0	90	70-130	
1,2,3-Trichloropropane	ug/L	50	44.8	90	70-130	
1,2,4-Trichlorobenzene	ug/L	50	51.4	103	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	51.8	104	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	49.4	99	70-130	
1,2-Dichlorobenzene	ug/L	50	48.3	97	70-130	
1,2-Dichloroethane	ug/L	50	41.3	83	70-130	
1,2-Dichloropropane	ug/L	50	45.9	92	70-130	
1,3-Dichlorobenzene	ug/L	50	48.5	97	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

LABORATORY CONTROL SAMPLE: 2855657

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	50	48.6	97	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	951	95	59-169	
2-Butanone (MEK)	ug/L	100	85.7	86	64-135	
2-Hexanone	ug/L	100	92.9	93	66-135	
4-Methyl-2-pentanone (MIBK)	ug/L	100	92.3	92	70-130	
Acetone	ug/L	100	86.9	87	61-157	
Acetonitrile	ug/L	500	453	91	62-130	
Acrolein	ug/L	250	377	151	10-200	IH
Acrylonitrile	ug/L	250	226	91	61-143	
Allyl chloride	ug/L	50	44.5	89	70-130	
Benzene	ug/L	50	46.1	92	70-130	
Bromodichloromethane	ug/L	50	47.4	95	70-130	
Bromoform	ug/L	50	51.0	102	70-130	
Bromomethane	ug/L	50	38.1	76	38-130	
Carbon disulfide	ug/L	50	45.4	91	68-130	
Carbon tetrachloride	ug/L	50	47.9	96	70-130	
Chlorobenzene	ug/L	50	47.6	95	70-130	
Chloroethane	ug/L	50	41.1	82	37-142	
Chloroform	ug/L	50	43.2	86	70-130	
Chloromethane	ug/L	50	37.2	74	48-130	
Chloroprene	ug/L	50	42.9	86	70-130	
cis-1,3-Dichloropropene	ug/L	50	46.4	93	70-130	
Dibromochloromethane	ug/L	50	48.0	96	70-130	
Dibromomethane	ug/L	50	50.6	101	70-130	
Dichlorodifluoromethane	ug/L	50	42.3	85	53-134	
Ethyl methacrylate	ug/L	50	46.9	94	70-130	
Ethylbenzene	ug/L	50	44.0	88	70-130	
Hexachloro-1,3-butadiene	ug/L	50	53.6	107	68-132	
Iodomethane	ug/L	100	66.7	67	40-130	
Isobutanol	ug/L	1000	825	83	44-144	
m&p-Xylene	ug/L	100	90.6	91	70-130	
Methacrylonitrile	ug/L	500	420	84	66-130	
Methyl methacrylate	ug/L	50	44.2	88	69-130	
Methylene Chloride	ug/L	50	44.1	88	67-132	
Naphthalene	ug/L	50	50.8	102	70-130	
o-Xylene	ug/L	50	46.2	92	70-131	
Pentachloroethane	ug/L		52.9			
Propionitrile	ug/L	500	450	90	70-130	
Styrene	ug/L	50	48.5	97	70-130	
Tetrachloroethene	ug/L	50	51.4	103	69-130	
Toluene	ug/L	50	44.9	90	70-130	
trans-1,2-Dichloroethene	ug/L	50	44.6	89	70-130	
trans-1,3-Dichloropropene	ug/L	50	46.4	93	70-130	
trans-1,4-Dichloro-2-butene	ug/L	50	42.8	86	35-189	
Trichloroethene	ug/L	50	49.2	98	70-130	
Trichlorofluoromethane	ug/L	50	42.6	85	63-130	
Vinyl acetate	ug/L	100	92.7	93	55-143	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

LABORATORY CONTROL SAMPLE: 2855657

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	50	46.8	94	70-131	
Xylene (Total)	ug/L	150	137	91	70-130	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 2855659

Parameter	Units	2630497002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	19.4	97	73-134	
1,1,1-Trichloroethane	ug/L	ND	20	23.0	115	82-143	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	19.6	98	70-136	
1,1,2-Trichloroethane	ug/L	ND	20	20.1	100	70-135	
1,1-Dichloroethane	ug/L	ND	20	22.2	111	70-139	
1,1-Dichloroethene	ug/L	ND	20	23.5	117	70-154	
1,2,3-Trichloropropane	ug/L	ND	20	17.9	89	71-137	
1,2,4-Trichlorobenzene	ug/L	ND	20	19.1	95	73-140	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	21.2	106	65-134	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20.6	103	70-137	
1,2-Dichlorobenzene	ug/L	ND	20	20.4	102	70-133	
1,2-Dichloroethane	ug/L	ND	20	21.6	108	70-137	
1,2-Dichloropropane	ug/L	ND	20	21.8	109	70-140	
1,3-Dichlorobenzene	ug/L	ND	20	19.6	98	70-135	
1,4-Dichlorobenzene	ug/L	ND	20	21.3	106	70-133	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	376	94	53-168	
2-Butanone (MEK)	ug/L	ND	40	43.1J	108	60-139	
2-Hexanone	ug/L	ND	40	41.5	104	65-138	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	41.3	103	65-135	
Acetone	ug/L	ND	40	44.3J	111	60-148	
Acetonitrile	ug/L	ND	200	221	111	65-141	
Acrolein	ug/L	ND	100	115	115	28-162	IH
Acrylonitrile	ug/L	ND	100	115	115	64-147	
Allyl chloride	ug/L	ND	20	23.2	116	70-133	
Benzene	ug/L	ND	20	22.0	110	70-151	
Bromodichloromethane	ug/L	ND	20	22.8	114	70-138	
Bromoform	ug/L	ND	20	18.8	94	63-130	
Bromomethane	ug/L	ND	20	17.5	87	15-152	
Carbon disulfide	ug/L	ND	20	23.1	116	69-149	
Carbon tetrachloride	ug/L	ND	20	23.5	118	70-143	
Chlorobenzene	ug/L	ND	20	20.5	102	70-138	
Chloroethane	ug/L	ND	20	22.9	115	52-163	
Chloroform	ug/L	ND	20	22.2	111	70-139	
Chloromethane	ug/L	ND	20	19.1	95	41-139	
Chloroprene	ug/L	ND	20	22.9	115	70-135	
cis-1,3-Dichloropropene	ug/L	ND	20	20.4	102	70-137	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

MATRIX SPIKE SAMPLE: 2855659

Parameter	Units	2630497002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	ND	20	20.3	101	70-134	
Dibromomethane	ug/L	ND	20	20.1	101	70-138	
Dichlorodifluoromethane	ug/L	ND	20	21.5	107	47-155	
Ethyl methacrylate	ug/L	ND	20	21.2	106	70-132	
Ethylbenzene	ug/L	ND	20	19.6	98	66-153	
Hexachloro-1,3-butadiene	ug/L	ND	20	20.8	104	65-149	
Iodomethane	ug/L	ND	40	24.7	62	20-138	
Isobutanol	ug/L	ND	400	394	98	41-152	
m&p-Xylene	ug/L	ND	40	39.5	99	69-152	
Methacrylonitrile	ug/L	ND	200	213	107	67-134	
Methyl methacrylate	ug/L	ND	20	20.2	101	70-130	
Methylene Chloride	ug/L	ND	20	21.9	109	42-159	
Naphthalene	ug/L	ND	20	19.7	99	61-148	
o-Xylene	ug/L	ND	20	19.3	97	70-148	
Pentachloroethane	ug/L	ND		ND			
Propionitrile	ug/L	ND	200	212	106	70-131	
Styrene	ug/L	ND	20	20.3	101	70-135	
Tetrachloroethene	ug/L	ND	20	19.3	96	59-143	
Toluene	ug/L	ND	20	19.9	100	59-148	
trans-1,2-Dichloroethene	ug/L	ND	20	23.1	115	70-146	
trans-1,3-Dichloropropene	ug/L	ND	20	20.9	105	70-135	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	17.1	85	47-135	
Trichloroethene	ug/L	ND	20	22.0	110	70-147	
Trichlorofluoromethane	ug/L	ND	20	22.0	110	70-148	
Vinyl acetate	ug/L	ND	40	41.0	103	49-151	
Vinyl chloride	ug/L	ND	20	23.5	118	70-156	
Xylene (Total)	ug/L	ND	60	58.8	98	63-158	
1,2-Dichloroethane-d4 (S)	%				113	70-130	
4-Bromofluorobenzene (S)	%				98	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 2855658

Parameter	Units	2630497001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

SAMPLE DUPLICATE: 2855658

Parameter	Units	2630497001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	14.4J		30	
Acetonitrile	ug/L	ND	ND		30	
Acrolein	ug/L	ND	ND		30	IH
Acrylonitrile	ug/L	ND	ND		30	
Allyl chloride	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon disulfide	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
Chloroprene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethyl methacrylate	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Iodomethane	ug/L	ND	ND		30	
Isobutanol	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methacrylonitrile	ug/L	ND	ND		30	
Methyl methacrylate	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
Pentachloroethane	ug/L	ND	ND		30	
Propionitrile	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
trans-1,4-Dichloro-2-butene	ug/L	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

SAMPLE DUPLICATE: 2855658

Parameter	Units	2630497001 Result	Dup Result	RPD	Max RPD	Qualifiers
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	92	109			
4-Bromofluorobenzene (S)	%	101	103			
Toluene-d8 (S)	%	97	105			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

QC Batch: 533687
QC Batch Method: EPA 8011
Analysis Method: EPA 8011
Analysis Description: GCS 8011 EDB DBCP
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 2630497001, 2630497002

METHOD BLANK: 2848546 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	ND	0.019	04/01/20 19:40	
1,2-Dibromoethane (EDB)	ug/L	ND	0.019	04/01/20 19:40	
1-Chloro-2-bromopropane (S)	%	132	60-140	04/01/20 19:40	

LABORATORY CONTROL SAMPLE & LCSD: 2848547 2848548

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.25	0.25	0.26	100	104	60-140	4	20	
1,2-Dibromoethane (EDB)	ug/L	0.25	0.26	0.26	105	105	60-140	0	20	
1-Chloro-2-bromopropane (S)	%				100	96	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2848550 2848551

Parameter	Units	2630497002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	ND	0.26	0.26	0.30	0.29	118	113	60-140	5	20	
1,2-Dibromoethane (EDB)	ug/L	ND	0.26	0.26	0.29	0.29	114	113	60-140	1	20	
1-Chloro-2-bromopropane (S)	%						102	102	60-140			

SAMPLE DUPLICATE: 2848549

Parameter	Units	2630497001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		20	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	101	99			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

QC Batch: 533669
QC Batch Method: EPA 3510C
Analysis Method: EPA 8081B
Analysis Description: 8081 OC Pesticides Red Vol
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 2630497001, 2630497002

METHOD BLANK: 2848504 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	04/06/20 20:22	
4,4'-DDE	ug/L	ND	0.050	04/06/20 20:22	
4,4'-DDT	ug/L	ND	0.050	04/06/20 20:22	
Aldrin	ug/L	ND	0.050	04/06/20 20:22	
alpha-BHC	ug/L	ND	0.050	04/06/20 20:22	
beta-BHC	ug/L	ND	0.050	04/06/20 20:22	
Chlordane (Technical)	ug/L	ND	0.20	04/06/20 20:22	
delta-BHC	ug/L	ND	0.050	04/06/20 20:22	
Dieldrin	ug/L	ND	0.050	04/06/20 20:22	
Endosulfan I	ug/L	ND	0.050	04/06/20 20:22	
Endosulfan II	ug/L	ND	0.050	04/06/20 20:22	
Endosulfan sulfate	ug/L	ND	0.050	04/06/20 20:22	
Endrin	ug/L	ND	0.050	04/06/20 20:22	
Endrin aldehyde	ug/L	ND	0.050	04/06/20 20:22	
gamma-BHC (Lindane)	ug/L	ND	0.050	04/06/20 20:22	
Heptachlor	ug/L	ND	0.050	04/06/20 20:22	
Heptachlor epoxide	ug/L	ND	0.050	04/06/20 20:22	
Hexachlorobenzene	ug/L	ND	0.050	04/06/20 20:22	
Methoxychlor	ug/L	ND	0.15	04/06/20 20:22	
Toxaphene	ug/L	ND	0.20	04/06/20 20:22	
Decachlorobiphenyl (S)	%	99	10-130	04/06/20 20:22	
Tetrachloro-m-xylene (S)	%	69	10-130	04/06/20 20:22	

LABORATORY CONTROL SAMPLE: 2848505

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	0.25	0.24	95	49-130	
4,4'-DDE	ug/L	0.25	0.18	74	56-130	
4,4'-DDT	ug/L	0.25	0.24	96	45-130	
Aldrin	ug/L	0.25	0.14	57	25-130	
alpha-BHC	ug/L	0.25	0.23	91	53-130	
beta-BHC	ug/L	0.25	0.27	108	46-130	
delta-BHC	ug/L	0.25	0.23	91	54-130	
Dieldrin	ug/L	0.25	0.24	96	54-130	
Endosulfan I	ug/L	0.25	0.24	96	43-130	
Endosulfan II	ug/L	0.25	0.25	100	64-130	
Endosulfan sulfate	ug/L	0.25	0.24	95	66-130	
Endrin	ug/L	0.25	0.24	95	56-130	
Endrin aldehyde	ug/L	0.25	0.25	102	59-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

LABORATORY CONTROL SAMPLE: 2848505

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
gamma-BHC (Lindane)	ug/L	0.25	0.23	93	57-130	
Heptachlor	ug/L	0.25	0.19	77	37-130	
Heptachlor epoxide	ug/L	0.25	0.23	94	56-130	
Hexachlorobenzene	ug/L	0.25	0.19	76	24-130	
Methoxychlor	ug/L	0.75	0.67	90	46-130	
Decachlorobiphenyl (S)	%			106	10-130	
Tetrachloro-m-xylene (S)	%			87	10-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2848506 2848507

Parameter	Units	92471456001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4,4'-DDD	ug/L	ND	0.25	0.25	0.30	0.31	121	123	28-130	2	30	
4,4'-DDE	ug/L	ND	0.25	0.25	0.25	0.25	98	102	26-130	4	30	
4,4'-DDT	ug/L	ND	0.25	0.25	0.34	0.35	135	139	11-130	3	30	M1
Aldrin	ug/L	ND	0.25	0.25	0.24	0.24	95	98	10-130	3	30	
alpha-BHC	ug/L	ND	0.25	0.25	0.21	0.21	84	86	27-130	2	30	
beta-BHC	ug/L	ND	0.25	0.25	0.27	0.27	107	108	15-130	1	30	
delta-BHC	ug/L	ND	0.25	0.25	0.23	0.23	90	92	44-130	2	30	
Dieldrin	ug/L	ND	0.25	0.25	0.27	0.28	110	111	20-130	2	30	
Endosulfan I	ug/L	0.080	0.25	0.25	0.30	0.30	87	87	10-139	0	30	
Endosulfan II	ug/L	ND	0.25	0.25	0.29	0.30	116	119	36-130	2	30	
Endosulfan sulfate	ug/L	ND	0.25	0.25	0.33	0.33	132	131	45-130	1	30	M1
Endrin	ug/L	ND	0.25	0.25	0.29	0.30	116	120	26-130	3	30	
Endrin aldehyde	ug/L	ND	0.25	0.25	0.49	0.43	197	171	19-160	14	30	M1
gamma-BHC (Lindane)	ug/L	ND	0.25	0.25	0.23	0.23	90	92	33-130	2	30	
Heptachlor	ug/L	ND	0.25	0.25	0.19	0.20	75	79	25-130	5	30	
Heptachlor epoxide	ug/L	ND	0.25	0.25	0.25	0.26	101	103	18-130	2	30	
Hexachlorobenzene	ug/L	ND	0.25	0.25	0.21	0.21	84	84	10-130	0	30	
Methoxychlor	ug/L	ND	0.75	0.75	0.87	0.84	116	113	10-130	3	30	
Decachlorobiphenyl (S)	%						73	66	10-130			
Tetrachloro-m-xylene (S)	%						81	80	10-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

QC Batch: 533582
QC Batch Method: EPA 3510C
Analysis Method: EPA 8082A
Analysis Description: 8082 GCS PCB
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 2630497001, 2630497002

METHOD BLANK: 2848140 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.50	04/01/20 23:26	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.50	04/01/20 23:26	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.50	04/01/20 23:26	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.50	04/01/20 23:26	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.50	04/01/20 23:26	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.50	04/01/20 23:26	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.50	04/01/20 23:26	
Decachlorobiphenyl (S)	%	110	10-130	04/01/20 23:26	

LABORATORY CONTROL SAMPLE: 2848141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	5	5.2	103	41-130	
PCB-1260 (Aroclor 1260)	ug/L	5	5.9	118	42-130	
Decachlorobiphenyl (S)	%			124	10-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2848142 2848143

Parameter	Units	2630497001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	ND	5	5	4.9	5.2	98	103	15-130	5	30	
PCB-1260 (Aroclor 1260)	ug/L	ND	5	5	4.9	4.5	99	90	10-130	9	30	
Decachlorobiphenyl (S)	%						97	80	10-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

QC Batch: 533664
QC Batch Method: EPA 3510C
Analysis Method: EPA 8270E
Analysis Description: 8270E Water APP9 RV MSSV
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 2630497001, 2630497002

METHOD BLANK: 2848486 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	04/01/20 19:01	
1,2,4-Trichlorobenzene	ug/L	ND	10.0	04/01/20 19:01	
1,2-Dichlorobenzene	ug/L	ND	10.0	04/01/20 19:01	
1,2-Diphenylhydrazine	ug/L	ND	10.0	04/01/20 19:01	
1,3,5-Trinitrobenzene	ug/L	ND	10.0	04/01/20 19:01	
1,3-Dichlorobenzene	ug/L	ND	10.0	04/01/20 19:01	
1,3-Dinitrobenzene	ug/L	ND	10.0	04/01/20 19:01	
1,4-Dichlorobenzene	ug/L	ND	10.0	04/01/20 19:01	
1,4-Dinitrobenzene	ug/L	ND	20.0	04/01/20 19:01	v1
1,4-Naphthoquinone	ug/L	ND	5.0	04/01/20 19:01	
1-Methylnaphthalene	ug/L	ND	10.0	04/01/20 19:01	
1-Naphthalenamine	ug/L	ND	5.0	04/01/20 19:01	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	04/01/20 19:01	
2,3,4,6-Tetrachlorophenol	ug/L	ND	10.0	04/01/20 19:01	
2,3-Dibromo-1-propanol phosph	ug/L	ND	50.0	04/01/20 19:01	
2,3-Dichloroaniline	ug/L	ND	10.0	04/01/20 19:01	
2,4,5-Trichlorophenol	ug/L	ND	10.0	04/01/20 19:01	
2,4,6-Trichlorophenol	ug/L	ND	10.0	04/01/20 19:01	
2,4-Dichlorophenol	ug/L	ND	10.0	04/01/20 19:01	
2,4-Dimethylphenol	ug/L	ND	10.0	04/01/20 19:01	
2,4-Dinitrophenol	ug/L	ND	50.0	04/01/20 19:01	
2,4-Dinitrotoluene	ug/L	ND	10.0	04/01/20 19:01	
2,6-Dichlorophenol	ug/L	ND	10.0	04/01/20 19:01	
2,6-Dinitrotoluene	ug/L	ND	10.0	04/01/20 19:01	
2-Acetylaminofluorene	ug/L	ND	10.0	04/01/20 19:01	v1
2-Chloronaphthalene	ug/L	ND	10.0	04/01/20 19:01	
2-Chlorophenol	ug/L	ND	10.0	04/01/20 19:01	
2-Methyl-5-nitroaniline	ug/L	ND	10.0	04/01/20 19:01	v1
2-Methylnaphthalene	ug/L	ND	10.0	04/01/20 19:01	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	04/01/20 19:01	
2-Naphthalenamine	ug/L	ND	10.0	04/01/20 19:01	
2-Nitroaniline	ug/L	ND	20.0	04/01/20 19:01	
2-Nitrophenol	ug/L	ND	10.0	04/01/20 19:01	
2-Picoline	ug/L	ND	10.0	04/01/20 19:01	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	04/01/20 19:01	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	04/01/20 19:01	
3,3'-Dimethylbenzidine	ug/L	ND	25.0	04/01/20 19:01	
3-Methylcholanthrene	ug/L	ND	10.0	04/01/20 19:01	
3-Nitroaniline	ug/L	ND	20.0	04/01/20 19:01	
4,4'-Methylene-bis(2-chloroani	ug/L	ND	20.0	04/01/20 19:01	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

METHOD BLANK: 2848486 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	04/01/20 19:01	
4-Aminobiphenyl	ug/L	ND	10.0	04/01/20 19:01	
4-Bromophenylphenyl ether	ug/L	ND	10.0	04/01/20 19:01	
4-Chloro-3-methylphenol	ug/L	ND	10.0	04/01/20 19:01	
4-Chloroaniline	ug/L	ND	20.0	04/01/20 19:01	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	04/01/20 19:01	
4-Nitroaniline	ug/L	ND	20.0	04/01/20 19:01	
4-Nitrophenol	ug/L	ND	50.0	04/01/20 19:01	
4-Nitroquinoline-n-oxide	ug/L	ND	20.0	04/01/20 19:01	
5-Nitro-o-toluidine	ug/L	ND	10.0	04/01/20 19:01	v1
7,12-Dimethylbenz(a)anthracene	ug/L	ND	10.0	04/01/20 19:01	
a,a-Dimethylphenylethylamine	ug/L	ND	10.0	04/01/20 19:01	
Acenaphthene	ug/L	ND	10.0	04/01/20 19:01	
Acenaphthylene	ug/L	ND	10.0	04/01/20 19:01	
Acetophenone	ug/L	ND	10.0	04/01/20 19:01	
Aniline	ug/L	ND	10.0	04/01/20 19:01	
Anthracene	ug/L	ND	10.0	04/01/20 19:01	
Aramite	ug/L	ND	10.0	04/01/20 19:01	
Atrazine	ug/L	ND	10.0	04/01/20 19:01	
Benzal chloride	ug/L	ND	50.0	04/01/20 19:01	
Benzaldehyde	ug/L	ND	10.0	04/01/20 19:01	
Benzidine	ug/L	ND	50.0	04/01/20 19:01	v2
Benzo(a)anthracene	ug/L	ND	10.0	04/01/20 19:01	
Benzo(a)pyrene	ug/L	ND	10.0	04/01/20 19:01	
Benzo(b)fluoranthene	ug/L	ND	10.0	04/01/20 19:01	
Benzo(g,h,i)perylene	ug/L	ND	10.0	04/01/20 19:01	
Benzo(k)fluoranthene	ug/L	ND	10.0	04/01/20 19:01	
Benzoic Acid	ug/L	ND	50.0	04/01/20 19:01	
Benzophenone	ug/L	ND	10.0	04/01/20 19:01	
Benzyl alcohol	ug/L	ND	20.0	04/01/20 19:01	
Biphenyl (Diphenyl)	ug/L	ND	10.0	04/01/20 19:01	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	04/01/20 19:01	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	04/01/20 19:01	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	04/01/20 19:01	
Butylbenzylphthalate	ug/L	ND	10.0	04/01/20 19:01	
Caprolactam	ug/L	ND	10.0	04/01/20 19:01	v1
Carbazole	ug/L	ND	10.0	04/01/20 19:01	
Chlorobenzilate	ug/L	ND	10.0	04/01/20 19:01	
Chrysene	ug/L	ND	10.0	04/01/20 19:01	
Di-n-butylphthalate	ug/L	ND	10.0	04/01/20 19:01	
Di-n-octylphthalate	ug/L	ND	10.0	04/01/20 19:01	
Diallate	ug/L	ND	10.0	04/01/20 19:01	
Dibenz(a,h)anthracene	ug/L	ND	10.0	04/01/20 19:01	
Dibenzo(a,e)pyrene	ug/L	ND	50.0	04/01/20 19:01	
Dibenzofuran	ug/L	ND	10.0	04/01/20 19:01	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

METHOD BLANK: 2848486 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diethylphthalate	ug/L	ND	10.0	04/01/20 19:01	
Dimethoate	ug/L	ND	10.0	04/01/20 19:01	v1
Dimethylphthalate	ug/L	ND	10.0	04/01/20 19:01	
Dinoseb	ug/L	ND	10.0	04/01/20 19:01	v1
Diphenyl ether (Phenyl ether)	ug/L	ND	10.0	04/01/20 19:01	
Diphenylamine	ug/L	ND	10.0	04/01/20 19:01	
Disulfoton	ug/L	ND	10.0	04/01/20 19:01	
Ethyl methanesulfonate	ug/L	ND	20.0	04/01/20 19:01	
Famphur	ug/L	ND	10.0	04/01/20 19:01	
Fluoranthene	ug/L	ND	10.0	04/01/20 19:01	
Fluorene	ug/L	ND	10.0	04/01/20 19:01	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	04/01/20 19:01	
Hexachlorobenzene	ug/L	ND	10.0	04/01/20 19:01	
Hexachlorocyclopentadiene	ug/L	ND	10.0	04/01/20 19:01	
Hexachloroethane	ug/L	ND	10.0	04/01/20 19:01	
Hexachlorophene	ug/L	ND	100	04/01/20 19:01	
Hexachloropropene	ug/L	ND	10.0	04/01/20 19:01	v2
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	04/01/20 19:01	
Isodrin	ug/L	ND	10.0	04/01/20 19:01	
Isophorone	ug/L	ND	10.0	04/01/20 19:01	
Isosafrole	ug/L	ND	10.0	04/01/20 19:01	
Kepone	ug/L	ND	10.0	04/01/20 19:01	v2
Methapyrilene	ug/L	ND	50.0	04/01/20 19:01	v1
Methyl methanesulfonate	ug/L	ND	5.0	04/01/20 19:01	
Methyl parathion	ug/L	ND	10.0	04/01/20 19:01	v1
n-Decane	ug/L	ND	10.0	04/01/20 19:01	
N-Nitroso-di-n-butylamine	ug/L	ND	10.0	04/01/20 19:01	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	04/01/20 19:01	
N-Nitrosodiethylamine	ug/L	ND	10.0	04/01/20 19:01	
N-Nitrosodimethylamine	ug/L	ND	10.0	04/01/20 19:01	
N-Nitrosodiphenylamine	ug/L	ND	10.0	04/01/20 19:01	
N-Nitrosomethylethylamine	ug/L	ND	10.0	04/01/20 19:01	
N-Nitrosomorpholine	ug/L	ND	10.0	04/01/20 19:01	
N-Nitrosopiperidine	ug/L	ND	10.0	04/01/20 19:01	
N-Nitrosopyrrolidine	ug/L	ND	10.0	04/01/20 19:01	
n-Octadecane	ug/L	ND	10.0	04/01/20 19:01	
Naphthalene	ug/L	ND	10.0	04/01/20 19:01	
Nitrobenzene	ug/L	ND	10.0	04/01/20 19:01	
O,O,O-Triethylphosphorothioate	ug/L	ND	10.0	04/01/20 19:01	
O-Toluidine	ug/L	ND	10.0	04/01/20 19:01	
P-Dimethylaminoazobenzene	ug/L	ND	5.0	04/01/20 19:01	
p-Phenylenediamine	ug/L	ND	10.0	04/01/20 19:01	
Parathion (Ethyl parathion)	ug/L	ND	10.0	04/01/20 19:01	v1
Pentachlorobenzene	ug/L	ND	10.0	04/01/20 19:01	
Pentachloroethane	ug/L	ND	10.0	04/01/20 19:01	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

METHOD BLANK: 2848486 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Pentachloronitrobenzene	ug/L	ND	10.0	04/01/20 19:01	
Pentachlorophenol	ug/L	ND	20.0	04/01/20 19:01	
Phenacetin	ug/L	ND	10.0	04/01/20 19:01	v1
Phenanthrene	ug/L	ND	10.0	04/01/20 19:01	
Phenol	ug/L	ND	10.0	04/01/20 19:01	
Phorate	ug/L	ND	10.0	04/01/20 19:01	
Pronamide	ug/L	ND	10.0	04/01/20 19:01	
Pyrene	ug/L	ND	10.0	04/01/20 19:01	
Pyridine	ug/L	ND	10.0	04/01/20 19:01	
Safrole	ug/L	ND	10.0	04/01/20 19:01	
Sulfotepp (Thiodiphosphoric Ac	ug/L	ND	10.0	04/01/20 19:01	
Terpineol	ug/L	ND	10.0	04/01/20 19:01	
Thionazin	ug/L	ND	10.0	04/01/20 19:01	
2,4,6-Tribromophenol (S)	%	84	10-137	04/01/20 19:01	
2-Fluorobiphenyl (S)	%	62	13-130	04/01/20 19:01	
2-Fluorophenol (S)	%	73	10-130	04/01/20 19:01	
Nitrobenzene-d5 (S)	%	71	13-130	04/01/20 19:01	
Phenol-d6 (S)	%	56	10-130	04/01/20 19:01	
Terphenyl-d14 (S)	%	90	25-130	04/01/20 19:01	

LABORATORY CONTROL SAMPLE: 2848487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	12.3	25	10-130	
1,2,4-Trichlorobenzene	ug/L	50	23.5	47	30-130	
1,2-Dichlorobenzene	ug/L	50	25.2	50	30-130	
1,2-Diphenylhydrazine	ug/L	50	57.1	114	40-130	
1,3,5-Trinitrobenzene	ug/L	50	71.0	142	50-130	L1
1,3-Dichlorobenzene	ug/L	50	23.8	48	20-130	
1,3-Dinitrobenzene	ug/L	50	54.6	109	30-130	
1,4-Dichlorobenzene	ug/L	50	25.6	51	30-130	
1,4-Dinitrobenzene	ug/L	50	55.7	111	50-130	v1
1,4-Naphthoquinone	ug/L	50	32.3	65	30-130	
1-Methylnaphthalene	ug/L	50	30.3	61	30-130	
1-Naphthalenamine	ug/L	50	37.3	75	30-130	
2,2'-Oxybis(1-chloropropane)	ug/L	50	38.6	77	20-130	
2,3,4,6-Tetrachlorophenol	ug/L	50	48.2	96	40-200	
2,3-Dibromo-1-propanol phosph	ug/L	200	240	120	40-130	
2,3-Dichloroaniline	ug/L	50	39.7	79	40-130	
2,4,5-Trichlorophenol	ug/L	50	42.4	85	40-130	
2,4,6-Trichlorophenol	ug/L	50	39.3	79	40-130	
2,4-Dichlorophenol	ug/L	50	38.9	78	31-130	
2,4-Dimethylphenol	ug/L	50	39.4	79	30-130	
2,4-Dinitrophenol	ug/L	250	224	90	30-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

LABORATORY CONTROL SAMPLE: 2848487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/L	50	52.7	105	49-130	
2,6-Dichlorophenol	ug/L	50	43.6	87	50-130	
2,6-Dinitrotoluene	ug/L	50	49.9	100	50-130	
2-Acetylaminofluorene	ug/L	50	56.7	113	70-150	v1
2-Chloronaphthalene	ug/L	50	29.3	59	30-130	
2-Chlorophenol	ug/L	50	41.1	82	30-130	
2-Methyl-5-nitroaniline	ug/L	50	58.1	116	50-200	v1
2-Methylnaphthalene	ug/L	50	30.0	60	30-130	
2-Methylphenol(o-Cresol)	ug/L	50	39.5	79	30-130	
2-Naphthalenamine	ug/L	50	42.7	85	30-130	
2-Nitroaniline	ug/L	100	75.8	76	40-130	
2-Nitrophenol	ug/L	50	42.5	85	20-130	
2-Picoline	ug/L	50	37.7	75	20-130	
3&4-Methylphenol(m&p Cresol)	ug/L	50	35.7	71	20-130	
3,3'-Dichlorobenzidine	ug/L	100	102	102	10-150	
3,3'-Dimethylbenzidine	ug/L	100	182	182	10-150	L1
3-Methylcholanthrene	ug/L	50	55.7	111	40-130	
3-Nitroaniline	ug/L	100	97.4	97	40-130	
4,4'-Methylene-bis(2-chloroani	ug/L	100	109	109	50-130	
4,6-Dinitro-2-methylphenol	ug/L	100	102	102	40-130	
4-Aminobiphenyl	ug/L	50	35.2	70	20-130	
4-Bromophenylphenyl ether	ug/L	50	40.3	81	30-130	
4-Chloro-3-methylphenol	ug/L	100	82.8	83	30-130	
4-Chloroaniline	ug/L	100	78.1	78	20-130	
4-Chlorophenylphenyl ether	ug/L	50	34.7	69	20-130	
4-Nitroaniline	ug/L	100	108	108	40-130	
4-Nitrophenol	ug/L	250	168	67	10-130	
4-Nitroquinoline-n-oxide	ug/L	100	101	101	10-130	
5-Nitro-o-toluidine	ug/L	50	58.1	116	50-150	v1
7,12-Dimethylbenz(a)anthracene	ug/L	50	46.3	93	50-130	
a,a-Dimethylphenylethylamine	ug/L	50	6J	12	10-200	
Acenaphthene	ug/L	50	33.7	67	30-130	
Acenaphthylene	ug/L	50	36.1	72	30-130	
Acetophenone	ug/L	50	36.9	74	20-130	
Aniline	ug/L	50	36.6	73	20-130	
Anthracene	ug/L	50	45.3	91	50-130	
Aramite	ug/L	100	52.6	53	30-130	
Atrazine	ug/L	50	34.4	69	30-150	
Benzal chloride	ug/L	50	ND	5	20-150	L2
Benzaldehyde	ug/L	50	56.6	113	10-130	
Benzidine	ug/L	100	46.6J	47	10-130	v3
Benzo(a)anthracene	ug/L	50	50.3	101	50-130	
Benzo(a)pyrene	ug/L	50	50.4	101	50-130	
Benzo(b)fluoranthene	ug/L	50	53.5	107	50-130	
Benzo(g,h,i)perylene	ug/L	50	54.4	109	50-130	
Benzo(k)fluoranthene	ug/L	50	50.6	101	50-130	
Benzoic Acid	ug/L	250	129	52	10-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

LABORATORY CONTROL SAMPLE: 2848487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzophenone	ug/L	50	58.9	118	20-130	
Benzyl alcohol	ug/L	100	79.7	80	20-130	
Biphenyl (Diphenyl)	ug/L	50	29.9	60	20-130	
bis(2-Chloroethoxy)methane	ug/L	50	37.3	75	30-130	
bis(2-Chloroethyl) ether	ug/L	50	38.6	77	30-130	
bis(2-Ethylhexyl)phthalate	ug/L	50	53.2	106	50-130	
Butylbenzylphthalate	ug/L	50	56.7	113	50-150	
Caprolactam	ug/L	50	39.7	79	10-130	v1
Carbazole	ug/L	50	49.0	98	40-130	
Chlorobenzilate	ug/L	50	51.0	102	50-130	
Chrysene	ug/L	50	50.1	100	50-130	
Di-n-butylphthalate	ug/L	50	51.4	103	50-130	
Di-n-octylphthalate	ug/L	50	58.3	117	50-130	
Diallate	ug/L	50	43.2	86	50-130	
Dibenz(a,h)anthracene	ug/L	50	55.0	110	40-130	
Dibenzo(a,e)pyrene	ug/L	50	48.7J	97	40-130	
Dibenzofuran	ug/L	50	35.8	72	40-130	
Diethylphthalate	ug/L	50	48.5	97	40-130	
Dimethoate	ug/L	50	60.6	121	50-150	v1
Dimethylphthalate	ug/L	50	45.6	91	40-130	
Dinoseb	ug/L	50	58.6	117	20-150	v1
Diphenyl ether (Phenyl ether)	ug/L	50	29.5	59	20-130	
Diphenylamine	ug/L	50	45.9	92	30-130	
Disulfoton	ug/L	50	43.2	86	40-150	
Ethyl methanesulfonate	ug/L	50	40.2	80	40-130	
Famphur	ug/L	100	50.2	50	30-150	
Fluoranthene	ug/L	50	49.8	100	30-130	
Fluorene	ug/L	50	38.8	78	20-130	
Hexachloro-1,3-butadiene	ug/L	50	19.9	40	10-130	
Hexachlorobenzene	ug/L	50	42.3	85	30-130	
Hexachlorocyclopentadiene	ug/L	50	17.1	34	10-150	
Hexachloroethane	ug/L	50	21.1	42	10-130	
Hexachlorophene	ug/L	500	335	67	10-130	v3
Hexachloropropene	ug/L	50	5.6J	11	10-150	
Indeno(1,2,3-cd)pyrene	ug/L	50	54.2	108	40-130	
Isodrin	ug/L	50	44.1	88	40-130	
Isophorone	ug/L	50	36.6	73	30-130	
Isosafrole	ug/L	50	30.3	61	40-130	
Kepone	ug/L	100	39.8	40	10-130	v3
Methapyrilene	ug/L	50	37.9J	76	10-150	v1
Methyl methanesulfonate	ug/L	50	33.9	68	20-130	
Methyl parathion	ug/L	50	65.1	130	50-130	v1
n-Decane	ug/L	50	22.4	45	10-130	
N-Nitroso-di-n-butylamine	ug/L	50	36.7	73	30-130	
N-Nitroso-di-n-propylamine	ug/L	50	37.1	74	30-130	
N-Nitrosodiethylamine	ug/L	50	41.4	83	40-130	
N-Nitrosodimethylamine	ug/L	50	33.6	67	10-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

LABORATORY CONTROL SAMPLE: 2848487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
N-Nitrosodiphenylamine	ug/L	50	45.9	92	30-130	
N-Nitrosomethylethylamine	ug/L	50	39.3	79	30-130	
N-Nitrosomorpholine	ug/L	50	43.0	86	30-130	
N-Nitrosopiperidine	ug/L	50	42.7	85	30-130	
N-Nitrosopyrrolidine	ug/L	50	44.2	88	30-130	
n-Octadecane	ug/L	50	41.8	84	40-130	
Naphthalene	ug/L	50	31.2	62	20-130	
Nitrobenzene	ug/L	50	34.5	69	20-130	
O,O,O-Triethylphosphorothioate	ug/L	50	35.8	72	40-130	
O-Toluidine	ug/L	50	41.6	83	20-130	
P-Dimethylaminoazobenzene	ug/L	50	22.8	46	10-130	
p-Phenylenediamine	ug/L	50	ND	0	70-140	L2
Parathion (Ethyl parathion)	ug/L	50	65.9	132	50-150	v1
Pentachlorobenzene	ug/L	50	23.2	46	30-150	
Pentachloroethane	ug/L	50	17.1	34	20-130	
Pentachloronitrobenzene	ug/L	50	54.0	108	60-130	
Pentachlorophenol	ug/L	100	103	103	10-140	
Phenacetin	ug/L	50	58.8	118	60-130	v1
Phenanthrene	ug/L	50	45.1	90	50-130	
Phenol	ug/L	50	31.6	63	10-130	
Phorate	ug/L	50	47.8	96	50-130	
Pronamide	ug/L	50	54.8	110	70-130	
Pyrene	ug/L	50	47.7	95	50-130	
Pyridine	ug/L	50	32.0	64	10-130	
Safrole	ug/L	50	32.2	64	30-130	
Sulfotepp (Thiodiphosphoric Ac	ug/L	50	46.6	93	30-130	
Terpineol	ug/L	50	39.4	79	30-150	
Thionazin	ug/L	50	53.1	106	60-130	
2,4,6-Tribromophenol (S)	%			96	10-137	
2-Fluorobiphenyl (S)	%			61	13-130	
2-Fluorophenol (S)	%			71	10-130	
Nitrobenzene-d5 (S)	%			70	13-130	
Phenol-d6 (S)	%			57	10-130	
Terphenyl-d14 (S)	%			93	25-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2848488 2848489

Parameter	Units	2630497002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4,5-Tetrachlorobenzene	ug/L	ND	50	50	7.7J	8.7J	15	17	10-130		30	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	15.2	16.7	30	33	30-130	9	30	
1,2-Dichlorobenzene	ug/L	ND	50	50	15.9	17.7	32	35	30-130	10	30	
1,2-Diphenylhydrazine	ug/L	ND	50	50	37.6	36.8	75	74	40-130	2	30	
1,3,5-Trinitrobenzene	ug/L	ND	50	50	50.1	42.6	100	85	50-130	16	30	
1,3-Dichlorobenzene	ug/L	ND	50	50	15.1	17.0	30	34	20-130	12	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2848488 2848489

Parameter	Units	2630497002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,3-Dinitrobenzene	ug/L	ND	50	50	34.4	33.6	69	67	30-130	2	30	
1,4-Dichlorobenzene	ug/L	ND	50	50	16.1	18.3	32	37	30-130	13	30	
1,4-Dinitrobenzene	ug/L	ND	50	50	34.6	33.7	69	67	50-130	2	30	v1
1,4-Naphthoquinone	ug/L	ND	50	50	19.1	19.9	38	40	30-130	4	30	
1-Methylnaphthalene	ug/L	ND	50	50	19.0	20.6	38	41	30-130	8	30	
1-Naphthalenamine	ug/L	ND	50	50	22.5	22.7	45	45	30-130	1	30	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	50	50	24.1	26.6	48	53	20-130	10	30	
2,3,4,6-Tetrachlorophenol	ug/L	ND	50	50	31.7	31.2	63	62	40-200	2	30	
2,3-Dibromo-1-propanol phosph	ug/L	ND	200	200	181	160	90	80	40-130	12	30	
2,3-Dichloroaniline	ug/L	ND	50	50	25.2	28.2	50	56	40-130	11	30	
2,4,5-Trichlorophenol	ug/L	ND	50	50	24.2	26.8	48	54	40-130	10	30	
2,4,6-Trichlorophenol	ug/L	ND	50	50	23.7	26.4	47	53	40-130	11	30	
2,4-Dichlorophenol	ug/L	ND	50	50	23.7	26.6	47	53	31-130	12	30	
2,4-Dimethylphenol	ug/L	ND	50	50	23.9	26.7	48	53	30-130	11	30	
2,4-Dinitrophenol	ug/L	ND	250	250	159	155	64	62	30-130	3	30	
2,4-Dinitrotoluene	ug/L	ND	50	50	36.6	35.6	73	71	49-130	3	30	
2,6-Dichlorophenol	ug/L	ND	50	50	26.5	28.5	53	57	50-130	7	30	
2,6-Dinitrotoluene	ug/L	ND	50	50	31.9	32.2	64	64	50-130	1	30	
2-Acetylaminofluorene	ug/L	ND	50	50	41.4	38.0	83	76	70-150	9	30	v1
2-Chloronaphthalene	ug/L	ND	50	50	18.6	20.7	37	41	30-130	11	30	
2-Chlorophenol	ug/L	ND	50	50	24.8	28.0	50	56	30-130	12	30	
2-Methyl-5-nitroaniline	ug/L	ND	50	50	40.7	37.9	81	76	50-200	7	30	v1
2-Methylnaphthalene	ug/L	ND	50	50	18.9	20.5	38	41	30-130	8	30	
2-Methylphenol(o-Cresol)	ug/L	ND	50	50	23.6	26.2	47	52	30-130	10	30	
2-Naphthalenamine	ug/L	ND	50	50	25.0	25.1	50	50	30-130	0	30	
2-Nitroaniline	ug/L	ND	100	100	47.3	48.0	47	48	40-130	2	30	
2-Nitrophenol	ug/L	ND	50	50	26.8	29.9	54	60	20-130	11	30	
2-Picoline	ug/L	ND	50	50	20.7	22.4	41	45	20-130	8	30	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	50	20.6	22.7	41	45	20-130	10	30	
3,3'-Dichlorobenzidine	ug/L	ND	100	100	73.3	68.3	73	68	10-150	7	30	
3,3'-Dimethylbenzidine	ug/L	ND	100	100	95.5	104	96	104	10-150	8	30	
3-Methylcholanthrene	ug/L	ND	50	50	40.6	36.0	81	72	40-130	12	30	
3-Nitroaniline	ug/L	ND	100	100	60.3	62.8	60	63	40-130	4	30	
4,4'-Methylene-bis(2-chloroani	ug/L	ND	100	100	77.4	70.1	77	70	50-130	10	30	
4,6-Dinitro-2-methylphenol	ug/L	ND	100	100	72.8	68.4	73	68	40-130	6	30	
4-Aminobiphenyl	ug/L	ND	50	50	24.6	24.0	49	48	20-130	3	30	
4-Bromophenylphenyl ether	ug/L	ND	50	50	26.6	26.1	53	52	30-130	2	30	
4-Chloro-3-methylphenol	ug/L	ND	100	100	48.5	52.4	49	52	30-130	8	30	
4-Chloroaniline	ug/L	ND	100	100	50.2	54.7	50	55	20-130	9	30	
4-Chlorophenylphenyl ether	ug/L	ND	50	50	21.5	22.9	43	46	20-130	6	30	
4-Nitroaniline	ug/L	ND	100	100	80.2	77.1	80	77	40-130	4	30	
4-Nitrophenol	ug/L	ND	250	250	123	117	49	47	10-130	5	30	
4-Nitroquinoline-n-oxide	ug/L	ND	100	100	71.9	64.9	72	65	10-130	10	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2848488 2848489

Parameter	Units	2630497002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
5-Nitro-o-toluidine	ug/L	ND	50	50	40.7	37.9	81	76	50-150	7	30	v1
7,12-Dimethylbenz(a)anthracene	ug/L	ND	50	50	34.2	30.6	68	61	50-130	11	30	
a,a-Dimethylphenylethylamine	ug/L	ND	50	50	ND	ND	0	0	10-200		30	M1
Acenaphthene	ug/L	ND	50	50	21.1	23.4	42	47	30-130	10	30	
Acenaphthylene	ug/L	ND	50	50	22.4	24.3	45	49	30-130	8	30	
Acetophenone	ug/L	ND	50	50	23.8	25.8	48	52	20-130	8	30	
Aniline	ug/L	ND	50	50	22.9	25.5	46	51	20-130	11	30	
Anthracene	ug/L	ND	50	50	33.3	31.4	67	63	50-130	6	30	
Aramite	ug/L	ND	100	100	39.4	33.8	39	34	30-130	15	30	
Atrazine	ug/L	ND	50	50	30.4	27.9	61	56	30-150	9	30	
Benzal chloride	ug/L	ND	50	50	ND	ND	5	5	20-150		30	M0
Benzaldehyde	ug/L	ND	50	50	34.9	38.9	70	78	10-130	11	30	
Benzidine	ug/L	ND	100	100	24.2J	26.8J	24	27	10-130		30	v3
Benzo(a)anthracene	ug/L	ND	50	50	38.3	35.5	77	71	50-130	8	30	
Benzo(a)pyrene	ug/L	ND	50	50	38.5	35.5	77	71	50-130	8	30	
Benzo(b)fluoranthene	ug/L	ND	50	50	39.9	36.2	80	72	50-130	10	30	
Benzo(g,h,i)perylene	ug/L	ND	50	50	41.3	38.5	83	77	50-130	7	30	
Benzo(k)fluoranthene	ug/L	ND	50	50	38.6	36.0	77	72	50-130	7	30	
Benzoic Acid	ug/L	ND	250	250	90.5	107	36	43	10-130	17	30	
Benzophenone	ug/L	ND	50	50	39.3	37.8	79	76	20-130	4	30	
Benzyl alcohol	ug/L	ND	100	100	50.2	56.1	50	56	20-130	11	30	
Biphenyl (Diphenyl)	ug/L	ND	50	50	19.2	21.5	38	43	20-130	11	30	
bis(2-Chloroethoxy)methane	ug/L	ND	50	50	23.3	25.8	47	52	30-130	10	30	
bis(2-Chloroethyl) ether	ug/L	ND	50	50	24.1	28.6	48	57	30-130	17	30	
bis(2-Ethylhexyl)phthalate	ug/L	ND	50	50	40.9	38.3	82	77	50-130	7	30	
Butylbenzylphthalate	ug/L	ND	50	50	42.6	39.1	85	78	50-150	8	30	
Caprolactam	ug/L	ND	50	50	28.2	28.5	56	57	10-130	1	30	v1
Carbazole	ug/L	ND	50	50	38.1	35.1	76	70	40-130	8	30	
Chlorobenzilate	ug/L	ND	50	50	37.5	33.6	75	67	50-130	11	30	
Chrysene	ug/L	ND	50	50	37.8	34.9	76	70	50-130	8	30	
Di-n-butylphthalate	ug/L	ND	50	50	40.1	36.4	80	73	50-130	10	30	
Di-n-octylphthalate	ug/L	ND	50	50	43.2	39.9	86	80	50-130	8	30	
Diallate	ug/L	ND	50	50	28.7	27.5	57	55	50-130	4	30	
Dibenz(a,h)anthracene	ug/L	ND	50	50	41.2	37.8	82	76	40-130	8	30	
Dibenzo(a,e)pyrene	ug/L	ND	50	50	36.6J	32.9J	73	66	40-130		30	
Dibenzofuran	ug/L	ND	50	50	22.5	24.3	45	49	40-130	8	30	
Diethylphthalate	ug/L	ND	50	50	34.9	33.4	70	67	40-130	4	30	
Dimethoate	ug/L	ND	50	50	43.7	39.2	87	78	50-150	11	30	v1
Dimethylphthalate	ug/L	ND	50	50	29.8	29.9	60	60	40-130	0	30	
Dinoseb	ug/L	ND	50	50	42.6	37.8	85	76	20-150	12	30	v1
Diphenyl ether (Phenyl ether)	ug/L	ND	50	50	18.7	20.6	37	41	20-130	10	30	
Diphenylamine	ug/L	ND	50	50	31.3	30.2	63	60	30-130	4	30	
Disulfoton	ug/L	ND	50	50	30.0	27.6	60	55	40-150	9	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2848488 2848489

Parameter	Units	2630497002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethyl methanesulfonate	ug/L	ND	50	50	25.2	27.8	50	56	40-130	10	30	
Famphur	ug/L	ND	100	100	50.4	47.8	50	48	30-150	5	30	
Fluoranthene	ug/L	ND	50	50	38.0	35.5	76	71	30-130	7	30	
Fluorene	ug/L	ND	50	50	24.3	25.7	49	51	20-130	6	30	
Hexachloro-1,3-butadiene	ug/L	ND	50	50	13.7	15.2	27	30	10-130	10	30	
Hexachlorobenzene	ug/L	ND	50	50	28.9	28.1	58	56	30-130	3	30	
Hexachlorocyclopentadiene	ug/L	ND	50	50	12.2	14.3	24	29	10-150	16	30	
Hexachloroethane	ug/L	ND	50	50	13.5	15.7	27	31	10-130	15	30	
Hexachlorophene	ug/L	ND	500	500	267	244	53	49	10-130	9	30	v3
Hexachloropropene	ug/L	ND	50	50	ND	ND	9	10	10-150		30	M1
Indeno(1,2,3-cd)pyrene	ug/L	ND	50	50	40.7	38.2	81	76	40-130	6	30	
Isodrin	ug/L	ND	50	50	30.5	27.8	61	56	40-130	9	30	
Isophorone	ug/L	ND	50	50	23.7	26.3	47	53	30-130	11	30	
Isosafrole	ug/L	ND	50	50	17.9	19.4	36	39	40-130	8	30	M1
Kepone	ug/L	ND	100	100	31.3	29.4	31	29	10-130	6	30	v3
Methapyrilene	ug/L	ND	50	50	ND	ND	28	19	10-150		30	v1
Methyl methanesulfonate	ug/L	ND	50	50	21.6	23.7	43	47	20-130	9	30	
Methyl parathion	ug/L	ND	50	50	48.3	43.0	97	86	50-130	12	30	v1
n-Decane	ug/L	ND	50	50	15.8	17.9	32	36	10-130	12	30	
N-Nitroso-di-n-butylamine	ug/L	ND	50	50	23.1	23.9	46	48	30-130	3	30	
N-Nitroso-di-n-propylamine	ug/L	ND	50	50	23.7	26.2	47	52	30-130	10	30	
N-Nitrosodiethylamine	ug/L	ND	50	50	25.6	28.1	51	56	40-130	9	30	
N-Nitrosodimethylamine	ug/L	ND	50	50	22.6	25.5	45	51	10-130	12	30	
N-Nitrosodiphenylamine	ug/L	ND	50	50	31.3	30.2	63	60	30-130	4	30	
N-Nitrosomethylethylamine	ug/L	ND	50	50	24.1	26.3	48	53	30-130	9	30	
N-Nitrosomorpholine	ug/L	ND	50	50	26.2	28.8	52	58	30-130	9	30	
N-Nitrosopiperidine	ug/L	ND	50	50	27.0	29.3	54	59	30-130	8	30	
N-Nitrosopyrrolidine	ug/L	ND	50	50	27.1	28.8	54	58	30-130	6	30	
n-Octadecane	ug/L	ND	50	50	27.5	28.2	55	56	40-130	3	30	
Naphthalene	ug/L	ND	50	50	19.1	21.1	38	42	20-130	10	30	
Nitrobenzene	ug/L	ND	50	50	22.0	24.2	44	48	20-130	9	30	
O,O,O-Triethylphosphorothioate	ug/L	ND	50	50	21.8	24.2	44	48	40-130	11	30	
O-Toluidine	ug/L	ND	50	50	26.0	28.6	52	57	20-130	10	30	
P-Dimethylaminoazobenzene	ug/L	ND	50	50	15.6	15.0	31	30	10-130	4	30	
p-Phenylenediamine	ug/L	ND	50	50	ND	ND	0	0	70-140		30	M0
Parathion (Ethyl parathion)	ug/L	ND	50	50	48.2	43.8	96	88	50-150	10	30	v1
Pentachlorobenzene	ug/L	ND	50	50	14.4	15.3	29	31	30-150	6	30	M1
Pentachloroethane	ug/L	ND	50	50	10.9	11.7	22	23	20-130	7	30	
Pentachloronitrobenzene	ug/L	ND	50	50	38.1	35.3	76	71	60-130	8	30	
Pentachlorophenol	ug/L	ND	100	100	74.8	69.6	75	70	10-140	7	30	
Phenacetin	ug/L	ND	50	50	44.5	40.2	89	80	60-130	10	30	v1
Phenanthrene	ug/L	ND	50	50	33.1	31.5	66	63	50-130	5	30	
Phenol	ug/L	ND	50	50	20.0	23.5	40	47	10-130	16	30	
Phorate	ug/L	ND	50	50	31.6	29.6	63	59	50-130	7	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2848488 2848489

Parameter	Units	2630497002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Pronamide	ug/L	ND	50	50	40.1	36.2	80	72	70-130	10	30	
Pyrene	ug/L	ND	50	50	37.0	34.4	74	69	50-130	7	30	
Pyridine	ug/L	ND	50	50	18.7	21.0	37	42	10-130	12	30	
Safrole	ug/L	ND	50	50	19.1	20.7	38	41	30-130	8	30	
Sulfotepp (Thiodiphosphoric Ac	ug/L	ND	50	50	32.4	29.9	65	60	30-130	8	30	
Terpineol	ug/L	ND	50	50	25.2	27.4	50	55	30-150	8	30	
Thionazin	ug/L	ND	50	50	35.3	34.3	71	69	60-130	3	30	
2,4,6-Tribromophenol (S)	%						69	66	10-137			
2-Fluorobiphenyl (S)	%						40	44	13-130			
2-Fluorophenol (S)	%						45	52	10-130			
Nitrobenzene-d5 (S)	%						47	52	13-130			
Phenol-d6 (S)	%						38	45	10-130			
Terphenyl-d14 (S)	%						71	69	25-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

QC Batch: 180742
QC Batch Method: EPA 9034
Analysis Method: EPA 9034
Analysis Description: 9034 Sulfide Waste Water
Laboratory: Pace Analytical Services - New Orleans
Associated Lab Samples: 2630497001, 2630497002

METHOD BLANK: 826991 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	ND	1.0	04/01/20 09:08	

LABORATORY CONTROL SAMPLE: 826992

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	20	17.6	88	80-120	

MATRIX SPIKE SAMPLE: 827018

Parameter	Units	2630497002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	20	17.6	84	75-125	

SAMPLE DUPLICATE: 827017

Parameter	Units	2630497002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 2630497

QC Batch: 534452
QC Batch Method: EPA 9012B
Analysis Method: EPA 9012B
Analysis Description: EPA 9012B Cyanide
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630497001, 2630497002

METHOD BLANK: 2852237 Matrix: Water
Associated Lab Samples: 2630497001, 2630497002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0080	04/05/20 21:07	

LABORATORY CONTROL SAMPLE: 2852238

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	0.1	0.089	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2852239 2852240

Parameter	Units	2630443017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	ND	0.1	0.1	0.089	0.041	85	37	75-125	74	20	M1,R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2852241 2852242

Parameter	Units	92471611001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	ND	0.1	0.1	0.049	0.055	46	52	75-125	12	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Colonels Island/App. IX
Pace Project No.: 2630497

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

SAMPLE QUALIFIERS

Sample: 2630497001

[1] Chlorinated Acid Herbicides (GC) by Method 8151 - Dilution due to sample volume.

Sample: 2630497002

[1] Chlorinated Acid Herbicides (GC) by Method 8151 - Dilution due to sample volume.

ANALYTE QUALIFIERS

IH	This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.
v1	The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias.
v2	The continuing calibration verification was below the method acceptance limit. The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard.
v3	The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have low bias.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Colonels Island/App. IX
Pace Project No.: 2630497

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630497001	**MW-68-032520**	8151A	1453446	EPA 8151	1453446
2630497002	**MW-67-032520**	8151A	1453446	EPA 8151	1453446
2630497001	**MW-68-032520**	EPA 8011	533687	EPA 8011	533825
2630497002	**MW-67-032520**	EPA 8011	533687	EPA 8011	533825
2630497001	**MW-68-032520**	EPA 3510C	533669	EPA 8081B	533935
2630497002	**MW-67-032520**	EPA 3510C	533669	EPA 8081B	533935
2630497001	**MW-68-032520**	EPA 3510C	533582	EPA 8082A	533660
2630497002	**MW-67-032520**	EPA 3510C	533582	EPA 8082A	533660
2630497001	**MW-68-032520**	EPA 3005A	45188	EPA 6020B	45200
2630497002	**MW-67-032520**	EPA 3005A	45188	EPA 6020B	45200
2630497001	**MW-68-032520**	EPA 7470A	45387	EPA 7470A	45411
2630497002	**MW-67-032520**	EPA 7470A	45387	EPA 7470A	45411
2630497001	**MW-68-032520**	EPA 3510C	533664	EPA 8270E	533815
2630497002	**MW-67-032520**	EPA 3510C	533664	EPA 8270E	533815
2630497001	**MW-68-032520**	EPA 8260D	535147		
2630497002	**MW-67-032520**	EPA 8260D	535147		
2630497003	**Trip Blank**	EPA 8260D	535147		
2630497001	**MW-68-032520**	EPA 9034	180742		
2630497002	**MW-67-032520**	EPA 9034	180742		
2630497001	**MW-68-032520**	EPA 9012B	534452	EPA 9012B	534470
2630497002	**MW-67-032520**	EPA 9012B	534452	EPA 9012B	534470

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Pace Analytical® www.pacelabs.com

Page : 1 Of 1

Section A: Required Client Information	Section B: Required Project Information	Section C: Invoice Information
Company: Newfields	Report To: Nick DiLuzio	Attention:
Address: 1349 West Peachtree Street	Copy To:	Company Name:
Atlanta, GA 30309		Address:
Email: ndiluzio@newfields.com	Purchase Order #:	Pace Quote:
Phone: (404)969-0731 Fax	Project Name: Colonels Island	Pace Project Manager: maiya.parks@pacelabs.com,
Requested Due Date: 7-Day TAT	Project #:	Pace Profile #: 187

Regulatory Agency
State / Location
GA

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	START TIME	END DATE	END TIME	SAMPLE TEMP AT COLLECTION °C	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	App. IX VOC 8260	App. IX SVOC 8270	App. IX Cyanide	App. IX EDB/DBCP 8011	App. IX Herbicides 8151	App. IX Pest/PCB 8081/8082	App. IX Sulfide	App. IX Dioxin/Furans 8290	App. IX Metals + Hg	Residual Chlorine (Y/N)
1	MW-68-032520	WT	G				1450	25	16	X		X	X	X					X	X	X	X	X	X	X	X	X	
2	MW-67-032520	WT	G				1715	22	16	X		X	X	X					X	X	X	X	X	X	X	X	X	
3	Trip Blank	WT	-				—	—	3				X						X									
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	[signature]	3/27	0845	K. Wellington/PACE	3/27/20	0845	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick DiLuzio

SIGNATURE of SAMPLER: [signature] DATE Signed: 3/26/2020

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

WO#: 2630497

2630497

Pace Analytical

Sample Condition Upon Receip

WO# : 2630497

PM: MZP **Due Date: 04/14/20**

CLIENT: Newfields

Client Name: Newfields

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used THR230 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 5.4 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: KRW 3/27/20

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes ☑No ☐N/A	2. Date not provided on COC.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☐No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing preservation have been checked.	☐Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: Date taken from sample labels.

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Maiya Parks
PASI-Georgia
110 Technology Parkway
Peachtree Corners Georgia 30092

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10513344
Sample Receipt Date: 03/31/2020
Client Project #: 2630497
Client Sub PO #: N/A
State Cert #: 959

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 3 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Kirsten Hogberg, your Pace Project Manager.

This report has been reviewed by:

April 07, 2020

Kirsten Hogberg, Project Manager
(612) 607-6407
(612) 607-6444 (fax)
kirsten.hogberg@pacelabs.com

Report Prepared Date:
April 7, 2020

Report of Laboratory Analysis

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on two samples submitted by a representative of Pace Analytical Services, LLC. The samples were analyzed for the presence or absence of Appendix IX List polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The estimated detection limits (EDLs) were based on signal-to-noise measurements.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 81-96%. All of the labeled internal standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained. Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show that the target PCDDs and PCDFs were not detected.

A laboratory spike sample was also prepared with the sample batch using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 96-122%. These results were within the target range for the method. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Minnesota - Pet	1240
Alabama	40770	Mississippi	MN00064
Alaska - DW	MN00064	Missouri - DW	10100
Alaska - UST	17-009	Montana	CERT0092
Arizona	AZ0014	Nebraska	NE-OS-18-06
Arkansas - DW	MN00064	Nevada	MN00064
Arkansas - WW	88-0680	New Hampshire	2081
CNMI Saipan	MP0003	New Jersey (NE	MN002
California	2929	New York	11647
Colorado	MN00064	North Carolina -	27700
Connecticut	PH-0256	North Carolina -	530
EPA Region 8+	via MN 027-053	North Dakota	R-036
Florida (NELAP	E87605	Ohio - DW	41244
Georgia	959	Ohio - VAP	CL101
Guam	20-00.R	Oklahoma	9507
Hawaii	MN00064	Oregon - Primar	MN300001
Idaho	MN00064	Oregon - Secon	MN200001
Illinois	200011	Pennsylvania	68-00563
Indiana	C-MN-01	Puerto Rico	MN00064
Iowa	368	South Carolina	74003
Kansas	E-10167	Tennessee	TN02818
Kentucky - DW	90062	Texas	T104704192
Kentucky - WW	90062	Utah (NELAP)	MN00064
Louisiana - DE	84596	Vermont	VT-027053137
Louisiana - DW	MN00064	Virginia	460163
Maine	MN00064	Washington	C486
Maryland	322	West Virginia -	382
Massachusetts	M-MN064	West Virginia -	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming - UST	2926.01
Minnesota - De	via MN 027-053		

REPORT OF LABORATORY ANALYSIS

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Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interferencepresent

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDEInterference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = SeeDiscussion

REPORTOFLABORATORYANALYSIS

Appendix A

Sample Management

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Sample ID Cross Reference

Client Sample ID	Pace Sample ID	Date Received	Sample Type
MW-68-032520	2630497001	03/31/2020	Water
MW-67-032520	2630497002	03/31/2020	Water

REPORT OF LABORATORY ANALYSIS

Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 3/27/2020 Results Requested By: 4/14/2020

Workorder: 2630497 **Workorder Name:** Colonels Island/App. IX

Report To	Subcontract To
Maiya Parks Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)734-4200	Pace Analytical Minnesota 1700 Elm Street Suite 200 Minneapolis, MN 55414 Phone (612)607-1700

WO#: 10513344
10513344

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	8290 Dioxins/Furans	LAB USE ONLY
1	MW-68-032520	PS	3/26/2020 14:50	2630497001	Water	1	X	01
2	MW-67-032520	PS	3/26/2020 17:15	2630497002	Water	1	X	02
3								
4								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible] Pace	3/30/2017:00	[illegible]	3/31/2020 7:40
2				
3				

Comments: App. IX

Cooler Temperature on Receipt 3.0 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 19Feb2020 Page 1 of 1
	Document No.: **F-MN-L-213-rev.31**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: Pace Atlanta

Project #: **WO#: 10513344**

PM: KNH **Due Date: 04/14/20**

CLIENT: PASI-GA

Courier: ☒Fed Ex ☐UPS ☐USPS ☐Client ☐Pace ☐SpeeDee ☐Commercial **See Exceptions** ☐

Tracking Number: 7475 9400 4743

Custody Seal on Cooler/Box Present? ☒Yes ☐No **Seals Intact?** ☒Yes ☐No **Biological Tissue Frozen?** ☐Yes ☐No ☒N/A

Packing Material: ☒Bubble Wrap ☒Bubble Bags ☐None ☐Other:_____ **Temp Blank?** ☐Yes ☒No

Thermometer: ☐T1(0461) ☐T2(1336) ☒T3(0459) ☐T4(0254) ☐T5(0489) **Type of Ice:** ☒Wet ☐Blue ☐None ☐Dry ☐Melted

Did Samples Originate in West Virginia? ☐Yes ☒No **Were All Container Temps Taken?** ☐Yes ☐No ☒N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:**_____ °C **Average Corrected Temp (no temp blank only):** ☒See Exceptions ☒1 Container

Correction Factor: NVE **Cooler Temp Corrected w/temp blank:**_____ °C 3.0 °C

USDA Regulated Soil: (☒ N/A, water sample/Other:_____) **Date/Initials of Person Examining Contents:** GNZ 3/31/2020

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐Yes ☐No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐Yes ☐No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒Yes	☐No		1.
Chain of Custody Relinquished?	☒Yes	☐No		2.
Sampler Name and/or Signature on COC?	☐Yes	☐No	☒N/A	3.
Samples Arrived within Hold Time?	☒Yes	☐No		4.
Short Hold Time Analysis (<72 hr)?	☐Yes	☒No		5. ☐Fecal Coliform ☐HPC ☐Total Coliform/E coli ☐BOD/cBOD ☐Hex Chrome ☐Turbidity ☐Nitrate ☐Nitrite ☐Orthophos ☐Other_____
Rush Turn Around Time Requested?	☐Yes	☒No		6.
Sufficient Volume?	☒Yes	☐No		7.
Correct Containers Used? -Pace Containers Used?	☒Yes ☒Yes	☐No ☐No		8.
Containers Intact?	☒Yes	☐No		9.
Field Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☒N/A	10. Is sediment visible in the dissolved container? ☐Yes ☐No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☒Water ☐Soil ☐Oil ☐Other_____	☒Yes	☐No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☐Yes	☐No	☒N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐Yes	☐No	☒N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐Yes	☐No	☒N/A	Positive for Res. Chlorine? ☐Yes ☐No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐Yes	☐No	☒N/A	13. **See Exception** ☐
Headspace in VOA Vials (greater than 6mm)?	☐Yes	☐No	☒N/A	
Trip Blank Present?	☐Yes	☐No	☒N/A	14.
Trip Blank Custody Seals Present?	☐Yes	☐No	☒N/A	Pace Trip Blank Lot # (if purchased):_____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☐No

Person Contacted:_____ Date/Time:_____

Comments/Resolution:_____

Project Manager Review: Kristen Hogberg **Date:** 4/1/2020

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: CEG (2)

SCUR Exceptions:

Workorder #:

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank

Read Temp	Corrected Temp	Average Temp
2.9	true	3.0
3.1		

Tracking Number/Temperature	

Other Issues

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Appendix B

Sample Analysis Summary

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - PASI-Georgia

Client's Sample ID	MW-68-032520		
Lab Sample ID	2630497001		
Filename	U200405B_15		
Injected By	BAL		
Total Amount Extracted	500 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	03/26/2020 14:50
ICAL ID	U200311	Received	03/31/2020 08:40
CCal Filename(s)	U200405B_02 & U200405B_20	Extracted	04/02/2020 12:15
Method Blank ID	BLANK-78269	Analyzed	04/06/2020 01:24

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	2.0	2,3,7,8-TCDF-13C	2.00	92
Total TCDF	ND	-----	2.0	2,3,7,8-TCDD-13C	2.00	93
				1,2,3,7,8-PeCDF-13C	2.00	90
2,3,7,8-TCDD	ND	-----	1.2	2,3,4,7,8-PeCDF-13C	2.00	89
Total TCDD	ND	-----	1.2	1,2,3,7,8-PeCDD-13C	2.00	94
				1,2,3,4,7,8-HxCDF-13C	2.00	86
1,2,3,7,8-PeCDF	ND	-----	2.8	1,2,3,6,7,8-HxCDF-13C	2.00	94
2,3,4,7,8-PeCDF	ND	-----	3.0	2,3,4,6,7,8-HxCDF-13C	2.00	92
Total PeCDF	ND	-----	2.8	1,2,3,7,8,9-HxCDF-13C	2.00	91
				1,2,3,4,7,8-HxCDD-13C	2.00	87
1,2,3,7,8-PeCDD	ND	-----	4.1	1,2,3,6,7,8-HxCDD-13C	2.00	81
Total PeCDD	ND	-----	4.1			
				1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	3.3	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	1.1			
2,3,4,6,7,8-HxCDF	ND	-----	1.1	2,3,7,8-TCDD-37Cl4	0.20	97
1,2,3,7,8,9-HxCDF	ND	-----	1.7			
Total HxCDF	ND	-----	1.1			
1,2,3,4,7,8-HxCDD	ND	-----	3.1	Total 2,3,7,8-TCDD		
1,2,3,6,7,8-HxCDD	ND	-----	2.3	Equivalence: 0.053 pg/L		
1,2,3,7,8,9-HxCDD	ND	-----	2.1	(Lower-bound - Using 2005 WHO Factors)		
Total HxCDD	ND	-----	2.1			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - PASI-Georgia

Client's Sample ID	MW-67-032520		
Lab Sample ID	2630497002		
Filename	U200405B_16		
Injected By	BAL		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	03/26/2020 17:15
ICAL ID	U200311	Received	03/31/2020 08:40
CCal Filename(s)	U200405B_02 & U200405B_20	Extracted	04/02/2020 12:15
Method Blank ID	BLANK-78269	Analyzed	04/06/2020 02:04

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.57		2,3,7,8-TCDF-13C	2.00	95
Total TCDF	ND	-----	0.57		2,3,7,8-TCDD-13C	2.00	94
					1,2,3,7,8-PeCDF-13C	2.00	92
2,3,7,8-TCDD	ND	-----	1.5		2,3,4,7,8-PeCDF-13C	2.00	88
Total TCDD	16	-----	1.5		1,2,3,7,8-PeCDD-13C	2.00	95
					1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	ND	-----	1.1		1,2,3,6,7,8-HxCDF-13C	2.00	94
2,3,4,7,8-PeCDF	ND	-----	1.2		2,3,4,6,7,8-HxCDF-13C	2.00	96
Total PeCDF	ND	-----	1.1		1,2,3,7,8,9-HxCDF-13C	2.00	91
					1,2,3,4,7,8-HxCDD-13C	2.00	85
1,2,3,7,8-PeCDD	ND	-----	1.6		1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD	ND	-----	1.6				
					1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	1.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	0.87				
2,3,4,6,7,8-HxCDF	ND	-----	0.61		2,3,7,8-TCDD-37Cl4	0.20	104
1,2,3,7,8,9-HxCDF	ND	-----	0.74				
Total HxCDF	ND	-----	0.61				
1,2,3,4,7,8-HxCDD	ND	-----	0.95		Total 2,3,7,8-TCDD		
1,2,3,6,7,8-HxCDD	ND	-----	1.2		Equivalence: 0.055 pg/L		
1,2,3,7,8,9-HxCDD	ND	-----	1.0		(Lower-bound - Using 2005 WHO Factors)		
Total HxCDD	16	-----	0.95	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

Appendix C

QC and Calibration Results Summary

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample Name	DFBLKFW		
Lab Sample ID	BLANK-78269	Matrix	Water
Filename	U200405B_10	Dilution	NA
Total Amount Extracted	1040 mL	Extracted	04/02/2020 12:15
ICAL ID	U200311	Analyzed	04/05/2020 22:06
CCal Filename(s)	U200405B_02 & U200405B_20	Injected By	BAL

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.76	2,3,7,8-TCDF-13C	2.00	82
Total TCDF	ND	-----	0.76	2,3,7,8-TCDD-13C	2.00	74
				1,2,3,7,8-PeCDF-13C	2.00	79
2,3,7,8-TCDD	ND	-----	1.1	2,3,4,7,8-PeCDF-13C	2.00	78
Total TCDD	ND	-----	1.1	1,2,3,7,8-PeCDD-13C	2.00	86
				1,2,3,4,7,8-HxCDF-13C	2.00	83
1,2,3,7,8-PeCDF	ND	-----	1.4	1,2,3,6,7,8-HxCDF-13C	2.00	91
2,3,4,7,8-PeCDF	ND	-----	1.5	2,3,4,6,7,8-HxCDF-13C	2.00	85
Total PeCDF	ND	-----	1.4	1,2,3,7,8,9-HxCDF-13C	2.00	83
				1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	ND	-----	1.6	1,2,3,6,7,8-HxCDD-13C	2.00	77
Total PeCDD	ND	-----	1.6			
				1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	0.99	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	0.98			
2,3,4,6,7,8-HxCDF	ND	-----	0.88	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,7,8,9-HxCDF	ND	-----	0.79			
Total HxCDF	ND	-----	0.79			
1,2,3,4,7,8-HxCDD	ND	-----	0.85	Total 2,3,7,8-TCDD		
1,2,3,6,7,8-HxCDD	ND	-----	0.75	Equivalence: 0.027 pg/L		
1,2,3,7,8,9-HxCDD	ND	-----	0.85	(Lower-bound - Using 2005 WHO Factors)		
Total HxCDD	ND	-----	0.75			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

J = Estimated value
I = Interference present
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-78270		
Filename	F200405B_16	Matrix	Water
Total Amount Extracted	1050 mL	Dilution	NA
ICAL ID	F200325	Extracted	04/02/2020 12:15
CCal Filename(s)	F200405B_01 & F200405B_17	Analyzed	04/06/2020 03:40
Method Blank ID	BLANK-78269	Injected By	CVS

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.20	102	2,3,7,8-TCDF-13C	2.0	84
Total TCDF				2,3,7,8-TCDD-13C	2.0	83
				1,2,3,7,8-PeCDF-13C	2.0	74
2,3,7,8-TCDD	0.20	0.21	106	2,3,4,7,8-PeCDF-13C	2.0	71
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	79
				1,2,3,4,7,8-HxCDF-13C	2.0	77
1,2,3,7,8-PeCDF	1.0	1.0	101	1,2,3,6,7,8-HxCDF-13C	2.0	89
2,3,4,7,8-PeCDF	1.0	1.0	102	2,3,4,6,7,8-HxCDF-13C	2.0	84
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	74
				1,2,3,4,7,8-HxCDD-13C	2.0	80
1,2,3,7,8-PeCDD	1.0	0.96	96	1,2,3,6,7,8-HxCDD-13C	2.0	86
Total PeCDD						
				1,2,3,4-TCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDF	1.0	1.1	115	1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,6,7,8-HxCDF	1.0	1.1	109			
2,3,4,6,7,8-HxCDF	1.0	1.1	108	2,3,7,8-TCDD-37Cl4	0.20	98
1,2,3,7,8,9-HxCDF	1.0	1.0	104			
Total HxCDF						
1,2,3,4,7,8-HxCDD	1.0	1.2	118			
1,2,3,6,7,8-HxCDD	1.0	1.1	106			
1,2,3,7,8,9-HxCDD	1.0	1.2	122			
Total HxCDD						

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Method 1613B
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	**F200325**	Data Files:		Time	Injected
Calibration Date	03/25/2020	CS-1	F200325A_04	13:45	SMT
Instrument	10MSHR05 (F)	CS-2	F200325A_02	11:55	SMT
Column Phase	DB-5MS 0.25mm	CS-3	F200325A_01	10:35	SMT
Column ID No.	UST780613H	CS-4	F200325A_06	15:34	SMT
		CS-5	F200325A_05	14:50	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	0.9195	0.8679	0.8837	0.9501	0.9331	0.9108	3.76
2,3,7,8-TCDD	1.0203	1.0311	1.1199	1.0982	1.1159	1.0771	4.44
1,2,3,7,8-PeCDF	0.8520	0.9070	0.9046	0.9212	0.9580	0.9086	4.20
2,3,4,7,8-PeCDF	0.9011	0.9799	1.0035	1.0038	0.9999	0.9777	4.49
1,2,3,7,8-PeCDD	0.9425	0.9664	1.0072	1.0090	1.0292	0.9909	3.57
1,2,3,4,7,8-HxCDF	1.0384	1.0769	1.0804	1.0687	1.0908	1.0711	1.86
1,2,3,6,7,8-HxCDF	0.9171	1.0539	1.0332	1.0438	1.0639	1.0224	5.86
2,3,4,6,7,8-HxCDF	1.0145	1.0882	1.0644	1.1652	1.1209	1.0907	5.22
1,2,3,7,8,9-HxCDF	1.0505	1.0151	0.9983	1.0625	1.0533	1.0359	2.67
1,2,3,4,7,8-HxCDD	0.8588	0.9228	1.0448	1.0525	1.0531	0.9864	9.14
1,2,3,6,7,8-HxCDD	1.0481	1.0681	0.9989	1.0087	0.9974	1.0242	3.12
1,2,3,7,8,9-HxCDD	0.9041	1.1068	1.1728	1.1046	1.0618	1.0700	9.43
Total TCDF	0.9195	0.8679	0.8837	0.9501	0.9331	0.9108	3.76
Total TCDD	1.0203	1.0311	1.1199	1.0982	1.1159	1.0771	4.44
Total PeCDF	0.8766	0.9435	0.9541	0.9625	0.9789	0.9431	4.18
Total PeCDD	0.9425	0.9664	1.0072	1.0090	1.0292	0.9909	3.57
Total HxCDF	1.0051	1.0585	1.0441	1.0851	1.0822	1.0550	3.09
Total HxCDD	0.9370	1.0326	1.0721	1.0553	1.0374	1.0269	5.12
2,3,7,8-TCDF-13C	1.4696	1.5012	1.5091	1.5093	1.5344	1.5047	1.55
2,3,7,8-TCDD-13C	0.9779	1.0164	1.0430	1.0283	1.0500	1.0231	2.78
2,3,7,8-TCDD-37Cl4	1.0137	0.9834	0.9803	1.0839	1.0861	1.0295	5.09
1,2,3,7,8-PeCDF-13C	1.0767	1.1541	1.1933	1.1607	1.2397	1.1649	5.14
2,3,4,7,8-PeCDF-13C	1.1175	1.2387	1.2106	1.2071	1.3358	1.2219	6.41
1,2,3,7,8-PeCDD-13C	0.6736	0.7711	0.7711	0.7287	0.7974	0.7484	6.48
1,2,3,4,7,8-HxCDF-13C	0.8934	0.8493	0.8597	0.9488	0.9821	0.9066	6.32
1,2,3,6,7,8-HxCDF-13C	1.4304	1.3082	1.2852	1.3864	1.4077	1.3636	4.66
2,3,4,6,7,8-HxCDF-13C	1.0720	1.0302	1.0810	1.0465	1.1051	1.0670	2.75
1,2,3,7,8,9-HxCDF-13C	0.8021	0.8241	0.8222	0.8309	0.8974	0.8353	4.34
1,2,3,4,7,8-HxCDD-13C	0.6695	0.6704	0.6215	0.6593	0.7217	0.6685	5.35
1,2,3,6,7,8-HxCDD-13C	1.0159	0.9703	0.9964	1.0677	1.1012	1.0303	5.18

REPORT OF LABORATORY ANALYSIS

Method 1613B
Initial Calibration (ICAL) - Isotope Ratio Summary

ICAL ID	**F200325**	Data Files:		Time	Injected
Calibration Date	03/25/2020	CS-1	F200325A_04	13:45	SMT
Instrument	10MSHR05 (F)	CS-2	F200325A_02	11:55	SMT
Column Phase	DB-5MS 0.25mm	CS-3	F200325A_01	10:35	SMT
Column ID No.	UST780613H	CS-4	F200325A_06	15:34	SMT
		CS-5	F200325A_05	14:50	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.77	0.78	0.72	0.77	0.78	0.65 - 0.89
2,3,7,8-TCDD	0.76	0.79	0.78	0.82	0.78	0.65 - 0.89
1,2,3,7,8-PeCDF	1.66	1.55	1.49	1.54	1.53	1.32 - 1.78
2,3,4,7,8-PeCDF	1.60	1.51	1.54	1.50	1.57	1.32 - 1.78
1,2,3,7,8-PeCDD	0.58	0.61	0.61	0.61	0.61	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.33	1.23	1.23	1.24	1.22	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.11	1.21	1.22	1.27	1.23	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.16	1.26	1.20	1.19	1.22	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.27	1.26	1.27	1.18	1.22	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.24	1.26	1.23	1.22	1.23	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.23	1.27	1.29	1.24	1.23	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.30	1.22	1.27	1.22	1.22	1.05 - 1.43
1,2,3,4-TCDD-13C	0.82	0.80	0.79	0.80	0.82	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.28	1.30	1.21	1.21	1.27	1.05 - 1.43
2,3,7,8-TCDF-13C	0.79	0.78	0.78	0.78	0.79	0.65 - 0.89
2,3,7,8-TCDD-13C	0.81	0.79	0.80	0.79	0.80	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.57	1.52	1.58	1.58	1.54	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.58	1.56	1.53	1.54	1.57	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.60	1.61	1.52	1.58	1.57	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.53	0.52	0.52	0.51	0.51	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.53	0.53	0.54	0.52	0.52	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.54	0.54	0.55	0.52	0.52	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.52	0.53	0.52	0.52	0.53	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.27	1.27	1.27	1.28	1.27	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.28	1.31	1.26	1.26	1.28	1.05 - 1.43

REPORT OF LABORATORY ANALYSIS

Method 1613B
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	**U200311**	Data Files:		Time	Injected
Calibration Date	03/11/2020	CS-1	U200311B_03	21:37	SMT
Instrument	10MSHR06 (U)	CS-2	U200311B_02	20:55	SMT
Column Phase	DB-5MS 0.25mm	CS-3	U200311B_01	20:14	SMT
Column ID No.	UST576323H	CS-4	U200311B_05	23:00	SMT
		CS-5	U200311B_04	22:18	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	0.8909	0.8220	0.8200	0.8450	0.8141	0.8384	3.77
2,3,7,8-TCDD	1.0971	1.0512	1.1116	0.9958	0.9881	1.0488	5.39
1,2,3,7,8-PeCDF	0.8254	0.8127	0.7958	0.8005	0.8092	0.8087	1.42
2,3,4,7,8-PeCDF	0.8513	0.8505	0.8917	0.8626	0.8513	0.8615	2.04
1,2,3,7,8-PeCDD	0.8691	0.8980	0.8873	0.8954	0.8752	0.8850	1.42
1,2,3,4,7,8-HxCDF	0.9857	0.9963	0.9929	0.9668	0.9992	0.9882	1.31
1,2,3,6,7,8-HxCDF	0.9576	0.9790	0.9026	0.9428	0.9505	0.9465	2.96
2,3,4,6,7,8-HxCDF	1.0087	1.0203	0.9618	1.0263	1.0440	1.0122	3.06
1,2,3,7,8,9-HxCDF	1.0286	0.9543	0.8926	0.9623	0.9277	0.9531	5.27
1,2,3,4,7,8-HxCDD	0.9709	0.9445	0.8958	0.8708	0.9388	0.9242	4.35
1,2,3,6,7,8-HxCDD	0.9353	0.9187	0.9483	0.9427	0.8856	0.9261	2.72
1,2,3,7,8,9-HxCDD	0.9740	0.9694	0.9414	0.8784	0.9015	0.9329	4.50
Total TCDF	0.8909	0.8220	0.8200	0.8450	0.8141	0.8384	3.77
Total TCDD	1.0971	1.0512	1.1116	0.9958	0.9881	1.0488	5.39
Total PeCDF	0.8384	0.8316	0.8437	0.8315	0.8303	0.8351	0.69
Total PeCDD	0.8691	0.8980	0.8873	0.8954	0.8752	0.8850	1.42
Total HxCDF	0.9951	0.9875	0.9375	0.9745	0.9804	0.9750	2.29
Total HxCDD	0.9601	0.9442	0.9285	0.8973	0.9086	0.9278	2.75
2,3,7,8-TCDF-13C	1.3169	1.2903	1.2986	1.3431	1.3862	1.3270	2.93
2,3,7,8-TCDD-13C	1.0344	1.0127	1.0437	1.0616	1.1051	1.0515	3.31
2,3,7,8-TCDD-37Cl4	1.0389	1.0600	0.9976	1.0474	1.0913	1.0470	3.25
1,2,3,7,8-PeCDF-13C	1.0172	0.9603	0.9804	1.0216	1.0950	1.0149	5.08
2,3,4,7,8-PeCDF-13C	1.0237	1.0113	0.9370	1.0823	1.1373	1.0383	7.29
1,2,3,7,8-PeCDD-13C	0.7611	0.7382	0.7554	0.7786	0.8334	0.7733	4.73
1,2,3,4,7,8-HxCDF-13C	0.8540	0.8628	0.8504	0.9236	0.9385	0.8858	4.72
1,2,3,6,7,8-HxCDF-13C	1.0571	1.0217	1.0276	1.0799	1.0632	1.0499	2.34
2,3,4,6,7,8-HxCDF-13C	0.9370	0.9054	0.9163	0.9294	0.9235	0.9223	1.32
1,2,3,7,8,9-HxCDF-13C	0.8160	0.8302	0.8166	0.8622	0.8520	0.8354	2.50
1,2,3,4,7,8-HxCDD-13C	0.8191	0.8063	0.8185	0.8857	0.8630	0.8385	4.06
1,2,3,6,7,8-HxCDD-13C	1.0089	1.0269	0.9661	1.0112	1.0234	1.0073	2.41

REPORT OF LABORATORY ANALYSIS

Method 1613B
Initial Calibration (ICAL) - Isotope Ratio Summary

ICAL ID	**U200311**	Data Files:		Time	Injected
Calibration Date	03/11/2020	CS-1	U200311B_03	21:37	SMT
Instrument	10MSHR06 (U)	CS-2	U200311B_02	20:55	SMT
Column Phase	DB-5MS 0.25mm	CS-3	U200311B_01	20:14	SMT
Column ID No.	UST576323H	CS-4	U200311B_05	23:00	SMT
		CS-5	U200311B_04	22:18	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.83	0.70	0.75	0.75	0.75	0.65 - 0.89
2,3,7,8-TCDD	0.85	0.78	0.78	0.77	0.77	0.65 - 0.89
1,2,3,7,8-PeCDF	1.48	1.44	1.53	1.48	1.47	1.32 - 1.78
2,3,4,7,8-PeCDF	1.47	1.43	1.51	1.49	1.47	1.32 - 1.78
1,2,3,7,8-PeCDD	0.59	0.64	0.61	0.60	0.61	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.20	1.20	1.20	1.20	1.22	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.13	1.23	1.19	1.19	1.22	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.20	1.24	1.21	1.19	1.22	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.17	1.16	1.21	1.24	1.21	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.16	1.27	1.31	1.21	1.22	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.19	1.23	1.14	1.22	1.22	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.17	1.24	1.18	1.22	1.21	1.05 - 1.43
1,2,3,4-TCDD-13C	0.78	0.79	0.79	0.79	0.79	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.25	1.25	1.28	1.23	1.23	1.05 - 1.43
2,3,7,8-TCDF-13C	0.77	0.79	0.76	0.76	0.78	0.65 - 0.89
2,3,7,8-TCDD-13C	0.78	0.78	0.78	0.79	0.77	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.53	1.58	1.54	1.48	1.54	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.53	1.49	1.54	1.51	1.52	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.56	1.55	1.58	1.58	1.61	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.52	0.50	0.51	0.51	0.52	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.50	0.50	0.52	0.50	0.50	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.52	0.51	0.50	0.51	0.52	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.51	0.51	0.51	0.51	0.50	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.24	1.22	1.26	1.24	1.26	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.26	1.26	1.26	1.23	1.25	1.05 - 1.43

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	F200405B_01	Instrument ID	10MSHR05 (F)
Standard	CS3/CPM-11321-194	GC Column ID	UST780613H
Analyzed	04/05/2020 16:09	ICAL ID	F200325

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	10.0	0.74	0.9108	0.9137	0.3
2,3,7,8-TCDD	10	10.2	0.78	1.0771	1.0986	2.0
1,2,3,7,8-PeCDF	50	48.4	1.55	0.9086	0.8799	-3.2
2,3,4,7,8-PeCDF	50	49.7	1.53	0.9777	0.9721	-0.6
1,2,3,7,8-PeCDD	50	48.5	0.61	0.9909	0.9621	-2.9
1,2,3,4,7,8-HxCDF	50	50.3	1.21	1.0711	1.0779	0.6
1,2,3,6,7,8-HxCDF	50	51.3	1.27	1.0224	1.0493	2.6
2,3,4,6,7,8-HxCDF	50	48.2	1.19	1.0907	1.0522	-3.5
1,2,3,7,8,9-HxCDF	50	49.4	1.23	1.0359	1.0233	-1.2
1,2,3,4,7,8-HxCDD	50	51.4	1.26	0.9864	1.0132	2.7
1,2,3,6,7,8-HxCDD	50	45.8	1.25	1.0242	0.9381	-8.4
1,2,3,7,8,9-HxCDD	50	51.7	1.32	1.0700	1.1067	3.4
2,3,7,8-TCDF-13C	100	92.6	0.80	1.5047	1.3929	-7.4
2,3,7,8-TCDD-13C	100	97.5	0.81	1.0231	0.9975	-2.5
2,3,7,8-TCDD-37Cl4	10	8.9	0.00	1.0295	0.9122	-11.4
1,2,3,7,8-PeCDF-13C	100	86.4	1.58	1.1649	1.0066	-13.6
2,3,4,7,8-PeCDF-13C	100	84.4	1.57	1.2219	1.0314	-15.6
1,2,3,7,8-PeCDD-13C	100	89.0	1.63	0.7484	0.6657	-11.0
1,2,3,4,7,8-HxCDF-13C	100	82.8	0.52	0.9066	0.7507	-17.2
1,2,3,6,7,8-HxCDF-13C	100	98.1	0.53	1.3636	1.2884	-5.5
2,3,4,6,7,8-HxCDF-13C	200	199.3	0.53	1.0670	1.0413	-2.4
1,2,3,7,8,9-HxCDF-13C	150	148.9	0.55	0.8353	0.7329	-12.3
1,2,3,4,7,8-HxCDD-13C	100	92.5	1.22	0.6685	0.5782	-13.5
1,2,3,6,7,8-HxCDD-13C	100	97.4	1.25	1.0303	1.0038	-2.6
1,2,3,4-TCDD-13C	100	NA	0.82	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.22	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U200405B_02	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-11321-194	GC Column ID	UST576323H
Analyzed	04/05/2020 16:42	ICAL ID	U200311

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	9.6	0.75	0.8384	0.8016	-4.4
2,3,7,8-TCDD	10	10.1	0.78	1.0488	1.0601	1.1
1,2,3,7,8-PeCDF	50	47.3	1.51	0.8087	0.7653	-5.4
2,3,4,7,8-PeCDF	50	48.2	1.47	0.8615	0.8312	-3.5
1,2,3,7,8-PeCDD	50	48.5	0.62	0.8850	0.8585	-3.0
1,2,3,4,7,8-HxCDF	50	46.9	1.19	0.9882	0.9267	-6.2
1,2,3,6,7,8-HxCDF	50	47.5	1.16	0.9465	0.8983	-5.1
2,3,4,6,7,8-HxCDF	50	46.5	1.23	1.0122	0.9421	-6.9
1,2,3,7,8,9-HxCDF	50	46.9	1.20	0.9531	0.8941	-6.2
1,2,3,4,7,8-HxCDD	50	49.6	1.20	0.9242	0.9171	-0.8
1,2,3,6,7,8-HxCDD	50	48.1	1.25	0.9261	0.8912	-3.8
1,2,3,7,8,9-HxCDD	50	49.4	1.21	0.9329	0.9226	-1.1
2,3,7,8-TCDF-13C	100	99.0	0.76	1.3270	1.3133	-1.0
2,3,7,8-TCDD-13C	100	100.7	0.77	1.0515	1.0594	0.7
2,3,7,8-TCDD-37Cl4	10	9.7	0.00	1.0470	1.0133	-3.2
1,2,3,7,8-PeCDF-13C	100	88.6	1.61	1.0149	0.8994	-11.4
2,3,4,7,8-PeCDF-13C	100	82.8	1.57	1.0383	0.8601	-17.2
1,2,3,7,8-PeCDD-13C	100	89.6	1.58	0.7733	0.6927	-10.4
1,2,3,4,7,8-HxCDF-13C	100	99.9	0.50	0.8858	0.8850	-0.1
1,2,3,6,7,8-HxCDF-13C	100	95.6	0.50	1.0499	1.0934	4.1
2,3,4,6,7,8-HxCDF-13C	200	187.8	0.50	0.9223	0.9371	1.6
1,2,3,7,8,9-HxCDF-13C	150	147.2	0.51	0.8354	0.7702	-7.8
1,2,3,4,7,8-HxCDD-13C	100	94.7	1.25	0.8385	0.7802	-7.0
1,2,3,6,7,8-HxCDD-13C	100	105.6	1.23	1.0073	1.0633	5.6
1,2,3,4-TCDD-13C	100	NA	0.81	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.21	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290
PCDD/PCDF Calibration Verification

Run Name:	F200405B_17	Instrument ID	10MSHR05 (F)
Standard	CS3/CPM-11321-194	GC Column ID	UST780613H
Analyzed	04/06/2020 04:26	ICAL ID	F200325

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	9.7	0.75	0.9108	0.8863	-2.7
2,3,7,8-TCDD	10	10.3	0.78	1.0771	1.1078	2.8
1,2,3,7,8-PeCDF	50	48.5	1.60	0.9086	0.8810	-3.0
2,3,4,7,8-PeCDF	50	48.3	1.53	0.9777	0.9441	-3.4
1,2,3,7,8-PeCDD	50	45.8	0.63	0.9909	0.9074	-8.4
1,2,3,4,7,8-HxCDF	50	49.8	1.20	1.0711	1.0673	-0.3
1,2,3,6,7,8-HxCDF	50	48.9	1.26	1.0224	1.0000	-2.2
2,3,4,6,7,8-HxCDF	50	50.3	1.30	1.0907	1.0968	0.6
1,2,3,7,8,9-HxCDF	50	51.4	1.29	1.0359	1.0654	2.8
1,2,3,4,7,8-HxCDD	50	50.8	1.24	0.9864	1.0023	1.6
1,2,3,6,7,8-HxCDD	50	46.0	1.24	1.0242	0.9414	-8.1
1,2,3,7,8,9-HxCDD	50	52.2	1.20	1.0700	1.1163	4.3
2,3,7,8-TCDF-13C	100	91.2	0.75	1.5047	1.3730	-8.8
2,3,7,8-TCDD-13C	100	96.1	0.79	1.0231	0.9827	-3.9
2,3,7,8-TCDD-37Cl4	10	8.6	0.00	1.0295	0.8851	-14.0
1,2,3,7,8-PeCDF-13C	100	82.0	1.59	1.1649	0.9549	-18.0
2,3,4,7,8-PeCDF-13C	100	78.5	1.54	1.2219	0.9594	-21.5
1,2,3,7,8-PeCDD-13C	100	86.6	1.59	0.7484	0.6483	-13.4
1,2,3,4,7,8-HxCDF-13C	100	79.5	0.52	0.9066	0.7211	-20.5
1,2,3,6,7,8-HxCDF-13C	100	96.8	0.51	1.3636	1.2550	-8.0
2,3,4,6,7,8-HxCDF-13C	200	200.4	0.49	1.0670	0.9929	-6.9
1,2,3,7,8,9-HxCDF-13C	150	148.9	0.56	0.8353	0.6754	-19.2
1,2,3,4,7,8-HxCDD-13C	100	91.4	1.30	0.6685	0.5708	-14.6
1,2,3,6,7,8-HxCDD-13C	100	96.2	1.27	1.0303	0.9912	-3.8
1,2,3,4-TCDD-13C	100	NA	0.79	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.27	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U200405B_20	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-11321-194	GC Column ID	UST576323H
Analyzed	04/06/2020 04:42	ICAL ID	U200311

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	9.7	0.75	0.8384	0.8136	-3.0
2,3,7,8-TCDD	10	10.3	0.81	1.0488	1.0808	3.1
1,2,3,7,8-PeCDF	50	46.1	1.48	0.8087	0.7455	-7.8
2,3,4,7,8-PeCDF	50	49.1	1.47	0.8615	0.8466	-1.7
1,2,3,7,8-PeCDD	50	47.3	0.60	0.8850	0.8366	-5.5
1,2,3,4,7,8-HxCDF	50	47.1	1.19	0.9882	0.9304	-5.8
1,2,3,6,7,8-HxCDF	50	47.4	1.19	0.9465	0.8972	-5.2
2,3,4,6,7,8-HxCDF	50	46.5	1.18	1.0122	0.9412	-7.0
1,2,3,7,8,9-HxCDF	50	46.7	1.19	0.9531	0.8895	-6.7
1,2,3,4,7,8-HxCDD	50	47.2	1.22	0.9242	0.8718	-5.7
1,2,3,6,7,8-HxCDD	50	47.2	1.25	0.9261	0.8735	-5.7
1,2,3,7,8,9-HxCDD	50	46.9	1.23	0.9329	0.8753	-6.2
2,3,7,8-TCDF-13C	100	96.5	0.75	1.3270	1.2804	-3.5
2,3,7,8-TCDD-13C	100	100.1	0.79	1.0515	1.0530	0.1
2,3,7,8-TCDD-37Cl4	10	9.6	0.00	1.0470	1.0015	-4.4
1,2,3,7,8-PeCDF-13C	100	94.7	1.51	1.0149	0.9614	-5.3
2,3,4,7,8-PeCDF-13C	100	87.8	1.57	1.0383	0.9114	-12.2
1,2,3,7,8-PeCDD-13C	100	95.6	1.59	0.7733	0.7392	-4.4
1,2,3,4,7,8-HxCDF-13C	100	101.5	0.51	0.8858	0.8991	1.5
1,2,3,6,7,8-HxCDF-13C	100	95.2	0.52	1.0499	1.0427	-0.7
2,3,4,6,7,8-HxCDF-13C	200	187.6	0.52	0.9223	0.9458	2.6
1,2,3,7,8,9-HxCDF-13C	150	141.2	0.52	0.8354	0.7912	-5.3
1,2,3,4,7,8-HxCDD-13C	100	94.3	1.24	0.8385	0.8350	-0.4
1,2,3,6,7,8-HxCDD-13C	100	102.4	1.21	1.0073	1.0314	2.4
1,2,3,4-TCDD-13C	100	NA	0.80	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.20	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

June 30, 2020

Nick Diluzio
NewFields
1349 West Peachtree Street
Suite 2000
Atlanta, GA 30309

RE: Project: Colonels Island/App. IX
Pace Project No.: 92481385

Dear Nick Diluzio:

Enclosed are the analytical results for sample(s) received by the laboratory on June 11, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet
- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - New Orleans

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Maiya Parks

Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Pace Analytical Services New Orleans

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

Pace Analytical Services Charlotte

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Pace Analytical Services Asheville
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners
110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92481385001	**MW-38A-060920**	Water	06/09/20 14:00	06/11/20 09:30
92481385002	**MW-47A-060920**	Water	06/09/20 15:15	06/11/20 09:30
92481385003	**MW-53-060920**	Water	06/09/20 17:00	06/11/20 09:30
92481385004	**Trip Blank 1**	Water	06/09/20 00:00	06/11/20 09:30
92481385005	**MW-62A-061020**	Water	06/10/20 09:45	06/11/20 09:30
92481385006	**Trip Blank 2**	Water	06/10/20 00:00	06/11/20 09:30

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92481385001	**MW-38A-060920**	EPA 8151	LEL	5	PAN
		EPA 8011	JMS1	3	PASI-C
		EPA 8081B	SEM	21	PASI-C
		EPA 8082A	SEM	8	PASI-C
		EPA 6020B	CW1	16	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 8270E	PKS	148	PASI-C
		EPA 8260D	SAS	64	PASI-C
		EPA 9034	LJL	1	PASI-N
		EPA 9012B	CJL	1	PASI-A
92481385002	**MW-47A-060920**	EPA 8151	LEL	5	PAN
		EPA 8011	JMS1	3	PASI-C
		EPA 8081B	SEM	21	PASI-C
		EPA 8082A	SEM	8	PASI-C
		EPA 6020B	CW1	16	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 8270E	PKS	148	PASI-C
		EPA 8260D	SAS	64	PASI-C
		EPA 9034	LJL	1	PASI-N
		EPA 9012B	CJL	1	PASI-A
92481385003	**MW-53-060920**	EPA 8151	LEL	5	PAN
		EPA 8011	JMS1	3	PASI-C
		EPA 8081B	SEM	21	PASI-C
		EPA 8082A	SEM	8	PASI-C
		EPA 6020B	CW1	16	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 8270E	PKS	148	PASI-C
		EPA 8260D	SAS	64	PASI-C
		EPA 9034	LJL	1	PASI-N
		EPA 9012B	CJL	1	PASI-A
92481385004	**Trip Blank 1**	EPA 8011	JMS1	3	PASI-C
		EPA 8260D	SAS	64	PASI-C
92481385005	**MW-62A-061020**	EPA 8151	LEL	5	PAN
		EPA 8011	JMS1	3	PASI-C
		EPA 8081B	SEM	21	PASI-C
		EPA 8082A	SEM	8	PASI-C
		EPA 6020B	CW1	16	PASI-GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470A	VB	1	PASI-GA
		EPA 8270E	PKS	148	PASI-C
		EPA 8260D	SAS	64	PASI-C
		EPA 9034	LJL	1	PASI-N
		EPA 9012B	CJL	1	PASI-A
92481385006	**Trip Blank 2**	EPA 8011	JMS1	3	PASI-C
		EPA 8260D	SAS	64	PASI-C

PAN = Pace National - Mt. Juliet
PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA
PASI-N = Pace Analytical Services - New Orleans

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92481385001	**MW-38A-060920**					
EPA 6020B	Antimony	0.70J	ug/L	5.0	06/12/20 15:52	
EPA 6020B	Arsenic	1.7J	ug/L	5.0	06/12/20 15:52	
EPA 6020B	Barium	17.0	ug/L	5.0	06/12/20 15:52	
EPA 6020B	Chromium	0.76J	ug/L	5.0	06/12/20 15:52	
EPA 6020B	Selenium	2.7J	ug/L	5.0	06/12/20 15:52	
EPA 6020B	Vanadium	1.8J	ug/L	10.0	06/12/20 15:52	
EPA 6020B	Zinc	17.0	ug/L	10.0	06/12/20 15:52	
EPA 8260D	Benzene	133	ug/L	50.0	06/15/20 20:40	
92481385002	**MW-47A-060920**					
EPA 6020B	Antimony	0.86J	ug/L	5.0	06/12/20 15:57	
EPA 6020B	Arsenic	8.1	ug/L	5.0	06/12/20 15:57	
EPA 6020B	Barium	7.3	ug/L	5.0	06/12/20 15:57	
EPA 6020B	Chromium	1.2J	ug/L	5.0	06/12/20 15:57	
EPA 6020B	Copper	0.33J	ug/L	5.0	06/12/20 15:57	
EPA 6020B	Lead	0.059J	ug/L	1.0	06/12/20 15:57	
EPA 6020B	Nickel	0.36J	ug/L	5.0	06/12/20 15:57	
EPA 6020B	Selenium	3.5J	ug/L	5.0	06/12/20 15:57	
EPA 6020B	Vanadium	6.3J	ug/L	10.0	06/12/20 15:57	
EPA 6020B	Zinc	7.7J	ug/L	10.0	06/12/20 15:57	
EPA 8260D	Benzene	787	ug/L	50.0	06/15/20 20:58	
EPA 8260D	Toluene	22.1J	ug/L	50.0	06/15/20 20:58	
EPA 8260D	Xylene (Total)	192	ug/L	50.0	06/15/20 20:58	
92481385003	**MW-53-060920**					
EPA 6020B	Antimony	0.61J	ug/L	5.0	06/12/20 16:03	
EPA 6020B	Arsenic	0.98J	ug/L	5.0	06/12/20 16:03	
EPA 6020B	Barium	52.1	ug/L	5.0	06/12/20 16:03	
EPA 6020B	Cadmium	0.18J	ug/L	0.50	06/12/20 16:03	
EPA 6020B	Chromium	1.2J	ug/L	5.0	06/12/20 16:03	
EPA 6020B	Copper	4.9J	ug/L	5.0	06/12/20 16:03	
EPA 6020B	Lead	0.049J	ug/L	1.0	06/12/20 16:03	
EPA 6020B	Nickel	22.2	ug/L	5.0	06/12/20 16:03	
EPA 6020B	Vanadium	76.0	ug/L	10.0	06/12/20 16:03	
EPA 6020B	Zinc	21.0	ug/L	10.0	06/12/20 16:03	
92481385005	**MW-62A-061020**					
EPA 6020B	Antimony	1.6J	ug/L	5.0	06/12/20 16:37	
EPA 6020B	Arsenic	9.4	ug/L	5.0	06/12/20 16:37	
EPA 6020B	Barium	14.4	ug/L	5.0	06/12/20 16:37	
EPA 6020B	Chromium	4.2J	ug/L	5.0	06/12/20 16:37	
EPA 6020B	Copper	0.45J	ug/L	5.0	06/12/20 16:37	
EPA 6020B	Lead	0.071J	ug/L	1.0	06/12/20 16:37	
EPA 6020B	Nickel	1.0J	ug/L	5.0	06/12/20 16:37	
EPA 6020B	Selenium	5.3	ug/L	5.0	06/12/20 16:37	
EPA 6020B	Vanadium	34.6	ug/L	10.0	06/12/20 16:37	
EPA 6020B	Zinc	2.1J	ug/L	10.0	06/12/20 16:37	
EPA 8260D	cis-1,2-Dichloroethene	391	ug/L	5.0	06/15/20 20:05	
EPA 8260D	Toluene	2.3J	ug/L	5.0	06/15/20 20:05	

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92481385005	**MW-62A-061020**					
EPA 8260D	Vinyl chloride	11.7	ug/L	5.0	06/15/20 20:05	

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-38A-060920 **Lab ID: 92481385001** Collected: 06/09/20 14:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Chlorinated Herb. (GC) 8151	Analytical Method: EPA 8151 Preparation Method: 8151A Pace National - Mt. Juliet								
2,4-D	ND	ug/L	2.00		1	06/14/20 21:44	06/16/20 02:17	94-75-7	
Dinoseb	ND	ug/L	2.00		1	06/14/20 21:44	06/16/20 02:17	88-85-7	
2,4,5-T	ND	ug/L	2.00		1	06/14/20 21:44	06/16/20 02:17	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	2.00		1	06/14/20 21:44	06/16/20 02:17	93-72-1	
Surrogates									
2,4-DCAA (S)	49.5	%	14.0-158		1	06/14/20 21:44	06/16/20 02:17	19719-28-9	
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011 Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.020		1	06/15/20 14:30	06/15/20 17:31	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.020		1	06/15/20 14:30	06/15/20 17:31	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	93	%	60-140		1	06/15/20 14:30	06/15/20 17:31	301-79-56	
8081 OC Pesticides RVE	Analytical Method: EPA 8081B Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Aldrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	309-00-2	
alpha-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	319-84-6	
beta-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	319-85-7	
delta-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20		1	06/12/20 13:55	06/15/20 22:14	57-74-9	
4,4'-DDD	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	72-54-8	
4,4'-DDE	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	72-55-9	
4,4'-DDT	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	50-29-3	
Dieldrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	60-57-1	
Endosulfan I	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	959-98-8	
Endosulfan II	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	1031-07-8	
Endrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	72-20-8	
Endrin aldehyde	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	7421-93-4	
Heptachlor	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:14	1024-57-3	
Methoxychlor	ND	ug/L	0.15		1	06/12/20 13:55	06/15/20 22:14	72-43-5	
Toxaphene	ND	ug/L	0.20		1	06/12/20 13:55	06/15/20 22:14	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	125	%	10-130		1	06/12/20 13:55	06/15/20 22:14	877-09-8	
Decachlorobiphenyl (S)	112	%	10-130		1	06/12/20 13:55	06/15/20 22:14	2051-24-3	
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 07:47	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 07:47	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 07:47	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 07:47	53469-21-9	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-38A-060920 **Lab ID: 92481385001** Collected: 06/09/20 14:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 07:47	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 07:47	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 07:47	11096-82-5	
Surrogates									
Decachlorobiphenyl (S)	110	%	10-130		1	06/12/20 13:55	06/16/20 07:47	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.70J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:52	7440-36-0	
Arsenic	**1.7J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:52	7440-38-2	
Barium	**17.0**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:52	7440-39-3	
Beryllium	ND	ug/L	0.50		1	06/11/20 20:45	06/12/20 15:52	7440-41-7	
Cadmium	ND	ug/L	0.50		1	06/11/20 20:45	06/12/20 15:52	7440-43-9	
Chromium	**0.76J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:52	7440-47-3	
Cobalt	ND	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:52	7440-48-4	
Copper	ND	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:52	7440-50-8	
Lead	ND	ug/L	1.0		1	06/11/20 20:45	06/12/20 15:52	7439-92-1	
Nickel	ND	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:52	7440-02-0	
Selenium	**2.7J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:52	7782-49-2	
Silver	ND	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:52	7440-22-4	
Thallium	ND	ug/L	1.0		1	06/11/20 20:45	06/12/20 15:52	7440-28-0	
Tin	ND	ug/L	20.0		1	06/11/20 20:45	06/12/20 15:52	7440-31-5	
Vanadium	**1.8J**	ug/L	10.0		1	06/11/20 20:45	06/12/20 15:52	7440-62-2	
Zinc	**17.0**	ug/L	10.0		1	06/11/20 20:45	06/12/20 15:52	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	ug/L	0.20		1	06/15/20 09:30	06/15/20 13:40	7439-97-6	
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Acenaphthene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	83-32-9	
Acenaphthylene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	208-96-8	
Acetophenone	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	98-86-2	
2-Acetylaminofluorene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	53-96-3	v1
4-Aminobiphenyl	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	92-67-1	
Aniline	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	62-53-3	
Anthracene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	120-12-7	
Aramite	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	140-57-8	IL,v1
Atrazine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	1912-24-9	
Benzal chloride	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:14	98-87-3	L2
Benzaldehyde	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	100-52-7	
Benzidine	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:14	92-87-5	
Benzo(a)anthracene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	56-55-3	
Benzo(a)pyrene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	50-32-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-38A-060920 **Lab ID: 92481385001** Collected: 06/09/20 14:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Benzo(b)fluoranthene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	207-08-9	
Benzoic Acid	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:14	65-85-0	
Benzophenone	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	119-61-9	
Benzyl alcohol	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	100-51-6	
Biphenyl (Diphenyl)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	101-55-3	
Butylbenzylphthalate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	85-68-7	
Caprolactam	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	105-60-2	
Carbazole	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	59-50-7	
4-Chloroaniline	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	106-47-8	
Chlorobenzilate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	510-15-6	
bis(2-Chloroethoxy)methane	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	111-44-4	
2-Chloronaphthalene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	91-58-7	
2-Chlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	7005-72-3	
Chrysene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	218-01-9	
n-Decane	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	124-18-5	
Diallate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	2303-16-4	
Dibenz(a,h)anthracene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	53-70-3	
Dibenzo(a,e)pyrene	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:14	192-65-4	IH,L1, v1
Dibenzofuran	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	132-64-9	
2,3-Dibromo-1-propanol phosph	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:14	126-72-7	L1,v1
1,2-Dichlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	91-94-1	
2,4-Dichlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	120-83-2	
2,6-Dichlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	87-65-0	
2,3-Dichloroaniline	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	608-27-5	
Diethylphthalate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	84-66-2	
Dimethoate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	60-51-5	
P-Dimethylaminoazobenzene	ND	ug/L	50.0		10	06/12/20 12:05	06/15/20 11:14	60-11-7	
7,12-Dimethylbenz(a)anthracene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	57-97-6	
3,3'-Dimethylbenzidine	ND	ug/L	250		10	06/12/20 12:05	06/15/20 11:14	119-93-7	IH,L1
2,4-Dimethylphenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	105-67-9	
a,a-Dimethylphenylethylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	122-09-8	L2
Dimethylphthalate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	131-11-3	
Di-n-butylphthalate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	534-52-1	
1,3-Dinitrobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	99-65-0	

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ANALYTICAL RESULTS

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Sample: MW-38A-060920 **Lab ID: 92481385001** Collected: 06/09/20 14:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
1,4-Dinitrobenzene	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	100-25-4	v1
2,4-Dinitrophenol	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:14	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	606-20-2	
Di-n-octylphthalate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	117-84-0	L1
Diphenylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	122-39-4	
Diphenyl ether (Phenyl ether)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	101-84-8	
1,2-Diphenylhydrazine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	122-66-7	L1
Disulfoton	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	298-04-4	
bis(2-Ethylhexyl)phthalate	ND	ug/L	60.0		10	06/12/20 12:05	06/15/20 11:14	117-81-7	
Ethyl methanesulfonate	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	62-50-0	
Famphur	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	52-85-7	
Fluoranthene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	206-44-0	
Fluorene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	87-68-3	
Hexachlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	77-47-4	
Hexachloroethane	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	67-72-1	
Hexachlorophene	ND	ug/L	1000		10	06/12/20 12:05	06/15/20 11:14	70-30-4	
Hexachloropropene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	1888-71-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	193-39-5	
Isodrin	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	465-73-6	
Isophorone	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	78-59-1	
Isosafrole	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	120-58-1	
Kepone	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	143-50-0	
Methapyrilene	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:14	91-80-5	IH
3-Methylcholanthrene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	56-49-5	IL
4,4'-Methylene-bis(2-chloroani	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	101-14-4	
Methyl methanesulfonate	ND	ug/L	50.0		10	06/12/20 12:05	06/15/20 11:14	66-27-3	
1-Methylnaphthalene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	90-12-0	
2-Methylnaphthalene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	91-57-6	
2-Methyl-5-nitroaniline	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	99-55-8	
Methyl parathion	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	298-00-0	L1
2-Methylphenol(o-Cresol)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	15831-10-4	
1-Naphthalenamine	ND	ug/L	50.0		10	06/12/20 12:05	06/15/20 11:14	134-32-7	
2-Naphthalenamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	91-59-8	
Naphthalene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	91-20-3	
1,4-Naphthoquinone	ND	ug/L	50.0		10	06/12/20 12:05	06/15/20 11:14	130-15-4	
2-Nitroaniline	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	88-74-4	
3-Nitroaniline	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	99-09-2	
4-Nitroaniline	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	100-01-6	
Nitrobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	98-95-3	
2-Nitrophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	88-75-5	
4-Nitrophenol	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:14	100-02-7	

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-38A-060920 **Lab ID: 92481385001** Collected: 06/09/20 14:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
4-Nitroquinoline-n-oxide	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	56-57-5	v1
5-Nitro-o-toluidine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	99-55-8	
N-Nitrosodiethylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	55-18-5	
N-Nitrosodimethylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	62-75-9	
N-Nitroso-di-n-butylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	924-16-3	
N-Nitroso-di-n-propylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	86-30-6	
N-Nitrosomethylethylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	10595-95-6	
N-Nitrosomorpholine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	59-89-2	
N-Nitrosopiperidine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	100-75-4	
N-Nitrosopyrrolidine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	930-55-2	
n-Octadecane	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	593-45-3	
O,O,O-Triethylphosphorothioate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	126-68-1	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	108-60-1	
Parathion (Ethyl parathion)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	56-38-2	
Pentachlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	608-93-5	
Pentachloroethane	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	76-01-7	
Pentachloronitrobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	82-68-8	
Pentachlorophenol	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:14	87-86-5	
Phenacetin	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	62-44-2	
Phenanthrene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	85-01-8	
Phenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	108-95-2	
p-Phenylenediamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	106-50-3	L2
Phorate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	298-02-2	
2-Picoline	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	109-06-8	
Pronamide	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	23950-58-5	
Pyrene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	129-00-0	
Pyridine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	110-86-1	
Safrole	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	94-59-7	
Sulfotepp (Thiodiphosphoric Ac	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	3689-24-5	
Terpineol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	98-55-5	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	58-90-2	
Thionazin	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	297-97-2	
O-Toluidine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	95-53-4	
1,2,4-Trichlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	88-06-2	
1,3,5-Trinitrobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:14	99-35-4	
Surrogates									
Nitrobenzene-d5 (S)	0	%	13-130		10	06/12/20 12:05	06/15/20 11:14	4165-60-0	D3,S4
2-Fluorobiphenyl (S)	0	%	13-130		10	06/12/20 12:05	06/15/20 11:14	321-60-8	S4
Terphenyl-d14 (S)	0	%	25-130		10	06/12/20 12:05	06/15/20 11:14	1718-51-0	S4
Phenol-d6 (S)	0	%	10-130		10	06/12/20 12:05	06/15/20 11:14	13127-88-3	S4
2-Fluorophenol (S)	0	%	10-130		10	06/12/20 12:05	06/15/20 11:14	367-12-4	S4

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-38A-060920 **Lab ID: 92481385001** Collected: 06/09/20 14:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Surrogates									
2,4,6-Tribromophenol (S)	0	%	10-137		10	06/12/20 12:05	06/15/20 11:14	118-79-6	S4
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Acetone	ND	ug/L	1250		50		06/15/20 20:40	67-64-1	
Acetonitrile	ND	ug/L	2500		50		06/15/20 20:40	75-05-8	
Acrolein	ND	ug/L	500		50		06/15/20 20:40	107-02-8	IH,IK,v1
Acrylonitrile	ND	ug/L	500		50		06/15/20 20:40	107-13-1	
Allyl chloride	ND	ug/L	100		50		06/15/20 20:40	107-05-1	
Benzene	**133**	ug/L	50.0		50		06/15/20 20:40	71-43-2	
Bromobenzene	ND	ug/L	50.0		50		06/15/20 20:40	108-86-1	
Bromochloromethane	ND	ug/L	50.0		50		06/15/20 20:40	74-97-5	
Bromodichloromethane	ND	ug/L	50.0		50		06/15/20 20:40	75-27-4	
Bromoform	ND	ug/L	50.0		50		06/15/20 20:40	75-25-2	
Bromomethane	ND	ug/L	100		50		06/15/20 20:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	250		50		06/15/20 20:40	78-93-3	
Carbon disulfide	ND	ug/L	100		50		06/15/20 20:40	75-15-0	
Carbon tetrachloride	ND	ug/L	50.0		50		06/15/20 20:40	56-23-5	
Chlorobenzene	ND	ug/L	50.0		50		06/15/20 20:40	108-90-7	
Chloroethane	ND	ug/L	50.0		50		06/15/20 20:40	75-00-3	
Chloroform	ND	ug/L	250		50		06/15/20 20:40	67-66-3	
Chloromethane	ND	ug/L	50.0		50		06/15/20 20:40	74-87-3	
Chloroprene	ND	ug/L	250		50		06/15/20 20:40	126-99-8	
Dibromochloromethane	ND	ug/L	50.0		50		06/15/20 20:40	124-48-1	
Dibromomethane	ND	ug/L	50.0		50		06/15/20 20:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	50.0		50		06/15/20 20:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	50.0		50		06/15/20 20:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	50.0		50		06/15/20 20:40	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	50.0		50		06/15/20 20:40	110-57-6	
Dichlorodifluoromethane	ND	ug/L	50.0		50		06/15/20 20:40	75-71-8	
1,1-Dichloroethane	ND	ug/L	50.0		50		06/15/20 20:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	50.0		50		06/15/20 20:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	50.0		50		06/15/20 20:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	50.0		50		06/15/20 20:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	50.0		50		06/15/20 20:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	50.0		50		06/15/20 20:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	50.0		50		06/15/20 20:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	50.0		50		06/15/20 20:40	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	7500		50		06/15/20 20:40	123-91-1	
Ethylbenzene	ND	ug/L	50.0		50		06/15/20 20:40	100-41-4	
Ethyl methacrylate	ND	ug/L	50.0		50		06/15/20 20:40	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	50.0		50		06/15/20 20:40	87-68-3	
2-Hexanone	ND	ug/L	250		50		06/15/20 20:40	591-78-6	
Iodomethane	ND	ug/L	1000		50		06/15/20 20:40	74-88-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-38A-060920 **Lab ID: 92481385001** Collected: 06/09/20 14:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Isobutanol	ND	ug/L	5000		50		06/15/20 20:40	78-83-1	
Methacrylonitrile	ND	ug/L	500		50		06/15/20 20:40	126-98-7	
Methylene Chloride	ND	ug/L	250		50		06/15/20 20:40	75-09-2	
Methyl methacrylate	ND	ug/L	100		50		06/15/20 20:40	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	250		50		06/15/20 20:40	108-10-1	
Propionitrile	ND	ug/L	1000		50		06/15/20 20:40	107-12-0	
Styrene	ND	ug/L	50.0		50		06/15/20 20:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	50.0		50		06/15/20 20:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	50.0		50		06/15/20 20:40	79-34-5	
Tetrachloroethene	ND	ug/L	50.0		50		06/15/20 20:40	127-18-4	
Toluene	ND	ug/L	50.0		50		06/15/20 20:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	50.0		50		06/15/20 20:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	50.0		50		06/15/20 20:40	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	50.0		50		06/15/20 20:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	50.0		50		06/15/20 20:40	79-00-5	
Trichloroethene	ND	ug/L	50.0		50		06/15/20 20:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	50.0		50		06/15/20 20:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	50.0		50		06/15/20 20:40	96-18-4	
Vinyl acetate	ND	ug/L	100		50		06/15/20 20:40	108-05-4	
Vinyl chloride	ND	ug/L	50.0		50		06/15/20 20:40	75-01-4	
Xylene (Total)	ND	ug/L	50.0		50		06/15/20 20:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	132	%	70-130		50		06/15/20 20:40	460-00-4	D3,S2
1,2-Dichloroethane-d4 (S)	86	%	70-130		50		06/15/20 20:40	17060-07-0	
Toluene-d8 (S)	102	%	70-130		50		06/15/20 20:40	2037-26-5	
9034 Sulfide, Titration	Analytical Method: EPA 9034 Pace Analytical Services - New Orleans								
Sulfide	ND	mg/L	1.0		1		06/15/20 14:29		
9012B Cyanide, Total	Analytical Method: EPA 9012B Preparation Method: EPA 9012B Pace Analytical Services - Asheville								
Cyanide	ND	mg/L	0.0080		1	06/12/20 23:36	06/13/20 02:50	57-12-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-47A-060920 **Lab ID: 92481385002** Collected: 06/09/20 15:15 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Chlorinated Herb. (GC) 8151	Analytical Method: EPA 8151 Preparation Method: 8151A Pace National - Mt. Juliet								
2,4-D	ND	ug/L	40.0		20	06/14/20 21:44	06/17/20 11:28	94-75-7	
Dinoseb	ND	ug/L	40.0		20	06/14/20 21:44	06/17/20 11:28	88-85-7	
2,4,5-T	ND	ug/L	40.0		20	06/14/20 21:44	06/17/20 11:28	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	40.0		20	06/14/20 21:44	06/17/20 11:28	93-72-1	
Surrogates									
2,4-DCAA (S)	55.3	%	14.0-158		20	06/14/20 21:44	06/17/20 11:28	19719-28-9	S4
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011 Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.020		1	06/15/20 14:30	06/15/20 17:49	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.020		1	06/15/20 14:30	06/15/20 17:49	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	100	%	60-140		1	06/15/20 14:30	06/15/20 17:49	301-79-56	
8081 OC Pesticides RVE	Analytical Method: EPA 8081B Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Aldrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	309-00-2	
alpha-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	319-84-6	
beta-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	319-85-7	
delta-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20		1	06/12/20 13:55	06/15/20 22:29	57-74-9	
4,4'-DDD	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	72-54-8	
4,4'-DDE	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	72-55-9	
4,4'-DDT	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	50-29-3	
Dieldrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	60-57-1	
Endosulfan I	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	959-98-8	
Endosulfan II	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	1031-07-8	
Endrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	72-20-8	
Endrin aldehyde	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	7421-93-4	
Heptachlor	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:29	1024-57-3	
Methoxychlor	ND	ug/L	0.15		1	06/12/20 13:55	06/15/20 22:29	72-43-5	
Toxaphene	ND	ug/L	0.20		1	06/12/20 13:55	06/15/20 22:29	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	102	%	10-130		1	06/12/20 13:55	06/15/20 22:29	877-09-8	
Decachlorobiphenyl (S)	85	%	10-130		1	06/12/20 13:55	06/15/20 22:29	2051-24-3	
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:01	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:01	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:01	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:01	53469-21-9	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-47A-060920 **Lab ID: 92481385002** Collected: 06/09/20 15:15 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:01	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:01	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:01	11096-82-5	
Surrogates									
Decachlorobiphenyl (S)	79	%	10-130		1	06/12/20 13:55	06/16/20 08:01	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.86J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:57	7440-36-0	
Arsenic	**8.1**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:57	7440-38-2	
Barium	**7.3**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:57	7440-39-3	
Beryllium	ND	ug/L	0.50		1	06/11/20 20:45	06/12/20 15:57	7440-41-7	
Cadmium	ND	ug/L	0.50		1	06/11/20 20:45	06/12/20 15:57	7440-43-9	
Chromium	**1.2J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:57	7440-47-3	
Cobalt	ND	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:57	7440-48-4	
Copper	**0.33J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:57	7440-50-8	
Lead	**0.059J**	ug/L	1.0		1	06/11/20 20:45	06/12/20 15:57	7439-92-1	
Nickel	**0.36J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:57	7440-02-0	
Selenium	**3.5J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:57	7782-49-2	
Silver	ND	ug/L	5.0		1	06/11/20 20:45	06/12/20 15:57	7440-22-4	
Thallium	ND	ug/L	1.0		1	06/11/20 20:45	06/12/20 15:57	7440-28-0	
Tin	ND	ug/L	20.0		1	06/11/20 20:45	06/12/20 15:57	7440-31-5	
Vanadium	**6.3J**	ug/L	10.0		1	06/11/20 20:45	06/12/20 15:57	7440-62-2	
Zinc	**7.7J**	ug/L	10.0		1	06/11/20 20:45	06/12/20 15:57	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	ug/L	0.20		1	06/15/20 09:30	06/15/20 13:49	7439-97-6	
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Acenaphthene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	83-32-9	
Acenaphthylene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	208-96-8	
Acetophenone	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	98-86-2	
2-Acetylaminofluorene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	53-96-3	v1
4-Aminobiphenyl	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	92-67-1	
Aniline	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	62-53-3	
Anthracene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	120-12-7	
Aramite	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	140-57-8	IL,v1
Atrazine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	1912-24-9	
Benzal chloride	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:42	98-87-3	L2
Benzaldehyde	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	100-52-7	
Benzidine	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:42	92-87-5	
Benzo(a)anthracene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	56-55-3	
Benzo(a)pyrene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	50-32-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-47A-060920 **Lab ID: 92481385002** Collected: 06/09/20 15:15 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Benzo(b)fluoranthene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	207-08-9	
Benzoic Acid	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:42	65-85-0	
Benzophenone	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	119-61-9	
Benzyl alcohol	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	100-51-6	
Biphenyl (Diphenyl)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	101-55-3	
Butylbenzylphthalate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	85-68-7	
Caprolactam	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	105-60-2	
Carbazole	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	59-50-7	
4-Chloroaniline	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	106-47-8	
Chlorobenzilate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	510-15-6	
bis(2-Chloroethoxy)methane	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	111-44-4	
2-Chloronaphthalene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	91-58-7	
2-Chlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	7005-72-3	
Chrysene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	218-01-9	
n-Decane	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	124-18-5	
Diallate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	2303-16-4	
Dibenz(a,h)anthracene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	53-70-3	
Dibenzo(a,e)pyrene	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:42	192-65-4	IH,L1, v1
Dibenzofuran	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	132-64-9	
2,3-Dibromo-1-propanol phosph	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:42	126-72-7	L1,v1
1,2-Dichlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	91-94-1	
2,4-Dichlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	120-83-2	
2,6-Dichlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	87-65-0	
2,3-Dichloroaniline	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	608-27-5	
Diethylphthalate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	84-66-2	
Dimethoate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	60-51-5	
P-Dimethylaminoazobenzene	ND	ug/L	50.0		10	06/12/20 12:05	06/15/20 11:42	60-11-7	
7,12-Dimethylbenz(a)anthracene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	57-97-6	
3,3'-Dimethylbenzidine	ND	ug/L	250		10	06/12/20 12:05	06/15/20 11:42	119-93-7	IH,L1
2,4-Dimethylphenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	105-67-9	
a,a-Dimethylphenylethylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	122-09-8	L2
Dimethylphthalate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	131-11-3	
Di-n-butylphthalate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	534-52-1	
1,3-Dinitrobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	99-65-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-47A-060920 **Lab ID: 92481385002** Collected: 06/09/20 15:15 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
1,4-Dinitrobenzene	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	100-25-4	v1
2,4-Dinitrophenol	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:42	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	606-20-2	
Di-n-octylphthalate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	117-84-0	L1
Diphenylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	122-39-4	
Diphenyl ether (Phenyl ether)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	101-84-8	
1,2-Diphenylhydrazine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	122-66-7	L1
Disulfoton	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	298-04-4	
bis(2-Ethylhexyl)phthalate	ND	ug/L	60.0		10	06/12/20 12:05	06/15/20 11:42	117-81-7	
Ethyl methanesulfonate	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	62-50-0	
Famphur	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	52-85-7	
Fluoranthene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	206-44-0	
Fluorene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	87-68-3	
Hexachlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	77-47-4	
Hexachloroethane	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	67-72-1	
Hexachlorophene	ND	ug/L	1000		10	06/12/20 12:05	06/15/20 11:42	70-30-4	
Hexachloropropene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	1888-71-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	193-39-5	
Isodrin	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	465-73-6	
Isophorone	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	78-59-1	
Isosafrole	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	120-58-1	
Kepone	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	143-50-0	
Methapyrilene	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:42	91-80-5	IH
3-Methylcholanthrene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	56-49-5	IL
4,4'-Methylene-bis(2-chloroani	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	101-14-4	
Methyl methanesulfonate	ND	ug/L	50.0		10	06/12/20 12:05	06/15/20 11:42	66-27-3	
1-Methylnaphthalene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	90-12-0	
2-Methylnaphthalene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	91-57-6	
2-Methyl-5-nitroaniline	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	99-55-8	
Methyl parathion	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	298-00-0	L1
2-Methylphenol(o-Cresol)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	15831-10-4	
1-Naphthalenamine	ND	ug/L	50.0		10	06/12/20 12:05	06/15/20 11:42	134-32-7	
2-Naphthalenamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	91-59-8	
Naphthalene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	91-20-3	
1,4-Naphthoquinone	ND	ug/L	50.0		10	06/12/20 12:05	06/15/20 11:42	130-15-4	
2-Nitroaniline	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	88-74-4	
3-Nitroaniline	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	99-09-2	
4-Nitroaniline	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	100-01-6	
Nitrobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	98-95-3	
2-Nitrophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	88-75-5	
4-Nitrophenol	ND	ug/L	500		10	06/12/20 12:05	06/15/20 11:42	100-02-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-47A-060920 **Lab ID: 92481385002** Collected: 06/09/20 15:15 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
4-Nitroquinoline-n-oxide	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	56-57-5	v1
5-Nitro-o-toluidine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	99-55-8	
N-Nitrosodiethylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	55-18-5	
N-Nitrosodimethylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	62-75-9	
N-Nitroso-di-n-butylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	924-16-3	
N-Nitroso-di-n-propylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	86-30-6	
N-Nitrosomethylethylamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	10595-95-6	
N-Nitrosomorpholine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	59-89-2	
N-Nitrosopiperidine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	100-75-4	
N-Nitrosopyrrolidine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	930-55-2	
n-Octadecane	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	593-45-3	
O,O,O-Triethylphosphorothioate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	126-68-1	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	108-60-1	
Parathion (Ethyl parathion)	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	56-38-2	
Pentachlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	608-93-5	
Pentachloroethane	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	76-01-7	
Pentachloronitrobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	82-68-8	
Pentachlorophenol	ND	ug/L	200		10	06/12/20 12:05	06/15/20 11:42	87-86-5	
Phenacetin	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	62-44-2	
Phenanthrene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	85-01-8	
Phenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	108-95-2	
p-Phenylenediamine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	106-50-3	L2
Phorate	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	298-02-2	
2-Picoline	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	109-06-8	
Pronamide	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	23950-58-5	
Pyrene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	129-00-0	
Pyridine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	110-86-1	
Safrole	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	94-59-7	
Sulfotepp (Thiodiphosphoric Ac	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	3689-24-5	
Terpineol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	98-55-5	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	58-90-2	
Thionazin	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	297-97-2	
O-Toluidine	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	95-53-4	
1,2,4-Trichlorobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	88-06-2	
1,3,5-Trinitrobenzene	ND	ug/L	100		10	06/12/20 12:05	06/15/20 11:42	99-35-4	
Surrogates									
Nitrobenzene-d5 (S)	0	%	13-130		10	06/12/20 12:05	06/15/20 11:42	4165-60-0	D3,S4
2-Fluorobiphenyl (S)	0	%	13-130		10	06/12/20 12:05	06/15/20 11:42	321-60-8	S4
Terphenyl-d14 (S)	0	%	25-130		10	06/12/20 12:05	06/15/20 11:42	1718-51-0	S4
Phenol-d6 (S)	0	%	10-130		10	06/12/20 12:05	06/15/20 11:42	13127-88-3	S4
2-Fluorophenol (S)	0	%	10-130		10	06/12/20 12:05	06/15/20 11:42	367-12-4	S4

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-47A-060920 **Lab ID: 92481385002** Collected: 06/09/20 15:15 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Surrogates									
2,4,6-Tribromophenol (S)	0	%	10-137		10	06/12/20 12:05	06/15/20 11:42	118-79-6	S4
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Acetone	ND	ug/L	1250		50		06/15/20 20:58	67-64-1	
Acetonitrile	ND	ug/L	2500		50		06/15/20 20:58	75-05-8	
Acrolein	ND	ug/L	500		50		06/15/20 20:58	107-02-8	IH,IK,v1
Acrylonitrile	ND	ug/L	500		50		06/15/20 20:58	107-13-1	
Allyl chloride	ND	ug/L	100		50		06/15/20 20:58	107-05-1	
Benzene	**787**	ug/L	50.0		50		06/15/20 20:58	71-43-2	
Bromobenzene	ND	ug/L	50.0		50		06/15/20 20:58	108-86-1	
Bromochloromethane	ND	ug/L	50.0		50		06/15/20 20:58	74-97-5	
Bromodichloromethane	ND	ug/L	50.0		50		06/15/20 20:58	75-27-4	
Bromoform	ND	ug/L	50.0		50		06/15/20 20:58	75-25-2	
Bromomethane	ND	ug/L	100		50		06/15/20 20:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	250		50		06/15/20 20:58	78-93-3	
Carbon disulfide	ND	ug/L	100		50		06/15/20 20:58	75-15-0	
Carbon tetrachloride	ND	ug/L	50.0		50		06/15/20 20:58	56-23-5	
Chlorobenzene	ND	ug/L	50.0		50		06/15/20 20:58	108-90-7	
Chloroethane	ND	ug/L	50.0		50		06/15/20 20:58	75-00-3	
Chloroform	ND	ug/L	250		50		06/15/20 20:58	67-66-3	
Chloromethane	ND	ug/L	50.0		50		06/15/20 20:58	74-87-3	
Chloroprene	ND	ug/L	250		50		06/15/20 20:58	126-99-8	
Dibromochloromethane	ND	ug/L	50.0		50		06/15/20 20:58	124-48-1	
Dibromomethane	ND	ug/L	50.0		50		06/15/20 20:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	50.0		50		06/15/20 20:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	50.0		50		06/15/20 20:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	50.0		50		06/15/20 20:58	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	50.0		50		06/15/20 20:58	110-57-6	
Dichlorodifluoromethane	ND	ug/L	50.0		50		06/15/20 20:58	75-71-8	
1,1-Dichloroethane	ND	ug/L	50.0		50		06/15/20 20:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	50.0		50		06/15/20 20:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	50.0		50		06/15/20 20:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	50.0		50		06/15/20 20:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	50.0		50		06/15/20 20:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	50.0		50		06/15/20 20:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	50.0		50		06/15/20 20:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	50.0		50		06/15/20 20:58	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	7500		50		06/15/20 20:58	123-91-1	
Ethylbenzene	ND	ug/L	50.0		50		06/15/20 20:58	100-41-4	
Ethyl methacrylate	ND	ug/L	50.0		50		06/15/20 20:58	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	50.0		50		06/15/20 20:58	87-68-3	
2-Hexanone	ND	ug/L	250		50		06/15/20 20:58	591-78-6	
Iodomethane	ND	ug/L	1000		50		06/15/20 20:58	74-88-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-47A-060920 **Lab ID: 92481385002** Collected: 06/09/20 15:15 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Isobutanol	ND	ug/L	5000		50		06/15/20 20:58	78-83-1	
Methacrylonitrile	ND	ug/L	500		50		06/15/20 20:58	126-98-7	
Methylene Chloride	ND	ug/L	250		50		06/15/20 20:58	75-09-2	
Methyl methacrylate	ND	ug/L	100		50		06/15/20 20:58	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	250		50		06/15/20 20:58	108-10-1	
Propionitrile	ND	ug/L	1000		50		06/15/20 20:58	107-12-0	
Styrene	ND	ug/L	50.0		50		06/15/20 20:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	50.0		50		06/15/20 20:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	50.0		50		06/15/20 20:58	79-34-5	
Tetrachloroethene	ND	ug/L	50.0		50		06/15/20 20:58	127-18-4	
Toluene	**22.1J**	ug/L	50.0		50		06/15/20 20:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	50.0		50		06/15/20 20:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	50.0		50		06/15/20 20:58	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	50.0		50		06/15/20 20:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	50.0		50		06/15/20 20:58	79-00-5	
Trichloroethene	ND	ug/L	50.0		50		06/15/20 20:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	50.0		50		06/15/20 20:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	50.0		50		06/15/20 20:58	96-18-4	
Vinyl acetate	ND	ug/L	100		50		06/15/20 20:58	108-05-4	
Vinyl chloride	ND	ug/L	50.0		50		06/15/20 20:58	75-01-4	
Xylene (Total)	**192**	ug/L	50.0		50		06/15/20 20:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	242	%	70-130		50		06/15/20 20:58	460-00-4	D3,S2
1,2-Dichloroethane-d4 (S)	86	%	70-130		50		06/15/20 20:58	17060-07-0	
Toluene-d8 (S)	102	%	70-130		50		06/15/20 20:58	2037-26-5	
9034 Sulfide, Titration	Analytical Method: EPA 9034 Pace Analytical Services - New Orleans								
Sulfide	ND	mg/L	1.0		1		06/15/20 14:29		
9012B Cyanide, Total	Analytical Method: EPA 9012B Preparation Method: EPA 9012B Pace Analytical Services - Asheville								
Cyanide	ND	mg/L	0.0080		1	06/12/20 23:36	06/13/20 02:54	57-12-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-53-060920 **Lab ID: 92481385003** Collected: 06/09/20 17:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Chlorinated Herb. (GC) 8151	Analytical Method: EPA 8151 Preparation Method: 8151A Pace National - Mt. Juliet								
2,4-D	ND	ug/L	2.00		1	06/14/20 21:44	06/16/20 02:46	94-75-7	
Dinoseb	ND	ug/L	2.00		1	06/14/20 21:44	06/16/20 02:46	88-85-7	
2,4,5-T	ND	ug/L	2.00		1	06/14/20 21:44	06/16/20 02:46	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	2.00		1	06/14/20 21:44	06/16/20 02:46	93-72-1	
Surrogates									
2,4-DCAA (S)	75.3	%	14.0-158		1	06/14/20 21:44	06/16/20 02:46	19719-28-9	
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011 Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.020		1	06/15/20 14:30	06/15/20 18:07	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.020		1	06/15/20 14:30	06/15/20 18:07	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	91	%	60-140		1	06/15/20 14:30	06/15/20 18:07	301-79-56	
8081 OC Pesticides RVE	Analytical Method: EPA 8081B Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Aldrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	309-00-2	
alpha-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	319-84-6	
beta-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	319-85-7	
delta-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20		1	06/12/20 13:55	06/15/20 22:44	57-74-9	
4,4'-DDD	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	72-54-8	
4,4'-DDE	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	72-55-9	
4,4'-DDT	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	50-29-3	
Dieldrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	60-57-1	
Endosulfan I	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	959-98-8	
Endosulfan II	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	1031-07-8	
Endrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	72-20-8	
Endrin aldehyde	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	7421-93-4	
Heptachlor	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:44	1024-57-3	
Methoxychlor	ND	ug/L	0.15		1	06/12/20 13:55	06/15/20 22:44	72-43-5	
Toxaphene	ND	ug/L	0.20		1	06/12/20 13:55	06/15/20 22:44	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	115	%	10-130		1	06/12/20 13:55	06/15/20 22:44	877-09-8	
Decachlorobiphenyl (S)	136	%	10-130		1	06/12/20 13:55	06/15/20 22:44	2051-24-3	S3
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:16	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:16	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:16	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:16	53469-21-9	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-53-060920 **Lab ID: 92481385003** Collected: 06/09/20 17:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:16	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:16	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:16	11096-82-5	
Surrogates									
Decachlorobiphenyl (S)	117	%	10-130		1	06/12/20 13:55	06/16/20 08:16	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.61J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:03	7440-36-0	
Arsenic	**0.98J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:03	7440-38-2	
Barium	**52.1**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:03	7440-39-3	
Beryllium	ND	ug/L	0.50		1	06/11/20 20:45	06/12/20 16:03	7440-41-7	
Cadmium	**0.18J**	ug/L	0.50		1	06/11/20 20:45	06/12/20 16:03	7440-43-9	
Chromium	**1.2J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:03	7440-47-3	
Cobalt	ND	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:03	7440-48-4	
Copper	**4.9J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:03	7440-50-8	
Lead	**0.049J**	ug/L	1.0		1	06/11/20 20:45	06/12/20 16:03	7439-92-1	
Nickel	**22.2**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:03	7440-02-0	
Selenium	ND	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:03	7782-49-2	
Silver	ND	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:03	7440-22-4	
Thallium	ND	ug/L	1.0		1	06/11/20 20:45	06/12/20 16:03	7440-28-0	
Tin	ND	ug/L	20.0		1	06/11/20 20:45	06/12/20 16:03	7440-31-5	
Vanadium	**76.0**	ug/L	10.0		1	06/11/20 20:45	06/12/20 16:03	7440-62-2	
Zinc	**21.0**	ug/L	10.0		1	06/11/20 20:45	06/12/20 16:03	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	ug/L	0.20		1	06/15/20 09:30	06/15/20 13:52	7439-97-6	
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Acenaphthene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	83-32-9	
Acenaphthylene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	208-96-8	
Acetophenone	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	98-86-2	
2-Acetylaminofluorene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	53-96-3	v1
4-Aminobiphenyl	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	92-67-1	
Aniline	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	62-53-3	
Anthracene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	120-12-7	
Aramite	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	140-57-8	IL,v1
Atrazine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	1912-24-9	
Benzal chloride	ND	ug/L	50.0		1	06/12/20 12:05	06/15/20 17:24	98-87-3	L2
Benzaldehyde	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	100-52-7	
Benzidine	ND	ug/L	50.0		1	06/12/20 12:05	06/15/20 17:24	92-87-5	
Benzo(a)anthracene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	50-32-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-53-060920 **Lab ID: 92481385003** Collected: 06/09/20 17:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Benzo(b)fluoranthene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	207-08-9	
Benzoic Acid	ND	ug/L	50.0		1	06/12/20 12:05	06/15/20 17:24	65-85-0	
Benzophenone	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	119-61-9	
Benzyl alcohol	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	100-51-6	
Biphenyl (Diphenyl)	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	85-68-7	
Caprolactam	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	105-60-2	
Carbazole	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	59-50-7	
4-Chloroaniline	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	106-47-8	
Chlorobenzilate	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	510-15-6	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	91-58-7	
2-Chlorophenol	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	7005-72-3	
Chrysene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	218-01-9	
n-Decane	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	124-18-5	
Diallate	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	2303-16-4	
Dibenz(a,h)anthracene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	53-70-3	
Dibenzo(a,e)pyrene	ND	ug/L	50.0		1	06/12/20 12:05	06/15/20 17:24	192-65-4	IH,L1, v1
Dibenzofuran	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	132-64-9	
2,3-Dibromo-1-propanol phosph	ND	ug/L	50.0		1	06/12/20 12:05	06/15/20 17:24	126-72-7	L1,v1
1,2-Dichlorobenzene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	120-83-2	
2,6-Dichlorophenol	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	87-65-0	
2,3-Dichloroaniline	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	608-27-5	
Diethylphthalate	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	84-66-2	
Dimethoate	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	60-51-5	
P-Dimethylaminoazobenzene	ND	ug/L	5.0		1	06/12/20 12:05	06/15/20 17:24	60-11-7	
7,12-Dimethylbenz(a)anthracene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	57-97-6	
3,3'-Dimethylbenzidine	ND	ug/L	25.0		1	06/12/20 12:05	06/15/20 17:24	119-93-7	IH,L1
2,4-Dimethylphenol	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	105-67-9	
a,a-Dimethylphenylethylamine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	122-09-8	L2
Dimethylphthalate	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	534-52-1	
1,3-Dinitrobenzene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	99-65-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-53-060920 **Lab ID: 92481385003** Collected: 06/09/20 17:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
1,4-Dinitrobenzene	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	100-25-4	v1
2,4-Dinitrophenol	ND	ug/L	50.0		1	06/12/20 12:05	06/15/20 17:24	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	117-84-0	L1
Diphenylamine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	122-39-4	
Diphenyl ether (Phenyl ether)	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	101-84-8	
1,2-Diphenylhydrazine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	122-66-7	L1
Disulfoton	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	298-04-4	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0		1	06/12/20 12:05	06/15/20 17:24	117-81-7	
Ethyl methanesulfonate	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	62-50-0	
Famphur	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	52-85-7	
Fluoranthene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	206-44-0	
Fluorene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	77-47-4	
Hexachloroethane	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	67-72-1	
Hexachlorophene	ND	ug/L	100		1	06/12/20 12:05	06/15/20 17:24	70-30-4	
Hexachloropropene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	1888-71-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	193-39-5	
Isodrin	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	465-73-6	
Isophorone	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	78-59-1	
Isosafrole	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	120-58-1	
Kepone	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	143-50-0	
Methapyrilene	ND	ug/L	50.0		1	06/12/20 12:05	06/15/20 17:24	91-80-5	IH
3-Methylcholanthrene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	56-49-5	IL
4,4'-Methylene-bis(2-chloroani	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	101-14-4	
Methyl methanesulfonate	ND	ug/L	5.0		1	06/12/20 12:05	06/15/20 17:24	66-27-3	
1-Methylnaphthalene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	91-57-6	
2-Methyl-5-nitroaniline	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	99-55-8	
Methyl parathion	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	298-00-0	L1
2-Methylphenol(o-Cresol)	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	15831-10-4	
1-Naphthalenamine	ND	ug/L	5.0		1	06/12/20 12:05	06/15/20 17:24	134-32-7	
2-Naphthalenamine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	91-59-8	
Naphthalene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	91-20-3	
1,4-Naphthoquinone	ND	ug/L	5.0		1	06/12/20 12:05	06/15/20 17:24	130-15-4	
2-Nitroaniline	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	88-74-4	
3-Nitroaniline	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	99-09-2	
4-Nitroaniline	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	100-01-6	
Nitrobenzene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	98-95-3	
2-Nitrophenol	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	88-75-5	
4-Nitrophenol	ND	ug/L	50.0		1	06/12/20 12:05	06/15/20 17:24	100-02-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-53-060920 **Lab ID: 92481385003** Collected: 06/09/20 17:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
4-Nitroquinoline-n-oxide	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	56-57-5	v1
5-Nitro-o-toluidine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	99-55-8	
N-Nitrosodiethylamine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	55-18-5	
N-Nitrosodimethylamine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	62-75-9	
N-Nitroso-di-n-butylamine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	924-16-3	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	86-30-6	
N-Nitrosomethylethylamine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	10595-95-6	
N-Nitrosomorpholine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	59-89-2	
N-Nitrosopiperidine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	100-75-4	
N-Nitrosopyrrolidine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	930-55-2	
n-Octadecane	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	593-45-3	
O,O,O-Triethylphosphorothioate	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	126-68-1	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	108-60-1	
Parathion (Ethyl parathion)	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	56-38-2	
Pentachlorobenzene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	608-93-5	
Pentachloroethane	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	76-01-7	
Pentachloronitrobenzene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	82-68-8	
Pentachlorophenol	ND	ug/L	20.0		1	06/12/20 12:05	06/15/20 17:24	87-86-5	
Phenacetin	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	62-44-2	
Phenanthrene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	85-01-8	
Phenol	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	108-95-2	
p-Phenylenediamine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	106-50-3	L2
Phorate	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	298-02-2	
2-Picoline	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	109-06-8	
Pronamide	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	23950-58-5	
Pyrene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	129-00-0	
Pyridine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	110-86-1	
Safrole	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	94-59-7	
Sulfotepp (Thiodiphosphoric Ac	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	3689-24-5	
Terpineol	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	98-55-5	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	58-90-2	
Thionazin	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	297-97-2	
O-Toluidine	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	95-53-4	
1,2,4-Trichlorobenzene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	88-06-2	
1,3,5-Trinitrobenzene	ND	ug/L	10.0		1	06/12/20 12:05	06/15/20 17:24	99-35-4	
Surrogates									
Nitrobenzene-d5 (S)	96	%	13-130		1	06/12/20 12:05	06/15/20 17:24	4165-60-0	
2-Fluorobiphenyl (S)	89	%	13-130		1	06/12/20 12:05	06/15/20 17:24	321-60-8	
Terphenyl-d14 (S)	125	%	25-130		1	06/12/20 12:05	06/15/20 17:24	1718-51-0	
Phenol-d6 (S)	47	%	10-130		1	06/12/20 12:05	06/15/20 17:24	13127-88-3	
2-Fluorophenol (S)	62	%	10-130		1	06/12/20 12:05	06/15/20 17:24	367-12-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-53-060920 **Lab ID: 92481385003** Collected: 06/09/20 17:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Surrogates									
2,4,6-Tribromophenol (S)	98	%	10-137		1	06/12/20 12:05	06/15/20 17:24	118-79-6	
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Acetone	ND	ug/L	25.0		1		06/16/20 14:43	67-64-1	
Acetonitrile	ND	ug/L	50.0		1		06/16/20 14:43	75-05-8	
Acrolein	ND	ug/L	10.0		1		06/16/20 14:43	107-02-8	IH,IK,L1
Acrylonitrile	ND	ug/L	10.0		1		06/16/20 14:43	107-13-1	
Allyl chloride	ND	ug/L	2.0		1		06/16/20 14:43	107-05-1	
Benzene	ND	ug/L	1.0		1		06/16/20 14:43	71-43-2	
Bromobenzene	ND	ug/L	1.0		1		06/16/20 14:43	108-86-1	
Bromochloromethane	ND	ug/L	1.0		1		06/16/20 14:43	74-97-5	
Bromodichloromethane	ND	ug/L	1.0		1		06/16/20 14:43	75-27-4	
Bromoform	ND	ug/L	1.0		1		06/16/20 14:43	75-25-2	
Bromomethane	ND	ug/L	2.0		1		06/16/20 14:43	74-83-9	IH,L1
2-Butanone (MEK)	ND	ug/L	5.0		1		06/16/20 14:43	78-93-3	
Carbon disulfide	ND	ug/L	2.0		1		06/16/20 14:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0		1		06/16/20 14:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0		1		06/16/20 14:43	108-90-7	
Chloroethane	ND	ug/L	1.0		1		06/16/20 14:43	75-00-3	
Chloroform	ND	ug/L	5.0		1		06/16/20 14:43	67-66-3	
Chloromethane	ND	ug/L	1.0		1		06/16/20 14:43	74-87-3	
Chloroprene	ND	ug/L	5.0		1		06/16/20 14:43	126-99-8	
Dibromochloromethane	ND	ug/L	1.0		1		06/16/20 14:43	124-48-1	
Dibromomethane	ND	ug/L	1.0		1		06/16/20 14:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0		1		06/16/20 14:43	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0		1		06/16/20 14:43	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0		1		06/16/20 14:43	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0		1		06/16/20 14:43	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0		1		06/16/20 14:43	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0		1		06/16/20 14:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0		1		06/16/20 14:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0		1		06/16/20 14:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0		1		06/16/20 14:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0		1		06/16/20 14:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0		1		06/16/20 14:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0		1		06/16/20 14:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0		1		06/16/20 14:43	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150		1		06/16/20 14:43	123-91-1	
Ethylbenzene	ND	ug/L	1.0		1		06/16/20 14:43	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0		1		06/16/20 14:43	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	1.0		1		06/16/20 14:43	87-68-3	
2-Hexanone	ND	ug/L	5.0		1		06/16/20 14:43	591-78-6	
Iodomethane	ND	ug/L	20.0		1		06/16/20 14:43	74-88-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-53-060920 **Lab ID: 92481385003** Collected: 06/09/20 17:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Isobutanol	ND	ug/L	100		1		06/16/20 14:43	78-83-1	
Methacrylonitrile	ND	ug/L	10.0		1		06/16/20 14:43	126-98-7	
Methylene Chloride	ND	ug/L	5.0		1		06/16/20 14:43	75-09-2	
Methyl methacrylate	ND	ug/L	2.0		1		06/16/20 14:43	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0		1		06/16/20 14:43	108-10-1	
Propionitrile	ND	ug/L	20.0		1		06/16/20 14:43	107-12-0	
Styrene	ND	ug/L	1.0		1		06/16/20 14:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0		1		06/16/20 14:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1		06/16/20 14:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0		1		06/16/20 14:43	127-18-4	
Toluene	ND	ug/L	1.0		1		06/16/20 14:43	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1		06/16/20 14:43	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1		06/16/20 14:43	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0		1		06/16/20 14:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0		1		06/16/20 14:43	79-00-5	
Trichloroethene	ND	ug/L	1.0		1		06/16/20 14:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0		1		06/16/20 14:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0		1		06/16/20 14:43	96-18-4	
Vinyl acetate	ND	ug/L	2.0		1		06/16/20 14:43	108-05-4	
Vinyl chloride	ND	ug/L	1.0		1		06/16/20 14:43	75-01-4	
Xylene (Total)	ND	ug/L	1.0		1		06/16/20 14:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	123	%	70-130		1		06/16/20 14:43	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		06/16/20 14:43	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		06/16/20 14:43	2037-26-5	
9034 Sulfide, Titration	Analytical Method: EPA 9034 Pace Analytical Services - New Orleans								
Sulfide	ND	mg/L	1.0		1		06/15/20 14:29		
9012B Cyanide, Total	Analytical Method: EPA 9012B Preparation Method: EPA 9012B Pace Analytical Services - Asheville								
Cyanide	ND	mg/L	0.0080		1	06/12/20 23:36	06/13/20 02:55	57-12-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: Trip Blank 1 **Lab ID: 92481385004** Collected: 06/09/20 00:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011 Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.020		1	06/15/20 14:30	06/15/20 18:25	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.020		1	06/15/20 14:30	06/15/20 18:25	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	97	%	60-140		1	06/15/20 14:30	06/15/20 18:25	301-79-56	
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Acetone	ND	ug/L	25.0		1		06/15/20 15:37	67-64-1	
Acetonitrile	ND	ug/L	50.0		1		06/15/20 15:37	75-05-8	
Acrolein	ND	ug/L	10.0		1		06/15/20 15:37	107-02-8	IH,IK,v1
Acrylonitrile	ND	ug/L	10.0		1		06/15/20 15:37	107-13-1	
Allyl chloride	ND	ug/L	2.0		1		06/15/20 15:37	107-05-1	
Benzene	ND	ug/L	1.0		1		06/15/20 15:37	71-43-2	
Bromobenzene	ND	ug/L	1.0		1		06/15/20 15:37	108-86-1	
Bromochloromethane	ND	ug/L	1.0		1		06/15/20 15:37	74-97-5	
Bromodichloromethane	ND	ug/L	1.0		1		06/15/20 15:37	75-27-4	
Bromoform	ND	ug/L	1.0		1		06/15/20 15:37	75-25-2	
Bromomethane	ND	ug/L	2.0		1		06/15/20 15:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0		1		06/15/20 15:37	78-93-3	
Carbon disulfide	ND	ug/L	2.0		1		06/15/20 15:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0		1		06/15/20 15:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0		1		06/15/20 15:37	108-90-7	
Chloroethane	ND	ug/L	1.0		1		06/15/20 15:37	75-00-3	
Chloroform	ND	ug/L	5.0		1		06/15/20 15:37	67-66-3	
Chloromethane	ND	ug/L	1.0		1		06/15/20 15:37	74-87-3	
Chloroprene	ND	ug/L	5.0		1		06/15/20 15:37	126-99-8	
Dibromochloromethane	ND	ug/L	1.0		1		06/15/20 15:37	124-48-1	
Dibromomethane	ND	ug/L	1.0		1		06/15/20 15:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0		1		06/15/20 15:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0		1		06/15/20 15:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0		1		06/15/20 15:37	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0		1		06/15/20 15:37	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0		1		06/15/20 15:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0		1		06/15/20 15:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0		1		06/15/20 15:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0		1		06/15/20 15:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0		1		06/15/20 15:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0		1		06/15/20 15:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0		1		06/15/20 15:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0		1		06/15/20 15:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0		1		06/15/20 15:37	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150		1		06/15/20 15:37	123-91-1	
Ethylbenzene	ND	ug/L	1.0		1		06/15/20 15:37	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0		1		06/15/20 15:37	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	1.0		1		06/15/20 15:37	87-68-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: Trip Blank 1 **Lab ID: 92481385004** Collected: 06/09/20 00:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
2-Hexanone	ND	ug/L	5.0		1		06/15/20 15:37	591-78-6	
Iodomethane	ND	ug/L	20.0		1		06/15/20 15:37	74-88-4	
Isobutanol	ND	ug/L	100		1		06/15/20 15:37	78-83-1	
Methacrylonitrile	ND	ug/L	10.0		1		06/15/20 15:37	126-98-7	
Methylene Chloride	ND	ug/L	5.0		1		06/15/20 15:37	75-09-2	
Methyl methacrylate	ND	ug/L	2.0		1		06/15/20 15:37	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0		1		06/15/20 15:37	108-10-1	
Propionitrile	ND	ug/L	20.0		1		06/15/20 15:37	107-12-0	
Styrene	ND	ug/L	1.0		1		06/15/20 15:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0		1		06/15/20 15:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1		06/15/20 15:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0		1		06/15/20 15:37	127-18-4	
Toluene	ND	ug/L	1.0		1		06/15/20 15:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1		06/15/20 15:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1		06/15/20 15:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0		1		06/15/20 15:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0		1		06/15/20 15:37	79-00-5	
Trichloroethene	ND	ug/L	1.0		1		06/15/20 15:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0		1		06/15/20 15:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0		1		06/15/20 15:37	96-18-4	
Vinyl acetate	ND	ug/L	2.0		1		06/15/20 15:37	108-05-4	
Vinyl chloride	ND	ug/L	1.0		1		06/15/20 15:37	75-01-4	
Xylene (Total)	ND	ug/L	1.0		1		06/15/20 15:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-130		1		06/15/20 15:37	460-00-4	
1,2-Dichloroethane-d4 (S)	83	%	70-130		1		06/15/20 15:37	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		06/15/20 15:37	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-62A-061020 **Lab ID: 92481385005** Collected: 06/10/20 09:45 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Chlorinated Herb. (GC) 8151	Analytical Method: EPA 8151 Preparation Method: 8151A Pace National - Mt. Juliet								
2,4-D	ND	ug/L	2.00		1	06/15/20 11:39	06/16/20 11:08	94-75-7	
Dinoseb	ND	ug/L	2.00		1	06/15/20 11:39	06/16/20 11:08	88-85-7	
2,4,5-T	ND	ug/L	2.00		1	06/15/20 11:39	06/16/20 11:08	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	2.00		1	06/15/20 11:39	06/16/20 11:08	93-72-1	
Surrogates									
2,4-DCAA (S)	72.0	%	14.0-158		1	06/15/20 11:39	06/16/20 11:08	19719-28-9	
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011 Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.020		1	06/15/20 14:30	06/15/20 18:42	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.020		1	06/15/20 14:30	06/15/20 18:42	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	87	%	60-140		1	06/15/20 14:30	06/15/20 18:42	301-79-56	
8081 OC Pesticides RVE	Analytical Method: EPA 8081B Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Aldrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	309-00-2	
alpha-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	319-84-6	
beta-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	319-85-7	
delta-BHC	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20		1	06/12/20 13:55	06/15/20 22:58	57-74-9	
4,4'-DDD	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	72-54-8	
4,4'-DDE	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	72-55-9	
4,4'-DDT	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	50-29-3	
Dieldrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	60-57-1	
Endosulfan I	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	959-98-8	
Endosulfan II	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	1031-07-8	
Endrin	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	72-20-8	
Endrin aldehyde	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	7421-93-4	
Heptachlor	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050		1	06/12/20 13:55	06/15/20 22:58	1024-57-3	
Methoxychlor	ND	ug/L	0.15		1	06/12/20 13:55	06/15/20 22:58	72-43-5	
Toxaphene	ND	ug/L	0.20		1	06/12/20 13:55	06/15/20 22:58	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	82	%	10-130		1	06/12/20 13:55	06/15/20 22:58	877-09-8	
Decachlorobiphenyl (S)	60	%	10-130		1	06/12/20 13:55	06/15/20 22:58	2051-24-3	
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:31	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:31	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:31	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:31	53469-21-9	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-62A-061020 **Lab ID: 92481385005** Collected: 06/10/20 09:45 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:31	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:31	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50		1	06/12/20 13:55	06/16/20 08:31	11096-82-5	
Surrogates									
Decachlorobiphenyl (S)	52	%	10-130		1	06/12/20 13:55	06/16/20 08:31	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**1.6J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:37	7440-36-0	
Arsenic	**9.4**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:37	7440-38-2	
Barium	**14.4**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:37	7440-39-3	
Beryllium	ND	ug/L	0.50		1	06/11/20 20:45	06/12/20 16:37	7440-41-7	
Cadmium	ND	ug/L	0.50		1	06/11/20 20:45	06/12/20 16:37	7440-43-9	
Chromium	**4.2J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:37	7440-47-3	
Cobalt	ND	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:37	7440-48-4	
Copper	**0.45J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:37	7440-50-8	
Lead	**0.071J**	ug/L	1.0		1	06/11/20 20:45	06/12/20 16:37	7439-92-1	
Nickel	**1.0J**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:37	7440-02-0	
Selenium	**5.3**	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:37	7782-49-2	
Silver	ND	ug/L	5.0		1	06/11/20 20:45	06/12/20 16:37	7440-22-4	
Thallium	ND	ug/L	1.0		1	06/11/20 20:45	06/12/20 16:37	7440-28-0	
Tin	ND	ug/L	20.0		1	06/11/20 20:45	06/12/20 16:37	7440-31-5	
Vanadium	**34.6**	ug/L	10.0		1	06/11/20 20:45	06/12/20 16:37	7440-62-2	
Zinc	**2.1J**	ug/L	10.0		1	06/11/20 20:45	06/12/20 16:37	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	ug/L	0.20		1	06/15/20 09:30	06/15/20 13:54	7439-97-6	
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Acenaphthene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	83-32-9	
Acenaphthylene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	208-96-8	
Acetophenone	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	98-86-2	
2-Acetylaminofluorene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	53-96-3	v1
4-Aminobiphenyl	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	92-67-1	
Aniline	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	62-53-3	
Anthracene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	120-12-7	
Aramite	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	140-57-8	IL,v1
Atrazine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	1912-24-9	
Benzal chloride	ND	ug/L	250		5	06/12/20 12:05	06/15/20 17:53	98-87-3	L2
Benzaldehyde	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	100-52-7	
Benzidine	ND	ug/L	250		5	06/12/20 12:05	06/15/20 17:53	92-87-5	
Benzo(a)anthracene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	56-55-3	
Benzo(a)pyrene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	50-32-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-62A-061020 **Lab ID: 92481385005** Collected: 06/10/20 09:45 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Benzo(b)fluoranthene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	207-08-9	
Benzoic Acid	ND	ug/L	250		5	06/12/20 12:05	06/15/20 17:53	65-85-0	
Benzophenone	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	119-61-9	
Benzyl alcohol	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	100-51-6	
Biphenyl (Diphenyl)	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	101-55-3	
Butylbenzylphthalate	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	85-68-7	
Caprolactam	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	105-60-2	
Carbazole	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	59-50-7	
4-Chloroaniline	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	106-47-8	
Chlorobenzilate	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	510-15-6	
bis(2-Chloroethoxy)methane	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	111-44-4	
2-Chloronaphthalene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	91-58-7	
2-Chlorophenol	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	7005-72-3	
Chrysene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	218-01-9	
n-Decane	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	124-18-5	
Diallate	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	2303-16-4	
Dibenz(a,h)anthracene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	53-70-3	
Dibenzo(a,e)pyrene	ND	ug/L	250		5	06/12/20 12:05	06/15/20 17:53	192-65-4	IH,L1, v1
Dibenzofuran	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	132-64-9	
2,3-Dibromo-1-propanol phosph	ND	ug/L	250		5	06/12/20 12:05	06/15/20 17:53	126-72-7	L1,v1
1,2-Dichlorobenzene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	91-94-1	
2,4-Dichlorophenol	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	120-83-2	
2,6-Dichlorophenol	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	87-65-0	
2,3-Dichloroaniline	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	608-27-5	
Diethylphthalate	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	84-66-2	
Dimethoate	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	60-51-5	
P-Dimethylaminoazobenzene	ND	ug/L	25.0		5	06/12/20 12:05	06/15/20 17:53	60-11-7	
7,12-Dimethylbenz(a)anthracene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	57-97-6	
3,3'-Dimethylbenzidine	ND	ug/L	125		5	06/12/20 12:05	06/15/20 17:53	119-93-7	IH,L1
2,4-Dimethylphenol	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	105-67-9	
a,a-Dimethylphenylethylamine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	122-09-8	L2
Dimethylphthalate	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	131-11-3	
Di-n-butylphthalate	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	534-52-1	
1,3-Dinitrobenzene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	99-65-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-62A-061020 **Lab ID: 92481385005** Collected: 06/10/20 09:45 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
1,4-Dinitrobenzene	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	100-25-4	v1
2,4-Dinitrophenol	ND	ug/L	250		5	06/12/20 12:05	06/15/20 17:53	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	606-20-2	
Di-n-octylphthalate	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	117-84-0	L1
Diphenylamine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	122-39-4	
Diphenyl ether (Phenyl ether)	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	101-84-8	
1,2-Diphenylhydrazine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	122-66-7	L1
Disulfoton	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	298-04-4	
bis(2-Ethylhexyl)phthalate	ND	ug/L	30.0		5	06/12/20 12:05	06/15/20 17:53	117-81-7	
Ethyl methanesulfonate	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	62-50-0	
Famphur	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	52-85-7	
Fluoranthene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	206-44-0	
Fluorene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	87-68-3	
Hexachlorobenzene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	77-47-4	
Hexachloroethane	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	67-72-1	
Hexachlorophene	ND	ug/L	500		5	06/12/20 12:05	06/15/20 17:53	70-30-4	
Hexachloropropene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	1888-71-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	193-39-5	
Isodrin	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	465-73-6	
Isophorone	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	78-59-1	
Isosafrole	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	120-58-1	
Kepone	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	143-50-0	
Methapyrilene	ND	ug/L	250		5	06/12/20 12:05	06/15/20 17:53	91-80-5	IH
3-Methylcholanthrene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	56-49-5	IL
4,4'-Methylene-bis(2-chloroani	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	101-14-4	
Methyl methanesulfonate	ND	ug/L	25.0		5	06/12/20 12:05	06/15/20 17:53	66-27-3	
1-Methylnaphthalene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	90-12-0	
2-Methylnaphthalene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	91-57-6	
2-Methyl-5-nitroaniline	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	99-55-8	
Methyl parathion	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	298-00-0	L1
2-Methylphenol(o-Cresol)	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	15831-10-4	
1-Naphthalenamine	ND	ug/L	25.0		5	06/12/20 12:05	06/15/20 17:53	134-32-7	
2-Naphthalenamine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	91-59-8	
Naphthalene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	91-20-3	
1,4-Naphthoquinone	ND	ug/L	25.0		5	06/12/20 12:05	06/15/20 17:53	130-15-4	
2-Nitroaniline	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	88-74-4	
3-Nitroaniline	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	99-09-2	
4-Nitroaniline	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	100-01-6	
Nitrobenzene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	98-95-3	
2-Nitrophenol	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	88-75-5	
4-Nitrophenol	ND	ug/L	250		5	06/12/20 12:05	06/15/20 17:53	100-02-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-62A-061020 **Lab ID: 92481385005** Collected: 06/10/20 09:45 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
4-Nitroquinoline-n-oxide	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	56-57-5	v1
5-Nitro-o-toluidine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	99-55-8	
N-Nitrosodiethylamine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	55-18-5	
N-Nitrosodimethylamine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	62-75-9	
N-Nitroso-di-n-butylamine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	924-16-3	
N-Nitroso-di-n-propylamine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	86-30-6	
N-Nitrosomethylethylamine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	10595-95-6	
N-Nitrosomorpholine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	59-89-2	
N-Nitrosopiperidine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	100-75-4	
N-Nitrosopyrrolidine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	930-55-2	
n-Octadecane	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	593-45-3	
O,O,O-Triethylphosphorothioate	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	126-68-1	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	108-60-1	
Parathion (Ethyl parathion)	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	56-38-2	
Pentachlorobenzene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	608-93-5	
Pentachloroethane	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	76-01-7	
Pentachloronitrobenzene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	82-68-8	
Pentachlorophenol	ND	ug/L	100		5	06/12/20 12:05	06/15/20 17:53	87-86-5	
Phenacetin	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	62-44-2	
Phenanthrene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	85-01-8	
Phenol	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	108-95-2	
p-Phenylenediamine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	106-50-3	L2
Phorate	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	298-02-2	
2-Picoline	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	109-06-8	
Pronamide	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	23950-58-5	
Pyrene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	129-00-0	
Pyridine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	110-86-1	
Safrole	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	94-59-7	
Sulfotepp (Thiodiphosphoric Ac	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	3689-24-5	
Terpineol	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	98-55-5	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	58-90-2	
Thionazin	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	297-97-2	
O-Toluidine	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	95-53-4	
1,2,4-Trichlorobenzene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	88-06-2	
1,3,5-Trinitrobenzene	ND	ug/L	50.0		5	06/12/20 12:05	06/15/20 17:53	99-35-4	
Surrogates									
Nitrobenzene-d5 (S)	60	%	13-130		5	06/12/20 12:05	06/15/20 17:53	4165-60-0	D3
2-Fluorobiphenyl (S)	40	%	13-130		5	06/12/20 12:05	06/15/20 17:53	321-60-8	
Terphenyl-d14 (S)	62	%	25-130		5	06/12/20 12:05	06/15/20 17:53	1718-51-0	
Phenol-d6 (S)	23	%	10-130		5	06/12/20 12:05	06/15/20 17:53	13127-88-3	
2-Fluorophenol (S)	30	%	10-130		5	06/12/20 12:05	06/15/20 17:53	367-12-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-62A-061020 **Lab ID: 92481385005** Collected: 06/10/20 09:45 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Surrogates									
2,4,6-Tribromophenol (S)	49	%	10-137		5	06/12/20 12:05	06/15/20 17:53	118-79-6	
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Acetone	ND	ug/L	125		5		06/15/20 20:05	67-64-1	
Acetonitrile	ND	ug/L	250		5		06/15/20 20:05	75-05-8	
Acrolein	ND	ug/L	50.0		5		06/15/20 20:05	107-02-8	IH,IK,v1
Acrylonitrile	ND	ug/L	50.0		5		06/15/20 20:05	107-13-1	
Allyl chloride	ND	ug/L	10.0		5		06/15/20 20:05	107-05-1	
Benzene	ND	ug/L	5.0		5		06/15/20 20:05	71-43-2	
Bromobenzene	ND	ug/L	5.0		5		06/15/20 20:05	108-86-1	
Bromochloromethane	ND	ug/L	5.0		5		06/15/20 20:05	74-97-5	
Bromodichloromethane	ND	ug/L	5.0		5		06/15/20 20:05	75-27-4	
Bromoform	ND	ug/L	5.0		5		06/15/20 20:05	75-25-2	
Bromomethane	ND	ug/L	10.0		5		06/15/20 20:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0		5		06/15/20 20:05	78-93-3	
Carbon disulfide	ND	ug/L	10.0		5		06/15/20 20:05	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0		5		06/15/20 20:05	56-23-5	
Chlorobenzene	ND	ug/L	5.0		5		06/15/20 20:05	108-90-7	
Chloroethane	ND	ug/L	5.0		5		06/15/20 20:05	75-00-3	
Chloroform	ND	ug/L	25.0		5		06/15/20 20:05	67-66-3	
Chloromethane	ND	ug/L	5.0		5		06/15/20 20:05	74-87-3	
Chloroprene	ND	ug/L	25.0		5		06/15/20 20:05	126-99-8	
Dibromochloromethane	ND	ug/L	5.0		5		06/15/20 20:05	124-48-1	
Dibromomethane	ND	ug/L	5.0		5		06/15/20 20:05	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0		5		06/15/20 20:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0		5		06/15/20 20:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0		5		06/15/20 20:05	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0		5		06/15/20 20:05	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0		5		06/15/20 20:05	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0		5		06/15/20 20:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0		5		06/15/20 20:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0		5		06/15/20 20:05	75-35-4	
cis-1,2-Dichloroethene	**391**	ug/L	5.0		5		06/15/20 20:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0		5		06/15/20 20:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0		5		06/15/20 20:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0		5		06/15/20 20:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0		5		06/15/20 20:05	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	750		5		06/15/20 20:05	123-91-1	
Ethylbenzene	ND	ug/L	5.0		5		06/15/20 20:05	100-41-4	
Ethyl methacrylate	ND	ug/L	5.0		5		06/15/20 20:05	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0		5		06/15/20 20:05	87-68-3	
2-Hexanone	ND	ug/L	25.0		5		06/15/20 20:05	591-78-6	
Iodomethane	ND	ug/L	100		5		06/15/20 20:05	74-88-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: MW-62A-061020 **Lab ID: 92481385005** Collected: 06/10/20 09:45 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Isobutanol	ND	ug/L	500		5		06/15/20 20:05	78-83-1	
Methacrylonitrile	ND	ug/L	50.0		5		06/15/20 20:05	126-98-7	
Methylene Chloride	ND	ug/L	25.0		5		06/15/20 20:05	75-09-2	
Methyl methacrylate	ND	ug/L	10.0		5		06/15/20 20:05	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0		5		06/15/20 20:05	108-10-1	
Propionitrile	ND	ug/L	100		5		06/15/20 20:05	107-12-0	
Styrene	ND	ug/L	5.0		5		06/15/20 20:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0		5		06/15/20 20:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0		5		06/15/20 20:05	79-34-5	
Tetrachloroethene	ND	ug/L	5.0		5		06/15/20 20:05	127-18-4	
Toluene	**2.3J**	ug/L	5.0		5		06/15/20 20:05	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0		5		06/15/20 20:05	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0		5		06/15/20 20:05	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0		5		06/15/20 20:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0		5		06/15/20 20:05	79-00-5	
Trichloroethene	ND	ug/L	5.0		5		06/15/20 20:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0		5		06/15/20 20:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0		5		06/15/20 20:05	96-18-4	
Vinyl acetate	ND	ug/L	10.0		5		06/15/20 20:05	108-05-4	
Vinyl chloride	**11.7**	ug/L	5.0		5		06/15/20 20:05	75-01-4	
Xylene (Total)	ND	ug/L	5.0		5		06/15/20 20:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		5		06/15/20 20:05	460-00-4	
1,2-Dichloroethane-d4 (S)	83	%	70-130		5		06/15/20 20:05	17060-07-0	
Toluene-d8 (S)	101	%	70-130		5		06/15/20 20:05	2037-26-5	
9034 Sulfide, Titration	Analytical Method: EPA 9034 Pace Analytical Services - New Orleans								
Sulfide	ND	mg/L	1.0		1		06/15/20 14:29		
9012B Cyanide, Total	Analytical Method: EPA 9012B Preparation Method: EPA 9012B Pace Analytical Services - Asheville								
Cyanide	ND	mg/L	0.0080		1	06/12/20 23:36	06/13/20 02:56	57-12-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: Trip Blank 2 **Lab ID: 92481385006** Collected: 06/10/20 00:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011 Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.019		1	06/16/20 09:38	06/17/20 01:06	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.019		1	06/16/20 09:38	06/17/20 01:06	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	93	%	60-140		1	06/16/20 09:38	06/17/20 01:06	301-79-56	
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Acetone	ND	ug/L	25.0		1		06/15/20 15:54	67-64-1	
Acetonitrile	ND	ug/L	50.0		1		06/15/20 15:54	75-05-8	
Acrolein	ND	ug/L	10.0		1		06/15/20 15:54	107-02-8	IH,IK,v1
Acrylonitrile	ND	ug/L	10.0		1		06/15/20 15:54	107-13-1	
Allyl chloride	ND	ug/L	2.0		1		06/15/20 15:54	107-05-1	
Benzene	ND	ug/L	1.0		1		06/15/20 15:54	71-43-2	
Bromobenzene	ND	ug/L	1.0		1		06/15/20 15:54	108-86-1	
Bromochloromethane	ND	ug/L	1.0		1		06/15/20 15:54	74-97-5	
Bromodichloromethane	ND	ug/L	1.0		1		06/15/20 15:54	75-27-4	
Bromoform	ND	ug/L	1.0		1		06/15/20 15:54	75-25-2	
Bromomethane	ND	ug/L	2.0		1		06/15/20 15:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0		1		06/15/20 15:54	78-93-3	
Carbon disulfide	ND	ug/L	2.0		1		06/15/20 15:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0		1		06/15/20 15:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0		1		06/15/20 15:54	108-90-7	
Chloroethane	ND	ug/L	1.0		1		06/15/20 15:54	75-00-3	
Chloroform	ND	ug/L	5.0		1		06/15/20 15:54	67-66-3	
Chloromethane	ND	ug/L	1.0		1		06/15/20 15:54	74-87-3	
Chloroprene	ND	ug/L	5.0		1		06/15/20 15:54	126-99-8	
Dibromochloromethane	ND	ug/L	1.0		1		06/15/20 15:54	124-48-1	
Dibromomethane	ND	ug/L	1.0		1		06/15/20 15:54	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0		1		06/15/20 15:54	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0		1		06/15/20 15:54	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0		1		06/15/20 15:54	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0		1		06/15/20 15:54	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0		1		06/15/20 15:54	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0		1		06/15/20 15:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0		1		06/15/20 15:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0		1		06/15/20 15:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0		1		06/15/20 15:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0		1		06/15/20 15:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0		1		06/15/20 15:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0		1		06/15/20 15:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0		1		06/15/20 15:54	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150		1		06/15/20 15:54	123-91-1	
Ethylbenzene	ND	ug/L	1.0		1		06/15/20 15:54	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0		1		06/15/20 15:54	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	1.0		1		06/15/20 15:54	87-68-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Sample: Trip Blank 2 **Lab ID: 92481385006** Collected: 06/10/20 00:00 Received: 06/11/20 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level Landfill	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
2-Hexanone	ND	ug/L	5.0		1		06/15/20 15:54	591-78-6	
Iodomethane	ND	ug/L	20.0		1		06/15/20 15:54	74-88-4	
Isobutanol	ND	ug/L	100		1		06/15/20 15:54	78-83-1	
Methacrylonitrile	ND	ug/L	10.0		1		06/15/20 15:54	126-98-7	
Methylene Chloride	ND	ug/L	5.0		1		06/15/20 15:54	75-09-2	
Methyl methacrylate	ND	ug/L	2.0		1		06/15/20 15:54	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0		1		06/15/20 15:54	108-10-1	
Propionitrile	ND	ug/L	20.0		1		06/15/20 15:54	107-12-0	
Styrene	ND	ug/L	1.0		1		06/15/20 15:54	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0		1		06/15/20 15:54	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1		06/15/20 15:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0		1		06/15/20 15:54	127-18-4	
Toluene	ND	ug/L	1.0		1		06/15/20 15:54	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1		06/15/20 15:54	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1		06/15/20 15:54	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0		1		06/15/20 15:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0		1		06/15/20 15:54	79-00-5	
Trichloroethene	ND	ug/L	1.0		1		06/15/20 15:54	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0		1		06/15/20 15:54	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0		1		06/15/20 15:54	96-18-4	
Vinyl acetate	ND	ug/L	2.0		1		06/15/20 15:54	108-05-4	
Vinyl chloride	ND	ug/L	1.0		1		06/15/20 15:54	75-01-4	
Xylene (Total)	ND	ug/L	1.0		1		06/15/20 15:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		06/15/20 15:54	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		06/15/20 15:54	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		06/15/20 15:54	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 1492547
QC Batch Method: 8151A
Analysis Method: EPA 8151
Analysis Description: Chlorinated Herb. (GC) 8151
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 92481385001, 92481385002, 92481385003

METHOD BLANK: R3539072-1 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4-D	ug/L	ND	2.00	06/15/20 20:42	
Dinoseb	ug/L	ND	2.00	06/15/20 20:42	
2,4,5-T	ug/L	ND	2.00	06/15/20 20:42	
2,4,5-TP (Silvex)	ug/L	ND	2.00	06/15/20 20:42	
2,4-DCAA (S)	%	33.4	14.0-158	06/15/20 20:42	

LABORATORY CONTROL SAMPLE & LCSD: R3539072-2 R3539072-3

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4-D	ug/L	5.00	4.69	4.84	93.8	96.8	50.0-120	3.15	20	
Dinoseb	ug/L	5.00	4.33	4.24	86.6	84.8	36.0-134	2.10	20	
2,4,5-T	ug/L	5.00	4.91	4.71	98.2	94.2	54.0-120	4.16	20	
2,4,5-TP (Silvex)	ug/L	5.00	4.31	4.29	86.2	85.8	50.0-125	0.465	20	
2,4-DCAA (S)	%				75.6	84.0	14.0-158			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 1492612
QC Batch Method: 8151A
Analysis Method: EPA 8151
Analysis Description: Chlorinated Herb. (GC) 8151
Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92481385005

METHOD BLANK: R3539130-1 Matrix: Water
Associated Lab Samples: 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4-D	ug/L	ND	2.00	06/16/20 09:27	
Dinoseb	ug/L	ND	2.00	06/16/20 09:27	
2,4,5-T	ug/L	ND	2.00	06/16/20 09:27	
2,4,5-TP (Silvex)	ug/L	ND	2.00	06/16/20 09:27	
2,4-DCAA (S)	%	77.6	14.0-158	06/16/20 09:27	

LABORATORY CONTROL SAMPLE: R3539130-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-D	ug/L	5.00	4.77	95.4	50.0-120	
Dinoseb	ug/L	5.00	4.55	91.0	36.0-134	
2,4,5-T	ug/L	5.00	5.12	102	54.0-120	
2,4,5-TP (Silvex)	ug/L	5.00	4.49	89.8	50.0-125	
2,4-DCAA (S)	%			69.4	14.0-158	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3539130-3 R3539130-4

Parameter	Units	L1228999-01 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4-D	ug/L	ND	5.90	6.60	5.36	5.58	90.8	84.5	50.0-120	4.02	20	
Dinoseb	ug/L	ND	5.90	6.60	5.22	5.23	88.5	79.2	36.0-134	0.191	20	
2,4,5-T	ug/L	ND	5.90	6.60	5.52	5.96	93.6	90.3	54.0-120	7.67	20	
2,4,5-TP (Silvex)	ug/L	ND	5.90	6.60	5.01	5.13	84.9	77.7	50.0-125	2.37	20	
2,4-DCAA (S)	%						65.8	62.1	14.0-158			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 546796
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

METHOD BLANK: 2910640 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	06/12/20 15:23	
Arsenic	ug/L	ND	5.0	06/12/20 15:23	
Barium	ug/L	ND	5.0	06/12/20 15:23	
Beryllium	ug/L	ND	0.50	06/12/20 15:23	
Cadmium	ug/L	ND	0.50	06/12/20 15:23	
Chromium	ug/L	ND	5.0	06/12/20 15:23	
Cobalt	ug/L	ND	5.0	06/12/20 15:23	
Copper	ug/L	ND	5.0	06/12/20 15:23	
Lead	ug/L	ND	1.0	06/12/20 15:23	
Nickel	ug/L	ND	5.0	06/12/20 15:23	
Selenium	ug/L	ND	5.0	06/12/20 15:23	
Silver	ug/L	ND	5.0	06/12/20 15:23	
Thallium	ug/L	ND	1.0	06/12/20 15:23	
Tin	ug/L	ND	20.0	06/12/20 15:23	
Vanadium	ug/L	ND	10.0	06/12/20 15:23	
Zinc	ug/L	ND	10.0	06/12/20 15:23	

LABORATORY CONTROL SAMPLE: 2910641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	100	98.6	99	80-120	
Arsenic	ug/L	100	98.0	98	80-120	
Barium	ug/L	100	97.2	97	80-120	
Beryllium	ug/L	100	96.7	97	80-120	
Cadmium	ug/L	100	96.9	97	80-120	
Chromium	ug/L	100	99.8	100	80-120	
Cobalt	ug/L	100	98.2	98	80-120	
Copper	ug/L	100	99.7	100	80-120	
Lead	ug/L	100	93.7	94	80-120	
Nickel	ug/L	100	96.9	97	80-120	
Selenium	ug/L	100	97.7	98	80-120	
Silver	ug/L	100	95.2	95	80-120	
Thallium	ug/L	100	94.6	95	80-120	
Tin	ug/L	100	98.4	98	80-120	
Vanadium	ug/L	100	100	100	80-120	
Zinc	ug/L	100	100	100	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2910642 2910643

Parameter	Units	92481385003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	0.61J	100	100	107	99.6	106	99	75-125	7	20	
Arsenic	ug/L	0.98J	100	100	102	102	101	101	75-125	0	20	
Barium	ug/L	52.1	100	100	158	147	106	95	75-125	7	20	
Beryllium	ug/L	ND	100	100	102	97.6	102	98	75-125	5	20	
Cadmium	ug/L	0.18J	100	100	99.4	99.6	99	99	75-125	0	20	
Chromium	ug/L	1.2J	100	100	102	103	101	102	75-125	1	20	
Cobalt	ug/L	ND	100	100	97.8	98.7	98	99	75-125	1	20	
Copper	ug/L	4.9J	100	100	103	103	99	98	75-125	0	20	
Lead	ug/L	0.049J	100	100	94.9	93.8	95	94	75-125	1	20	
Nickel	ug/L	22.2	100	100	119	120	96	98	75-125	1	20	
Selenium	ug/L	ND	100	100	92.8	94.3	93	94	75-125	1	20	
Silver	ug/L	ND	100	100	98.9	95.2	99	95	75-125	4	20	
Thallium	ug/L	ND	100	100	97.6	94.4	98	94	75-125	3	20	
Tin	ug/L	ND	100	100	104	99.0	104	99	75-125	5	20	
Vanadium	ug/L	76.0	100	100	179	184	103	108	75-125	3	20	
Zinc	ug/L	21.0	100	100	120	122	99	101	75-125	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2910644 2910645

Parameter	Units	92481527003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	97.8	97.3	98	97	75-125	0	20	
Arsenic	ug/L	ND	100	100	93.7	95.8	94	96	75-125	2	20	
Barium	ug/L	0.037 mg/L	100	100	131	130	94	93	75-125	1	20	
Beryllium	ug/L	ND	100	100	92.7	94.3	93	94	75-125	2	20	
Cadmium	ug/L	ND	100	100	98.0	96.8	98	97	75-125	1	20	
Chromium	ug/L	ND	100	100	98.2	101	94	97	75-125	3	20	
Cobalt	ug/L	ND	100	100	94.8	97.7	93	96	75-125	3	20	
Copper	ug/L	ND	100	100	97.1	100	96	99	75-125	3	20	
Lead	ug/L	ND	100	100	93.7	93.5	92	92	75-125	0	20	
Nickel	ug/L	ND	100	100	95.9	98.5	93	96	75-125	3	20	
Selenium	ug/L	ND	100	100	92.8	94.7	93	95	75-125	2	20	
Silver	ug/L	ND	100	100	95.4	93.1	95	93	75-125	2	20	
Thallium	ug/L	ND	100	100	92.1	91.4	92	91	75-125	1	20	
Tin	ug/L	ND	100	100	96.8	97.3	97	97	75-125	0	20	
Vanadium	ug/L	ND	100	100	99.7	102	96	98	75-125	2	20	
Zinc	ug/L	ND	100	100	106	108	96	98	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 547246
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

METHOD BLANK: 2912683 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	06/15/20 13:35	

LABORATORY CONTROL SAMPLE: 2912684

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.4	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2912685 2912686

Parameter	Units	92481385001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.3	2.3	91	92	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 547303
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV Low Level Landfill
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92481385001, 92481385002, 92481385004, 92481385005, 92481385006

METHOD BLANK: 2912856 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385004, 92481385005, 92481385006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	06/15/20 12:38	
1,1,1-Trichloroethane	ug/L	ND	1.0	06/15/20 12:38	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	06/15/20 12:38	
1,1,2-Trichloroethane	ug/L	ND	1.0	06/15/20 12:38	
1,1-Dichloroethane	ug/L	ND	1.0	06/15/20 12:38	
1,1-Dichloroethene	ug/L	ND	1.0	06/15/20 12:38	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	06/15/20 12:38	
1,2,3-Trichloropropane	ug/L	ND	1.0	06/15/20 12:38	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	06/15/20 12:38	
1,2-Dichlorobenzene	ug/L	ND	1.0	06/15/20 12:38	
1,2-Dichloroethane	ug/L	ND	1.0	06/15/20 12:38	
1,2-Dichloropropane	ug/L	ND	1.0	06/15/20 12:38	
1,3-Dichlorobenzene	ug/L	ND	1.0	06/15/20 12:38	
1,4-Dichlorobenzene	ug/L	ND	1.0	06/15/20 12:38	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	06/15/20 12:38	
2-Butanone (MEK)	ug/L	ND	5.0	06/15/20 12:38	
2-Hexanone	ug/L	ND	5.0	06/15/20 12:38	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	06/15/20 12:38	
Acetone	ug/L	ND	25.0	06/15/20 12:38	
Acetonitrile	ug/L	ND	50.0	06/15/20 12:38	
Acrolein	ug/L	ND	10.0	06/15/20 12:38	IH,IK,v1
Acrylonitrile	ug/L	ND	10.0	06/15/20 12:38	
Allyl chloride	ug/L	ND	2.0	06/15/20 12:38	
Benzene	ug/L	ND	1.0	06/15/20 12:38	
Bromobenzene	ug/L	ND	1.0	06/15/20 12:38	
Bromochloromethane	ug/L	ND	1.0	06/15/20 12:38	
Bromodichloromethane	ug/L	ND	1.0	06/15/20 12:38	
Bromoform	ug/L	ND	1.0	06/15/20 12:38	
Bromomethane	ug/L	ND	2.0	06/15/20 12:38	
Carbon disulfide	ug/L	ND	2.0	06/15/20 12:38	
Carbon tetrachloride	ug/L	ND	1.0	06/15/20 12:38	
Chlorobenzene	ug/L	ND	1.0	06/15/20 12:38	
Chloroethane	ug/L	ND	1.0	06/15/20 12:38	
Chloroform	ug/L	ND	5.0	06/15/20 12:38	
Chloromethane	ug/L	ND	1.0	06/15/20 12:38	
Chloroprene	ug/L	ND	5.0	06/15/20 12:38	
cis-1,2-Dichloroethene	ug/L	ND	1.0	06/15/20 12:38	
cis-1,3-Dichloropropene	ug/L	ND	1.0	06/15/20 12:38	
Dibromochloromethane	ug/L	ND	1.0	06/15/20 12:38	
Dibromomethane	ug/L	ND	1.0	06/15/20 12:38	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

METHOD BLANK: 2912856 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385004, 92481385005, 92481385006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	06/15/20 12:38	
Ethyl methacrylate	ug/L	ND	1.0	06/15/20 12:38	
Ethylbenzene	ug/L	ND	1.0	06/15/20 12:38	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	06/15/20 12:38	
Iodomethane	ug/L	ND	20.0	06/15/20 12:38	
Isobutanol	ug/L	ND	100	06/15/20 12:38	
Methacrylonitrile	ug/L	ND	10.0	06/15/20 12:38	
Methyl methacrylate	ug/L	ND	2.0	06/15/20 12:38	
Methylene Chloride	ug/L	ND	5.0	06/15/20 12:38	
Propionitrile	ug/L	ND	20.0	06/15/20 12:38	
Styrene	ug/L	ND	1.0	06/15/20 12:38	
Tetrachloroethene	ug/L	ND	1.0	06/15/20 12:38	
Toluene	ug/L	ND	1.0	06/15/20 12:38	
trans-1,2-Dichloroethene	ug/L	ND	1.0	06/15/20 12:38	
trans-1,3-Dichloropropene	ug/L	ND	1.0	06/15/20 12:38	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	06/15/20 12:38	
Trichloroethene	ug/L	ND	1.0	06/15/20 12:38	
Trichlorofluoromethane	ug/L	ND	1.0	06/15/20 12:38	
Vinyl acetate	ug/L	ND	2.0	06/15/20 12:38	
Vinyl chloride	ug/L	ND	1.0	06/15/20 12:38	
Xylene (Total)	ug/L	ND	1.0	06/15/20 12:38	
1,2-Dichloroethane-d4 (S)	%	88	70-130	06/15/20 12:38	
4-Bromofluorobenzene (S)	%	91	70-130	06/15/20 12:38	
Toluene-d8 (S)	%	99	70-130	06/15/20 12:38	

LABORATORY CONTROL SAMPLE: 2912857

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	48.5	97	70-130	
1,1,1-Trichloroethane	ug/L	50	45.6	91	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.3	91	70-130	
1,1,2-Trichloroethane	ug/L	50	49.3	99	70-130	
1,1-Dichloroethane	ug/L	50	46.3	93	70-130	
1,1-Dichloroethene	ug/L	50	46.5	93	70-130	
1,2,3-Trichlorobenzene	ug/L	50	38.6	77	70-130	
1,2,3-Trichloropropane	ug/L	50	42.9	86	70-130	
1,2,4-Trichlorobenzene	ug/L	50	45.4	91	70-130	
1,2-Dichlorobenzene	ug/L	50	51.5	103	70-130	
1,2-Dichloroethane	ug/L	50	41.5	83	70-130	
1,2-Dichloropropane	ug/L	50	49.9	100	70-130	
1,3-Dichlorobenzene	ug/L	50	51.5	103	70-130	
1,4-Dichlorobenzene	ug/L	50	51.6	103	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	944	94	59-169	
2-Butanone (MEK)	ug/L	100	91.3	91	64-135	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

LABORATORY CONTROL SAMPLE: 2912857

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Hexanone	ug/L	100	86.4	86	66-135	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.8	92	70-130	
Acetone	ug/L	100	87.4	87	61-157	
Acetonitrile	ug/L	500	500	100	62-130	
Acrolein	ug/L	250	369	148	10-200	IH,IK,v1
Acrylonitrile	ug/L	250	233	93	61-143	
Allyl chloride	ug/L	50	46.9	94	70-130	
Benzene	ug/L	50	49.7	99	70-130	
Bromobenzene	ug/L	50	50.3	101	70-130	
Bromochloromethane	ug/L	50	50.8	102	70-130	
Bromodichloromethane	ug/L	50	48.5	97	70-130	
Bromoform	ug/L	50	47.8	96	70-130	
Bromomethane	ug/L	50	51.7	103	38-130	
Carbon disulfide	ug/L	50	47.5	95	68-130	
Carbon tetrachloride	ug/L	50	48.7	97	70-130	
Chlorobenzene	ug/L	50	50.4	101	70-130	
Chloroethane	ug/L	50	31.9	64	37-142	
Chloroform	ug/L	50	43.8	88	70-130	
Chloromethane	ug/L	50	41.9	84	48-130	
Chloroprene	ug/L	50	46.4	93	70-130	
cis-1,2-Dichloroethene	ug/L	50	45.4	91	70-130	
cis-1,3-Dichloropropene	ug/L	50	49.4	99	70-130	
Dibromochloromethane	ug/L	50	48.8	98	70-130	
Dibromomethane	ug/L	50	49.6	99	70-130	
Dichlorodifluoromethane	ug/L	50	37.9	76	53-134	
Ethyl methacrylate	ug/L	50	46.2	92	70-130	
Ethylbenzene	ug/L	50	46.7	93	70-130	
Hexachloro-1,3-butadiene	ug/L	50	49.0	98	68-132	
Iodomethane	ug/L	100	83.8	84	40-130	
Isobutanol	ug/L	1000	795	80	44-144	
Methacrylonitrile	ug/L	500	495	99	66-130	
Methyl methacrylate	ug/L	50	44.7	89	69-130	
Methylene Chloride	ug/L	50	47.6	95	67-132	
Propionitrile	ug/L	500	477	95	70-130	
Styrene	ug/L	50	52.7	105	70-130	
Tetrachloroethene	ug/L	50	53.2	106	69-130	
Toluene	ug/L	50	48.1	96	70-130	
trans-1,2-Dichloroethene	ug/L	50	46.4	93	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.9	96	70-130	
trans-1,4-Dichloro-2-butene	ug/L	50	55.3	111	35-189	
Trichloroethene	ug/L	50	52.4	105	70-130	
Trichlorofluoromethane	ug/L	50	37.8	76	63-130	
Vinyl acetate	ug/L	100	101	101	55-143	
Vinyl chloride	ug/L	50	52.9	106	70-131	
Xylene (Total)	ug/L	150	144	96	70-130	
1,2-Dichloroethane-d4 (S)	%			83	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

LABORATORY CONTROL SAMPLE: 2912857

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2913740 2913741

Parameter	Units	92480522007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	19.7	19.8	99	99	73-134	1	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	21.2	21.2	106	106	82-143	0	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	22.1	22.3	111	111	70-136	1	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	20.5	20.8	102	104	70-135	1	30	
1,1-Dichloroethane	ug/L	ND	20	20	23.5	23.8	117	119	70-139	1	30	
1,1-Dichloroethene	ug/L	ND	20	20	24.0	23.7	120	119	70-154	1	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	22.6	21.3	113	106	70-135	6	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	20.0	19.9	100	99	71-137	0	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	21.7	21.0	109	105	73-140	3	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	21.2	21.2	106	106	70-133	0	30	
1,2-Dichloroethane	ug/L	ND	20	20	20.6	20.6	103	103	70-137	0	30	
1,2-Dichloropropane	ug/L	ND	20	20	22.8	23.4	114	117	70-140	3	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	21.2	21.2	106	106	70-135	0	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	21.1	21.4	105	107	70-133	1	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	407	395	102	99	53-168	3	30	
2-Butanone (MEK)	ug/L	ND	40	40	45.5	45.3	114	113	60-139	0	30	v1
2-Hexanone	ug/L	ND	40	40	43.6	43.7	109	109	65-138	0	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	43.5	43.8	109	109	65-135	1	30	
Acetone	ug/L	ND	40	40	44.7	44.6	112	112	60-148	0	30	v1
Acetonitrile	ug/L	ND	200	200	248	242	124	121	65-141	2	30	v1
Acrolein	ug/L	ND	100	100	122	122	122	122	28-162	1	30	v1
Acrylonitrile	ug/L	ND	100	100	124	124	124	124	64-147	0	30	v1
Allyl chloride	ug/L	ND	20	20	24.4	24.4	122	122	70-133	0	30	
Benzene	ug/L	ND	20	20	22.0	22.3	110	111	70-151	1	30	
Bromobenzene	ug/L	ND	20	20	20.8	21.1	104	105	70-136	1	30	
Bromochloromethane	ug/L	ND	20	20	22.4	22.2	112	111	70-141	1	30	
Bromodichloromethane	ug/L	ND	20	20	19.4	19.7	97	98	70-138	1	30	
Bromoform	ug/L	ND	20	20	17.8	17.6	89	88	63-130	1	30	
Bromomethane	ug/L	ND	20	20	19.6	20.5	98	103	15-152	5	30	v3
Carbon disulfide	ug/L	ND	20	20	24.9	24.9	124	125	69-149	0	30	
Carbon tetrachloride	ug/L	ND	20	20	20.2	20.8	101	104	70-143	3	30	
Chlorobenzene	ug/L	ND	20	20	20.9	21.0	104	105	70-138	0	30	
Chloroethane	ug/L	ND	20	20	22.4	22.2	112	111	52-163	1	30	IK,v3
Chloroform	ug/L	ND	20	20	22.0	22.0	110	110	70-139	0	30	
Chloromethane	ug/L	ND	20	20	20.8	20.5	104	103	41-139	2	30	
Chloroprene	ug/L	ND	20	20	23.2	23.6	116	118	70-135	2	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	23.4	23.3	117	117	70-141	0	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	21.9	22.3	110	111	70-137	1	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2913740 2913741

Parameter	Units	92480522007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	20	20	19.5	19.8	97	99	70-134	1	30	
Dibromomethane	ug/L	ND	20	20	18.5	19.1	92	96	70-138	3	30	
Dichlorodifluoromethane	ug/L	ND	20	20	17.4	17.3	87	87	47-155	0	30	
Ethyl methacrylate	ug/L	ND	20	20	22.0	22.1	110	111	70-132	1	30	
Ethylbenzene	ug/L	ND	20	20	21.3	21.5	106	107	66-153	1	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	22.3	21.0	112	105	65-149	6	30	
Iodomethane	ug/L	ND	40	40	41.5	41.5	104	104	20-138	0	30	
Isobutanol	ug/L	ND	400	400	480	466	120	117	41-152	3	30	v1
Methacrylonitrile	ug/L	ND	200	200	231	232	116	116	67-134	0	30	v1
Methyl methacrylate	ug/L	ND	20	20	20.8	20.9	104	105	70-130	1	30	
Methylene Chloride	ug/L	ND	20	20	24.2	24.1	121	121	42-159	0	30	
Propionitrile	ug/L	ND	200	200	234	231	117	115	70-131	1	30	v1
Styrene	ug/L	ND	20	20	20.6	20.7	103	104	70-135	1	30	
Tetrachloroethene	ug/L	ND	20	20	20.2	20.6	101	103	59-143	2	30	
Toluene	ug/L	ND	20	20	21.1	21.4	106	107	59-148	1	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	24.4	24.2	122	121	70-146	1	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	20.5	20.6	102	103	70-135	0	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	20	13.0	12.8	65	64	47-135	2	30	
Trichloroethene	ug/L	ND	20	20	20.0	20.7	100	103	70-147	3	30	
Trichlorofluoromethane	ug/L	ND	20	20	19.1	19.3	96	96	70-148	1	30	
Vinyl acetate	ug/L	ND	40	40	46.7	46.5	117	116	49-151	0	30	
Vinyl chloride	ug/L	ND	20	20	23.2	23.1	116	116	70-156	0	30	
Xylene (Total)	ug/L	ND	60	60	62.8	64.1	105	107	63-158	2	30	
1,2-Dichloroethane-d4 (S)	%						107	104	70-130			
4-Bromofluorobenzene (S)	%						103	102	70-130			
Toluene-d8 (S)	%						101	101	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 547583
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV Low Level Landfill
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92481385003

METHOD BLANK: 2914083 Matrix: Water
Associated Lab Samples: 92481385003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	06/16/20 14:08	
1,1,1-Trichloroethane	ug/L	ND	1.0	06/16/20 14:08	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	06/16/20 14:08	
1,1,2-Trichloroethane	ug/L	ND	1.0	06/16/20 14:08	
1,1-Dichloroethane	ug/L	ND	1.0	06/16/20 14:08	
1,1-Dichloroethene	ug/L	ND	1.0	06/16/20 14:08	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	06/16/20 14:08	
1,2,3-Trichloropropane	ug/L	ND	1.0	06/16/20 14:08	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	06/16/20 14:08	
1,2-Dichlorobenzene	ug/L	ND	1.0	06/16/20 14:08	
1,2-Dichloroethane	ug/L	ND	1.0	06/16/20 14:08	
1,2-Dichloropropane	ug/L	ND	1.0	06/16/20 14:08	
1,3-Dichlorobenzene	ug/L	ND	1.0	06/16/20 14:08	
1,4-Dichlorobenzene	ug/L	ND	1.0	06/16/20 14:08	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	06/16/20 14:08	
2-Butanone (MEK)	ug/L	ND	5.0	06/16/20 14:08	
2-Hexanone	ug/L	ND	5.0	06/16/20 14:08	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	06/16/20 14:08	
Acetone	ug/L	ND	25.0	06/16/20 14:08	
Acetonitrile	ug/L	ND	50.0	06/16/20 14:08	
Acrolein	ug/L	ND	10.0	06/16/20 14:08	IH,IK
Acrylonitrile	ug/L	ND	10.0	06/16/20 14:08	
Allyl chloride	ug/L	ND	2.0	06/16/20 14:08	
Benzene	ug/L	ND	1.0	06/16/20 14:08	
Bromobenzene	ug/L	ND	1.0	06/16/20 14:08	
Bromochloromethane	ug/L	ND	1.0	06/16/20 14:08	
Bromodichloromethane	ug/L	ND	1.0	06/16/20 14:08	
Bromoform	ug/L	ND	1.0	06/16/20 14:08	
Bromomethane	ug/L	0.99J	2.0	06/16/20 14:08	IH
Carbon disulfide	ug/L	ND	2.0	06/16/20 14:08	
Carbon tetrachloride	ug/L	ND	1.0	06/16/20 14:08	
Chlorobenzene	ug/L	ND	1.0	06/16/20 14:08	
Chloroethane	ug/L	ND	1.0	06/16/20 14:08	
Chloroform	ug/L	ND	5.0	06/16/20 14:08	
Chloromethane	ug/L	ND	1.0	06/16/20 14:08	
Chloroprene	ug/L	ND	5.0	06/16/20 14:08	
cis-1,2-Dichloroethene	ug/L	ND	1.0	06/16/20 14:08	
cis-1,3-Dichloropropene	ug/L	ND	1.0	06/16/20 14:08	
Dibromochloromethane	ug/L	ND	1.0	06/16/20 14:08	
Dibromomethane	ug/L	ND	1.0	06/16/20 14:08	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

METHOD BLANK: 2914083 Matrix: Water
Associated Lab Samples: 92481385003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	06/16/20 14:08	
Ethyl methacrylate	ug/L	ND	1.0	06/16/20 14:08	
Ethylbenzene	ug/L	ND	1.0	06/16/20 14:08	
Hexachloro-1,3-butadiene	ug/L	1.3	1.0	06/16/20 14:08	
Iodomethane	ug/L	ND	20.0	06/16/20 14:08	
Isobutanol	ug/L	ND	100	06/16/20 14:08	
Methacrylonitrile	ug/L	ND	10.0	06/16/20 14:08	
Methyl methacrylate	ug/L	ND	2.0	06/16/20 14:08	
Methylene Chloride	ug/L	ND	5.0	06/16/20 14:08	
Propionitrile	ug/L	ND	20.0	06/16/20 14:08	
Styrene	ug/L	ND	1.0	06/16/20 14:08	
Tetrachloroethene	ug/L	ND	1.0	06/16/20 14:08	
Toluene	ug/L	ND	1.0	06/16/20 14:08	
trans-1,2-Dichloroethene	ug/L	ND	1.0	06/16/20 14:08	
trans-1,3-Dichloropropene	ug/L	ND	1.0	06/16/20 14:08	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	06/16/20 14:08	
Trichloroethene	ug/L	ND	1.0	06/16/20 14:08	
Trichlorofluoromethane	ug/L	ND	1.0	06/16/20 14:08	
Vinyl acetate	ug/L	ND	2.0	06/16/20 14:08	
Vinyl chloride	ug/L	ND	1.0	06/16/20 14:08	
Xylene (Total)	ug/L	ND	1.0	06/16/20 14:08	
1,2-Dichloroethane-d4 (S)	%	102	70-130	06/16/20 14:08	
4-Bromofluorobenzene (S)	%	101	70-130	06/16/20 14:08	
Toluene-d8 (S)	%	102	70-130	06/16/20 14:08	

LABORATORY CONTROL SAMPLE: 2914084

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.6	101	70-130	
1,1,1-Trichloroethane	ug/L	50	52.7	105	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	50.7	101	70-130	
1,1,2-Trichloroethane	ug/L	50	49.9	100	70-130	
1,1-Dichloroethane	ug/L	50	53.1	106	70-130	
1,1-Dichloroethene	ug/L	50	58.0	116	70-130	
1,2,3-Trichlorobenzene	ug/L	50	54.3	109	70-130	
1,2,3-Trichloropropane	ug/L	50	52.7	105	70-130	
1,2,4-Trichlorobenzene	ug/L	50	55.5	111	70-130	
1,2-Dichlorobenzene	ug/L	50	54.0	108	70-130	
1,2-Dichloroethane	ug/L	50	51.4	103	70-130	
1,2-Dichloropropane	ug/L	50	50.9	102	70-130	
1,3-Dichlorobenzene	ug/L	50	53.7	107	70-130	
1,4-Dichlorobenzene	ug/L	50	53.1	106	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	1080	108	59-169	
2-Butanone (MEK)	ug/L	100	110	110	64-135	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

LABORATORY CONTROL SAMPLE: 2914084

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Hexanone	ug/L	100	103	103	66-135	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	70-130	
Acetone	ug/L	100	108	108	61-157	
Acetonitrile	ug/L	500	529	106	62-130	
Acrolein	ug/L	250	547	219	10-200	IH,IK,L1
Acrylonitrile	ug/L	250	255	102	61-143	
Allyl chloride	ug/L	50	56.6	113	70-130	
Benzene	ug/L	50	51.6	103	70-130	
Bromobenzene	ug/L	50	52.6	105	70-130	
Bromochloromethane	ug/L	50	52.5	105	70-130	
Bromodichloromethane	ug/L	50	47.3	95	70-130	
Bromoform	ug/L	50	53.9	108	70-130	
Bromomethane	ug/L	50	79.9	160	38-130	IH,L1
Carbon disulfide	ug/L	50	57.3	115	68-130	
Carbon tetrachloride	ug/L	50	54.7	109	70-130	
Chlorobenzene	ug/L	50	52.7	105	70-130	
Chloroethane	ug/L	50	42.4	85	37-142	
Chloroform	ug/L	50	52.6	105	70-130	
Chloromethane	ug/L	50	47.9	96	48-130	
Chloroprene	ug/L	50	55.1	110	70-130	
cis-1,2-Dichloroethene	ug/L	50	53.4	107	70-130	
cis-1,3-Dichloropropene	ug/L	50	53.9	108	70-130	
Dibromochloromethane	ug/L	50	52.7	105	70-130	
Dibromomethane	ug/L	50	50.0	100	70-130	
Dichlorodifluoromethane	ug/L	50	55.9	112	53-134	
Ethyl methacrylate	ug/L	50	53.5	107	70-130	
Ethylbenzene	ug/L	50	52.6	105	70-130	
Hexachloro-1,3-butadiene	ug/L	50	53.4	107	68-132	
Iodomethane	ug/L	100	108	108	40-130	
Isobutanol	ug/L	1000	1000	100	44-144	
Methacrylonitrile	ug/L	500	532	106	66-130	
Methyl methacrylate	ug/L	50	46.9	94	69-130	
Methylene Chloride	ug/L	50	54.6	109	67-132	
Propionitrile	ug/L	500	541	108	70-130	
Styrene	ug/L	50	53.0	106	70-130	
Tetrachloroethene	ug/L	50	57.2	114	69-130	
Toluene	ug/L	50	48.2	96	70-130	
trans-1,2-Dichloroethene	ug/L	50	54.8	110	70-130	
trans-1,3-Dichloropropene	ug/L	50	51.7	103	70-130	
trans-1,4-Dichloro-2-butene	ug/L	50	55.9	112	35-189	
Trichloroethene	ug/L	50	53.3	107	70-130	
Trichlorofluoromethane	ug/L	50	48.6	97	63-130	
Vinyl acetate	ug/L	100	126	126	55-143	
Vinyl chloride	ug/L	50	56.5	113	70-131	
Xylene (Total)	ug/L	150	156	104	70-130	
1,2-Dichloroethane-d4 (S)	%			94	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

LABORATORY CONTROL SAMPLE: 2914084

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2914085 2914086

Parameter	Units	92480017001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	100	100	99.1	95.8	99	96	73-134	3	30	
1,1,1-Trichloroethane	ug/L	ND	100	100	109	107	109	107	82-143	2	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	100	100	98.0	95.8	98	96	70-136	2	30	
1,1,2-Trichloroethane	ug/L	ND	100	100	97.1	105	97	105	70-135	8	30	
1,1-Dichloroethane	ug/L	ND	100	100	108	109	108	109	70-139	1	30	
1,1-Dichloroethene	ug/L	ND	100	100	123	123	123	123	70-154	0	30	
1,2,3-Trichlorobenzene	ug/L	ND	100	100	94.4	104	94	104	70-135	9	30	
1,2,3-Trichloropropane	ug/L	ND	100	100	97.4	100	97	100	71-137	3	30	
1,2,4-Trichlorobenzene	ug/L	ND	100	100	98.8	111	99	111	73-140	11	30	
1,2-Dichlorobenzene	ug/L	ND	100	100	97.9	100	98	100	70-133	2	30	
1,2-Dichloroethane	ug/L	ND	100	100	105	104	103	103	70-137	0	30	
1,2-Dichloropropane	ug/L	ND	100	100	99.1	100	99	100	70-140	1	30	
1,3-Dichlorobenzene	ug/L	ND	100	100	101	99.8	101	100	70-135	1	30	
1,4-Dichlorobenzene	ug/L	ND	100	100	98.9	101	99	101	70-133	2	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	2000	2000	2200	2330	110	117	53-168	6	30	
2-Butanone (MEK)	ug/L	206	200	200	434	442	114	118	60-139	2	30	
2-Hexanone	ug/L	ND	200	200	199	205	100	103	65-138	3	30	
4-Methyl-2-pentanone (MIBK)	ug/L	31.4	200	200	233	239	101	104	65-135	3	30	
Acetone	ug/L	1720	200	200	1830	1900	55	86	60-148	3	30	M1
Acetonitrile	ug/L	ND	1000	1000	1110	1100	107	107	65-141	0	30	
Acrolein	ug/L	ND	500	500	1100	1120	221	224	28-162	2	30	IH,IK, M0
Acrylonitrile	ug/L	ND	500	500	504	520	101	104	64-147	3	30	
Allyl chloride	ug/L	ND	100	100	110	106	110	106	70-133	4	30	
Benzene	ug/L	1.8J	100	100	105	107	104	105	70-151	1	30	
Bromobenzene	ug/L	ND	100	100	101	97.0	101	97	70-136	4	30	
Bromochloromethane	ug/L	ND	100	100	107	106	107	106	70-141	1	30	
Bromodichloromethane	ug/L	ND	100	100	93.6	92.7	94	93	70-138	1	30	
Bromoform	ug/L	ND	100	100	98.0	100	98	100	63-130	2	30	
Bromomethane	ug/L	ND	100	100	136	139	136	139	15-152	2	30	IH
Carbon disulfide	ug/L	ND	100	100	116	114	116	114	69-149	2	30	
Carbon tetrachloride	ug/L	ND	100	100	116	114	116	114	70-143	1	30	
Chlorobenzene	ug/L	ND	100	100	102	101	102	101	70-138	0	30	
Chloroethane	ug/L	ND	100	100	93.7	94.7	94	95	52-163	1	30	
Chloroform	ug/L	ND	100	100	105	109	105	109	70-139	4	30	
Chloromethane	ug/L	ND	100	100	88.4	89.0	88	89	41-139	1	30	
Chloroprene	ug/L	ND	100	100	116	116	116	116	70-135	0	30	
cis-1,2-Dichloroethene	ug/L	ND	100	100	110	109	110	109	70-141	0	30	
cis-1,3-Dichloropropene	ug/L	ND	100	100	101	104	101	104	70-137	3	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2914085 2914086

Parameter	Units	92480017001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	100	100	102	98.7	102	99	70-134	3	30	
Dibromomethane	ug/L	ND	100	100	101	101	101	101	70-138	0	30	
Dichlorodifluoromethane	ug/L	ND	100	100	98.3	98.5	98	98	47-155	0	30	
Ethyl methacrylate	ug/L	ND	100	100	105	108	105	108	70-132	3	30	
Ethylbenzene	ug/L	ND	100	100	102	104	102	104	66-153	1	30	
Hexachloro-1,3-butadiene	ug/L	ND	100	100	94.5	98.9	95	99	65-149	5	30	
Iodomethane	ug/L	ND	200	200	160	177	80	88	20-138	10	30	
Isobutanol	ug/L	ND	2000	2000	2090	2240	105	112	41-152	7	30	
Methacrylonitrile	ug/L	ND	1000	1000	1090	1080	109	108	67-134	0	30	
Methyl methacrylate	ug/L	ND	100	100	92.7	94.1	93	94	70-130	1	30	
Methylene Chloride	ug/L	ND	100	100	113	111	113	111	42-159	2	30	
Propionitrile	ug/L	ND	1000	1000	1060	1110	106	111	70-131	5	30	
Styrene	ug/L	ND	100	100	104	101	104	101	70-135	2	30	
Tetrachloroethene	ug/L	ND	100	100	109	108	109	108	59-143	1	30	
Toluene	ug/L	ND	100	100	95.8	96.1	96	96	59-148	0	30	
trans-1,2-Dichloroethene	ug/L	ND	100	100	112	114	112	114	70-146	2	30	
trans-1,3-Dichloropropene	ug/L	ND	100	100	98.8	98.4	99	98	70-135	0	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	100	96.2	95.0	96	95	47-135	1	30	
Trichloroethene	ug/L	ND	100	100	106	107	106	107	70-147	0	30	
Trichlorofluoromethane	ug/L	ND	100	100	105	101	105	101	70-148	4	30	
Vinyl acetate	ug/L	ND	200	200	245	249	122	125	49-151	2	30	
Vinyl chloride	ug/L	ND	100	100	111	112	111	112	70-156	1	30	
Xylene (Total)	ug/L	ND	300	300	307	305	102	102	63-158	1	30	
1,2-Dichloroethane-d4 (S)	%						103	105	70-130			
4-Bromofluorobenzene (S)	%						104	103	70-130			
Toluene-d8 (S)	%						100	99	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 547304
QC Batch Method: EPA 8011
Analysis Method: EPA 8011
Analysis Description: GCS 8011 EDB DBCP
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385004, 92481385005

METHOD BLANK: 2912860 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385004, 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	ND	0.020	06/15/20 16:38	
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	06/15/20 16:38	
1-Chloro-2-bromopropane (S)	%	98	60-140	06/15/20 16:38	

LABORATORY CONTROL SAMPLE & LCSD: 2912861 2912862

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.25	0.23	0.22	90	90	60-140	3	20	
1,2-Dibromoethane (EDB)	ug/L	0.25	0.23	0.22	90	90	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				93	93	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2912864 2912865

Parameter	Units	92481585002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	ND	0.25	0.25	0.23	0.21	92	85	60-140	7	20	
1,2-Dibromoethane (EDB)	ug/L	ND	0.25	0.25	0.22	0.21	89	83	60-140	7	20	
1-Chloro-2-bromopropane (S)	%						91	92	60-140			

SAMPLE DUPLICATE: 2912863

Parameter	Units	92481585001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		20	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	92	92			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 547510
QC Batch Method: EPA 8011
Analysis Method: EPA 8011
Analysis Description: GCS 8011 EDB DBCP
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92481385006

METHOD BLANK: 2913654 Matrix: Water
Associated Lab Samples: 92481385006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	ND	0.019	06/17/20 11:10	
1,2-Dibromoethane (EDB)	ug/L	ND	0.019	06/17/20 11:10	
1-Chloro-2-bromopropane (S)	%	95	60-140	06/17/20 11:10	

LABORATORY CONTROL SAMPLE & LCSD: 2913655 2913656

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.25	0.23	0.23	94	95	60-140	1	20	
1,2-Dibromoethane (EDB)	ug/L	0.25	0.24	0.23	98	96	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				97	99	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2913658 2913659

Parameter	Units	92481773012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	ND	0.25	0.25	0.27	0.27	108	107	60-140	0	20	
1,2-Dibromoethane (EDB)	ug/L	ND	0.25	0.25	0.27	0.26	108	104	60-140	1	20	
1-Chloro-2-bromopropane (S)	%						104	101	60-140			

SAMPLE DUPLICATE: 2913657

Parameter	Units	92481773009 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		20	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	106	107			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 546870
QC Batch Method: EPA 3510C
Analysis Method: EPA 8081B
Analysis Description: 8081 OC Pesticides Red Vol
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

METHOD BLANK: 2910816 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	06/15/20 23:28	
4,4'-DDE	ug/L	ND	0.050	06/15/20 23:28	
4,4'-DDT	ug/L	ND	0.050	06/15/20 23:28	
Aldrin	ug/L	ND	0.050	06/15/20 23:28	
alpha-BHC	ug/L	ND	0.050	06/15/20 23:28	
beta-BHC	ug/L	ND	0.050	06/15/20 23:28	
Chlordane (Technical)	ug/L	ND	0.20	06/15/20 23:28	
delta-BHC	ug/L	ND	0.050	06/15/20 23:28	
Dieldrin	ug/L	ND	0.050	06/15/20 23:28	
Endosulfan I	ug/L	ND	0.050	06/15/20 23:28	
Endosulfan II	ug/L	ND	0.050	06/15/20 23:28	
Endosulfan sulfate	ug/L	ND	0.050	06/15/20 23:28	
Endrin	ug/L	ND	0.050	06/15/20 23:28	
Endrin aldehyde	ug/L	ND	0.050	06/15/20 23:28	
gamma-BHC (Lindane)	ug/L	ND	0.050	06/15/20 23:28	
Heptachlor	ug/L	ND	0.050	06/15/20 23:28	
Heptachlor epoxide	ug/L	ND	0.050	06/15/20 23:28	
Methoxychlor	ug/L	ND	0.15	06/15/20 23:28	
Toxaphene	ug/L	ND	0.20	06/15/20 23:28	
Decachlorobiphenyl (S)	%	126	10-130	06/15/20 23:28	
Tetrachloro-m-xylene (S)	%	120	10-130	06/15/20 23:28	

LABORATORY CONTROL SAMPLE: 2910817

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	0.25	0.25	99	49-130	
4,4'-DDE	ug/L	0.25	0.23	90	56-130	
4,4'-DDT	ug/L	0.25	0.26	105	45-130	
Aldrin	ug/L	0.25	0.20	78	25-130	
alpha-BHC	ug/L	0.25	0.22	89	53-130	
beta-BHC	ug/L	0.25	0.26	105	46-130	
delta-BHC	ug/L	0.25	0.24	95	54-130	
Dieldrin	ug/L	0.25	0.24	95	54-130	
Endosulfan I	ug/L	0.25	0.23	94	43-130	
Endosulfan II	ug/L	0.25	0.24	96	64-130	
Endosulfan sulfate	ug/L	0.25	0.24	97	66-130	
Endrin	ug/L	0.25	0.24	97	56-130	
Endrin aldehyde	ug/L	0.25	0.23	91	59-130	
gamma-BHC (Lindane)	ug/L	0.25	0.23	92	57-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

LABORATORY CONTROL SAMPLE: 2910817

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Heptachlor	ug/L	0.25	0.20	79	37-130	
Heptachlor epoxide	ug/L	0.25	0.23	90	56-130	
Methoxychlor	ug/L	0.75	0.67	89	46-130	
Decachlorobiphenyl (S)	%			136	10-130	S0
Tetrachloro-m-xylene (S)	%			130	10-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2910818 2910819

Parameter	Units	92481368002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4,4'-DDD	ug/L	ND	0.25	0.25	0.24	0.22	96	89	28-130	7	30	
4,4'-DDE	ug/L	ND	0.25	0.25	0.23	0.21	94	85	26-130	9	30	
4,4'-DDT	ug/L	ND	0.25	0.25	0.23	0.22	92	87	11-130	5	30	
Aldrin	ug/L	ND	0.25	0.25	0.22	0.21	88	83	10-130	5	30	
alpha-BHC	ug/L	ND	0.25	0.25	0.22	0.20	88	82	27-130	7	30	
beta-BHC	ug/L	ND	0.25	0.25	0.27	0.25	108	101	15-130	7	30	
delta-BHC	ug/L	ND	0.25	0.25	0.22	0.21	89	83	44-130	7	30	
Dieldrin	ug/L	ND	0.25	0.25	0.24	0.22	97	87	20-130	11	30	
Endosulfan I	ug/L	ND	0.25	0.25	1.0	0.85	415	338	10-139	20	30	M1
Endosulfan II	ug/L	ND	0.25	0.25	0.23	0.22	93	88	36-130	6	30	
Endosulfan sulfate	ug/L	ND	0.25	0.25	0.24	0.23	96	91	45-130	6	30	
Endrin	ug/L	ND	0.25	0.25	0.24	0.23	96	90	26-130	6	30	
Endrin aldehyde	ug/L	ND	0.25	0.25	0.22	0.21	88	82	19-160	7	30	
gamma-BHC (Lindane)	ug/L	ND	0.25	0.25	0.23	0.21	91	85	33-130	7	30	
Heptachlor	ug/L	ND	0.25	0.25	0.20	0.19	81	77	25-130	5	30	
Heptachlor epoxide	ug/L	ND	0.25	0.25	0.31	0.29	123	118	18-130	5	30	
Methoxychlor	ug/L	ND	0.75	0.75	0.66	0.62	88	83	10-130	6	30	
Decachlorobiphenyl (S)	%						135	129	10-130			S0
Tetrachloro-m-xylene (S)	%						121	115	10-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 546871
QC Batch Method: EPA 3510C
Analysis Method: EPA 8082A
Analysis Description: 8082 GCS PCB
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

METHOD BLANK: 2910820 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.50	06/16/20 09:00	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.50	06/16/20 09:00	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.50	06/16/20 09:00	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.50	06/16/20 09:00	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.50	06/16/20 09:00	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.50	06/16/20 09:00	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.50	06/16/20 09:00	
Decachlorobiphenyl (S)	%	114	10-130	06/16/20 09:00	

LABORATORY CONTROL SAMPLE: 2910821

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	5	4.7	94	41-130	
PCB-1260 (Aroclor 1260)	ug/L	5	4.4	88	42-130	
Decachlorobiphenyl (S)	%			119	10-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2910822 2910823

Parameter	Units	92481368002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	ND	5	5	4.9	4.6	99	91	15-130	8	30	
PCB-1260 (Aroclor 1260)	ug/L	ND	5	5	4.9	4.5	98	90	10-130	9	30	
Decachlorobiphenyl (S)	%						128	115	10-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 546959
QC Batch Method: EPA 3510C
Analysis Method: EPA 8270E
Analysis Description: 8270E Water APP9 RV MSSV
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

METHOD BLANK: 2911180 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	06/15/20 10:16	
1,2,4-Trichlorobenzene	ug/L	ND	10.0	06/15/20 10:16	
1,2-Dichlorobenzene	ug/L	ND	10.0	06/15/20 10:16	
1,2-Diphenylhydrazine	ug/L	ND	10.0	06/15/20 10:16	
1,3,5-Trinitrobenzene	ug/L	ND	10.0	06/15/20 10:16	
1,3-Dichlorobenzene	ug/L	ND	10.0	06/15/20 10:16	
1,3-Dinitrobenzene	ug/L	ND	10.0	06/15/20 10:16	
1,4-Dichlorobenzene	ug/L	ND	10.0	06/15/20 10:16	
1,4-Dinitrobenzene	ug/L	ND	20.0	06/15/20 10:16	v1
1,4-Naphthoquinone	ug/L	ND	5.0	06/15/20 10:16	
1-Methylnaphthalene	ug/L	ND	10.0	06/15/20 10:16	
1-Naphthalenamine	ug/L	ND	5.0	06/15/20 10:16	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	06/15/20 10:16	
2,3,4,6-Tetrachlorophenol	ug/L	ND	10.0	06/15/20 10:16	
2,3-Dibromo-1-propanol phosph	ug/L	ND	50.0	06/15/20 10:16	v1
2,3-Dichloroaniline	ug/L	ND	10.0	06/15/20 10:16	
2,4,5-Trichlorophenol	ug/L	ND	10.0	06/15/20 10:16	
2,4,6-Trichlorophenol	ug/L	ND	10.0	06/15/20 10:16	
2,4-Dichlorophenol	ug/L	ND	10.0	06/15/20 10:16	
2,4-Dimethylphenol	ug/L	ND	10.0	06/15/20 10:16	
2,4-Dinitrophenol	ug/L	ND	50.0	06/15/20 10:16	
2,4-Dinitrotoluene	ug/L	ND	10.0	06/15/20 10:16	
2,6-Dichlorophenol	ug/L	ND	10.0	06/15/20 10:16	
2,6-Dinitrotoluene	ug/L	ND	10.0	06/15/20 10:16	
2-Acetylaminofluorene	ug/L	ND	10.0	06/15/20 10:16	v1
2-Chloronaphthalene	ug/L	ND	10.0	06/15/20 10:16	
2-Chlorophenol	ug/L	ND	10.0	06/15/20 10:16	
2-Methyl-5-nitroaniline	ug/L	ND	10.0	06/15/20 10:16	
2-Methylnaphthalene	ug/L	ND	10.0	06/15/20 10:16	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	06/15/20 10:16	
2-Naphthalenamine	ug/L	ND	10.0	06/15/20 10:16	
2-Nitroaniline	ug/L	ND	20.0	06/15/20 10:16	
2-Nitrophenol	ug/L	ND	10.0	06/15/20 10:16	
2-Picoline	ug/L	ND	10.0	06/15/20 10:16	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	06/15/20 10:16	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	06/15/20 10:16	
3,3'-Dimethylbenzidine	ug/L	ND	25.0	06/15/20 10:16	IH
3-Methylcholanthrene	ug/L	ND	10.0	06/15/20 10:16	IL
3-Nitroaniline	ug/L	ND	20.0	06/15/20 10:16	
4,4'-Methylene-bis(2-chloroani	ug/L	ND	20.0	06/15/20 10:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

METHOD BLANK: 2911180 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	06/15/20 10:16	
4-Aminobiphenyl	ug/L	ND	10.0	06/15/20 10:16	
4-Bromophenylphenyl ether	ug/L	ND	10.0	06/15/20 10:16	
4-Chloro-3-methylphenol	ug/L	ND	10.0	06/15/20 10:16	
4-Chloroaniline	ug/L	ND	20.0	06/15/20 10:16	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	06/15/20 10:16	
4-Nitroaniline	ug/L	ND	20.0	06/15/20 10:16	
4-Nitrophenol	ug/L	ND	50.0	06/15/20 10:16	
4-Nitroquinoline-n-oxide	ug/L	ND	20.0	06/15/20 10:16	v1
5-Nitro-o-toluidine	ug/L	ND	10.0	06/15/20 10:16	
7,12-Dimethylbenz(a)anthracene	ug/L	ND	10.0	06/15/20 10:16	
a,a-Dimethylphenylethylamine	ug/L	ND	10.0	06/15/20 10:16	
Acenaphthene	ug/L	ND	10.0	06/15/20 10:16	
Acenaphthylene	ug/L	ND	10.0	06/15/20 10:16	
Acetophenone	ug/L	ND	10.0	06/15/20 10:16	
Aniline	ug/L	ND	10.0	06/15/20 10:16	
Anthracene	ug/L	ND	10.0	06/15/20 10:16	
Aramite	ug/L	ND	10.0	06/15/20 10:16	IL,v1
Atrazine	ug/L	ND	10.0	06/15/20 10:16	
Benzal chloride	ug/L	ND	50.0	06/15/20 10:16	
Benzaldehyde	ug/L	ND	10.0	06/15/20 10:16	
Benzidine	ug/L	ND	50.0	06/15/20 10:16	
Benzo(a)anthracene	ug/L	ND	10.0	06/15/20 10:16	
Benzo(a)pyrene	ug/L	ND	10.0	06/15/20 10:16	
Benzo(b)fluoranthene	ug/L	ND	10.0	06/15/20 10:16	
Benzo(g,h,i)perylene	ug/L	ND	10.0	06/15/20 10:16	
Benzo(k)fluoranthene	ug/L	ND	10.0	06/15/20 10:16	
Benzoic Acid	ug/L	ND	50.0	06/15/20 10:16	
Benzophenone	ug/L	ND	10.0	06/15/20 10:16	
Benzyl alcohol	ug/L	ND	20.0	06/15/20 10:16	
Biphenyl (Diphenyl)	ug/L	ND	10.0	06/15/20 10:16	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	06/15/20 10:16	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	06/15/20 10:16	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	06/15/20 10:16	
Butylbenzylphthalate	ug/L	ND	10.0	06/15/20 10:16	
Caprolactam	ug/L	ND	10.0	06/15/20 10:16	
Carbazole	ug/L	ND	10.0	06/15/20 10:16	
Chlorobenzilate	ug/L	ND	10.0	06/15/20 10:16	
Chrysene	ug/L	ND	10.0	06/15/20 10:16	
Di-n-butylphthalate	ug/L	ND	10.0	06/15/20 10:16	
Di-n-octylphthalate	ug/L	ND	10.0	06/15/20 10:16	
Diallate	ug/L	ND	10.0	06/15/20 10:16	
Dibenz(a,h)anthracene	ug/L	ND	10.0	06/15/20 10:16	
Dibenzo(a,e)pyrene	ug/L	ND	50.0	06/15/20 10:16	IH,v1
Dibenzofuran	ug/L	ND	10.0	06/15/20 10:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

METHOD BLANK: 2911180 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diethylphthalate	ug/L	ND	10.0	06/15/20 10:16	
Dimethoate	ug/L	ND	10.0	06/15/20 10:16	
Dimethylphthalate	ug/L	ND	10.0	06/15/20 10:16	
Diphenyl ether (Phenyl ether)	ug/L	ND	10.0	06/15/20 10:16	
Diphenylamine	ug/L	ND	10.0	06/15/20 10:16	
Disulfoton	ug/L	ND	10.0	06/15/20 10:16	
Ethyl methanesulfonate	ug/L	ND	20.0	06/15/20 10:16	
Famphur	ug/L	ND	10.0	06/15/20 10:16	
Fluoranthene	ug/L	ND	10.0	06/15/20 10:16	
Fluorene	ug/L	ND	10.0	06/15/20 10:16	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	06/15/20 10:16	
Hexachlorobenzene	ug/L	ND	10.0	06/15/20 10:16	
Hexachlorocyclopentadiene	ug/L	ND	10.0	06/15/20 10:16	
Hexachloroethane	ug/L	ND	10.0	06/15/20 10:16	
Hexachlorophene	ug/L	ND	100	06/15/20 10:16	
Hexachloropropene	ug/L	ND	10.0	06/15/20 10:16	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	06/15/20 10:16	
Isodrin	ug/L	ND	10.0	06/15/20 10:16	
Isophorone	ug/L	ND	10.0	06/15/20 10:16	
Isosafrole	ug/L	ND	10.0	06/15/20 10:16	
Kepone	ug/L	ND	10.0	06/15/20 10:16	
Methapyrilene	ug/L	ND	50.0	06/15/20 10:16	IH
Methyl methanesulfonate	ug/L	ND	5.0	06/15/20 10:16	
Methyl parathion	ug/L	ND	10.0	06/15/20 10:16	
n-Decane	ug/L	ND	10.0	06/15/20 10:16	
N-Nitroso-di-n-butylamine	ug/L	ND	10.0	06/15/20 10:16	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	06/15/20 10:16	
N-Nitrosodiethylamine	ug/L	ND	10.0	06/15/20 10:16	
N-Nitrosodimethylamine	ug/L	ND	10.0	06/15/20 10:16	
N-Nitrosodiphenylamine	ug/L	ND	10.0	06/15/20 10:16	
N-Nitrosomethylethylamine	ug/L	ND	10.0	06/15/20 10:16	
N-Nitrosomorpholine	ug/L	ND	10.0	06/15/20 10:16	
N-Nitrosopiperidine	ug/L	ND	10.0	06/15/20 10:16	
N-Nitrosopyrrolidine	ug/L	ND	10.0	06/15/20 10:16	
n-Octadecane	ug/L	ND	10.0	06/15/20 10:16	
Naphthalene	ug/L	ND	10.0	06/15/20 10:16	
Nitrobenzene	ug/L	ND	10.0	06/15/20 10:16	
O,O,O-Triethylphosphorothioate	ug/L	ND	10.0	06/15/20 10:16	
O-Toluidine	ug/L	ND	10.0	06/15/20 10:16	
P-Dimethylaminoazobenzene	ug/L	ND	5.0	06/15/20 10:16	
p-Phenylenediamine	ug/L	ND	10.0	06/15/20 10:16	
Parathion (Ethyl parathion)	ug/L	ND	10.0	06/15/20 10:16	
Pentachlorobenzene	ug/L	ND	10.0	06/15/20 10:16	
Pentachloroethane	ug/L	ND	10.0	06/15/20 10:16	
Pentachloronitrobenzene	ug/L	ND	10.0	06/15/20 10:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

METHOD BLANK: 2911180 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Pentachlorophenol	ug/L	ND	20.0	06/15/20 10:16	
Phenacetin	ug/L	ND	10.0	06/15/20 10:16	
Phenanthrene	ug/L	ND	10.0	06/15/20 10:16	
Phenol	ug/L	ND	10.0	06/15/20 10:16	
Phorate	ug/L	ND	10.0	06/15/20 10:16	
Pronamide	ug/L	ND	10.0	06/15/20 10:16	
Pyrene	ug/L	ND	10.0	06/15/20 10:16	
Pyridine	ug/L	ND	10.0	06/15/20 10:16	
Safrole	ug/L	ND	10.0	06/15/20 10:16	
Sulfotepp (Thiodiphosphoric Ac	ug/L	ND	10.0	06/15/20 10:16	
Terpineol	ug/L	ND	10.0	06/15/20 10:16	
Thionazin	ug/L	ND	10.0	06/15/20 10:16	
2,4,6-Tribromophenol (S)	%	96	10-137	06/15/20 10:16	
2-Fluorobiphenyl (S)	%	81	13-130	06/15/20 10:16	
2-Fluorophenol (S)	%	76	10-130	06/15/20 10:16	
Nitrobenzene-d5 (S)	%	92	13-130	06/15/20 10:16	
Phenol-d6 (S)	%	59	10-130	06/15/20 10:16	
Terphenyl-d14 (S)	%	129	25-130	06/15/20 10:16	

LABORATORY CONTROL SAMPLE: 2911181

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	28.4	57	10-130	
1,2,4-Trichlorobenzene	ug/L	50	37.6	75	30-130	
1,2-Dichlorobenzene	ug/L	50	37.5	75	30-130	
1,2-Diphenylhydrazine	ug/L	50	77.7	155	40-130	L1
1,3,5-Trinitrobenzene	ug/L	50	56.8	114	50-130	
1,3-Dichlorobenzene	ug/L	50	35.2	70	20-130	
1,3-Dinitrobenzene	ug/L	50	55.1	110	30-130	
1,4-Dichlorobenzene	ug/L	50	38.1	76	30-130	
1,4-Dinitrobenzene	ug/L	50	61.3	123	50-130	v1
1,4-Naphthoquinone	ug/L	50	31.5	63	30-130	
1-Methylnaphthalene	ug/L	50	43.3	87	30-130	
1-Naphthalenamine	ug/L	50	41.3	83	30-130	
2,2'-Oxybis(1-chloropropane)	ug/L	50	49.4	99	20-130	
2,3,4,6-Tetrachlorophenol	ug/L	50	57.9	116	40-200	
2,3-Dibromo-1-propanol phosph	ug/L	200	431	216	40-130	L1,v1
2,3-Dichloroaniline	ug/L	50	51.1	102	40-130	
2,4,5-Trichlorophenol	ug/L	50	53.9	108	40-130	
2,4,6-Trichlorophenol	ug/L	50	51.4	103	40-130	
2,4-Dichlorophenol	ug/L	50	53.0	106	31-130	
2,4-Dimethylphenol	ug/L	50	54.0	108	30-130	
2,4-Dinitrophenol	ug/L	250	311	124	30-130	
2,4-Dinitrotoluene	ug/L	50	59.3	119	49-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

LABORATORY CONTROL SAMPLE: 2911181

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,6-Dichlorophenol	ug/L	50	50.5	101	50-130	
2,6-Dinitrotoluene	ug/L	50	58.3	117	50-130	
2-Acetylaminofluorene	ug/L	50	64.9	130	70-150	v1
2-Chloronaphthalene	ug/L	50	45.3	91	30-130	
2-Chlorophenol	ug/L	50	49.7	99	30-130	
2-Methyl-5-nitroaniline	ug/L	50	58.0	116	50-200	
2-Methylnaphthalene	ug/L	50	44.1	88	30-130	
2-Methylphenol(o-Cresol)	ug/L	50	49.4	99	30-130	
2-Naphthalenamine	ug/L	50	38.4	77	30-130	
2-Nitroaniline	ug/L	100	113	113	40-130	
2-Nitrophenol	ug/L	50	49.5	99	20-130	
2-Picoline	ug/L	50	11.8	24	20-130	
3&4-Methylphenol(m&p Cresol)	ug/L	50	51.6	103	20-130	
3,3'-Dichlorobenzidine	ug/L	100	125	125	10-150	
3,3'-Dimethylbenzidine	ug/L	100	184	184	10-150	IH,L1
3-Methylcholanthrene	ug/L	50	60.3	121	40-130	IL
3-Nitroaniline	ug/L	100	121	121	40-130	
4,4'-Methylene-bis(2-chloroani	ug/L	100	121	121	50-130	
4,6-Dinitro-2-methylphenol	ug/L	100	119	119	40-130	
4-Aminobiphenyl	ug/L	50	40.9	82	20-130	
4-Bromophenylphenyl ether	ug/L	50	50.6	101	30-130	
4-Chloro-3-methylphenol	ug/L	100	110	110	30-130	
4-Chloroaniline	ug/L	100	105	105	20-130	
4-Chlorophenylphenyl ether	ug/L	50	50.3	101	20-130	
4-Nitroaniline	ug/L	100	130	130	40-130	
4-Nitrophenol	ug/L	250	230	92	10-130	
4-Nitroquinoline-n-oxide	ug/L	100	127	127	10-130	v1
5-Nitro-o-toluidine	ug/L	50	58.0	116	50-150	
7,12-Dimethylbenz(a)anthracene	ug/L	50	48.3	97	50-130	
a,a-Dimethylphenylethylamine	ug/L	50	ND	0	10-200	L2
Acenaphthene	ug/L	50	48.7	97	30-130	
Acenaphthylene	ug/L	50	49.6	99	30-130	
Acetophenone	ug/L	50	49.5	99	20-130	
Aniline	ug/L	50	44.6	89	20-130	
Anthracene	ug/L	50	54.6	109	50-130	
Aramite	ug/L	100	66.4	66	30-130	IL,v1
Atrazine	ug/L	50	48.5	97	30-150	
Benzal chloride	ug/L	50	9.2J	18	20-150	L2
Benzaldehyde	ug/L	50	56.9	114	10-130	
Benzidine	ug/L	100	39.0J	39	10-130	
Benzo(a)anthracene	ug/L	50	58.5	117	50-130	
Benzo(a)pyrene	ug/L	50	60.1	120	50-130	
Benzo(b)fluoranthene	ug/L	50	62.1	124	50-130	
Benzo(g,h,i)perylene	ug/L	50	60.8	122	50-130	
Benzo(k)fluoranthene	ug/L	50	60.1	120	50-130	
Benzoic Acid	ug/L	250	187	75	10-130	
Benzophenone	ug/L	50	61.4	123	20-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

LABORATORY CONTROL SAMPLE: 2911181

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzyl alcohol	ug/L	100	101	101	20-130	
Biphenyl (Diphenyl)	ug/L	50	44.5	89	20-130	
bis(2-Chloroethoxy)methane	ug/L	50	49.5	99	30-130	
bis(2-Chloroethyl) ether	ug/L	50	49.2	98	30-130	
bis(2-Ethylhexyl)phthalate	ug/L	50	62.5	125	50-130	
Butylbenzylphthalate	ug/L	50	63.8	128	50-150	
Caprolactam	ug/L	50	13.4	27	10-130	
Carbazole	ug/L	50	58.5	117	40-130	
Chlorobenzilate	ug/L	50	58.6	117	50-130	
Chrysene	ug/L	50	57.2	114	50-130	
Di-n-butylphthalate	ug/L	50	61.0	122	50-130	
Di-n-octylphthalate	ug/L	50	67.1	134	50-130	L1
Diallate	ug/L	50	48.9	98	50-130	
Dibenz(a,h)anthracene	ug/L	50	61.7	123	40-130	
Dibenzo(a,e)pyrene	ug/L	50	91.3	183	40-130	IH,L1,v1
Dibenzofuran	ug/L	50	49.3	99	40-130	
Diethylphthalate	ug/L	50	57.6	115	40-130	
Dimethoate	ug/L	50	63.3	127	50-150	
Dimethylphthalate	ug/L	50	55.3	111	40-130	
Diphenyl ether (Phenyl ether)	ug/L	50	44.9	90	20-130	
Diphenylamine	ug/L	50	51.8	104	30-130	
Disulfoton	ug/L	50	42.3	85	40-150	
Ethyl methanesulfonate	ug/L	50	40.1	80	40-130	
Famphur	ug/L	100	84.7	85	30-150	
Fluoranthene	ug/L	50	59.9	120	30-130	
Fluorene	ug/L	50	52.9	106	20-130	
Hexachloro-1,3-butadiene	ug/L	50	32.2	64	10-130	
Hexachlorobenzene	ug/L	50	51.3	103	30-130	
Hexachlorocyclopentadiene	ug/L	50	33.5	67	10-150	
Hexachloroethane	ug/L	50	32.2	64	10-130	
Hexachlorophene	ug/L	500	646	129	10-130	
Hexachloropropene	ug/L	50	13.1	26	10-150	
Indeno(1,2,3-cd)pyrene	ug/L	50	60.6	121	40-130	
Isodrin	ug/L	50	51.6	103	40-130	
Isophorone	ug/L	50	51.8	104	30-130	
Isosafrole	ug/L	50	41.6	83	40-130	
Kepone	ug/L	100	78.7	79	10-130	
Methapyrilene	ug/L	50	ND	31	10-150	IH
Methyl methanesulfonate	ug/L	50	36.6	73	20-130	
Methyl parathion	ug/L	50	65.5	131	50-130	L1
n-Decane	ug/L	50	29.6	59	10-130	
N-Nitroso-di-n-butylamine	ug/L	50	31.3	63	30-130	
N-Nitroso-di-n-propylamine	ug/L	50	52.1	104	30-130	
N-Nitrosodiethylamine	ug/L	50	41.7	83	40-130	
N-Nitrosodimethylamine	ug/L	50	42.8	86	10-130	
N-Nitrosodiphenylamine	ug/L	50	51.8	104	30-130	
N-Nitrosomethylethylamine	ug/L	50	39.1	78	30-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

LABORATORY CONTROL SAMPLE: 2911181

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
N-Nitrosomorpholine	ug/L	50	58.5	117	30-130	
N-Nitrosopiperidine	ug/L	50	44.9	90	30-130	
N-Nitrosopyrrolidine	ug/L	50	42.6	85	30-130	
n-Octadecane	ug/L	50	54.8	110	40-130	
Naphthalene	ug/L	50	43.3	87	20-130	
Nitrobenzene	ug/L	50	49.2	98	20-130	
O,O,O-Triethylphosphorothioate	ug/L	50	42.5	85	40-130	
O-Toluidine	ug/L	50	40.5	81	20-130	
P-Dimethylaminoazobenzene	ug/L	50	25.8	52	10-130	
p-Phenylenediamine	ug/L	50	ND	0	70-140	L2
Parathion (Ethyl parathion)	ug/L	50	61.5	123	50-150	
Pentachlorobenzene	ug/L	50	38.6	77	30-150	
Pentachloroethane	ug/L	50	23.6	47	20-130	
Pentachloronitrobenzene	ug/L	50	61.9	124	60-130	
Pentachlorophenol	ug/L	100	122	122	10-140	
Phenacetin	ug/L	50	56.5	113	60-130	
Phenanthrene	ug/L	50	53.5	107	50-130	
Phenol	ug/L	50	35.0	70	10-130	
Phorate	ug/L	50	51.7	103	50-130	
Pronamide	ug/L	50	58.5	117	70-130	
Pyrene	ug/L	50	54.3	109	50-130	
Pyridine	ug/L	50	17.6	35	10-130	
Safrole	ug/L	50	40.6	81	30-130	
Sulfotepp (Thiodiphosphoric Ac	ug/L	50	54.7	109	30-130	
Terpineol	ug/L	50	52.9	106	30-150	
Thionazin	ug/L	50	49.7	99	60-130	
2,4,6-Tribromophenol (S)	%			102	10-137	
2-Fluorobiphenyl (S)	%			83	13-130	
2-Fluorophenol (S)	%			76	10-130	
Nitrobenzene-d5 (S)	%			91	13-130	
Phenol-d6 (S)	%			62	10-130	
Terphenyl-d14 (S)	%			117	25-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 189118
QC Batch Method: EPA 9034
Analysis Method: EPA 9034
Analysis Description: 9034 Sulfide Waste Water
Laboratory: Pace Analytical Services - New Orleans
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

METHOD BLANK: 872691 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	ND	1.0	06/15/20 14:29	

LABORATORY CONTROL SAMPLE: 872692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	20	17.6	88	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Colonels Island/App. IX
Pace Project No.: 92481385

QC Batch: 547092
QC Batch Method: EPA 9012B
Analysis Method: EPA 9012B
Analysis Description: EPA 9012B Cyanide
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

METHOD BLANK: 2912294 Matrix: Water
Associated Lab Samples: 92481385001, 92481385002, 92481385003, 92481385005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0080	06/13/20 02:48	

LABORATORY CONTROL SAMPLE: 2912295

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	0.1	0.10	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2912296 2912297

Parameter	Units	92481385001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	ND	0.1	0.1	0.089	0.084	88	84	75-125	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2912298 2912299

Parameter	Units	92481040001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	ND	0.1	0.1	0.085	0.10	84	100	75-125	17	20	

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALIFIERS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

SAMPLE QUALIFIERS

Sample: 92481385002

[1] Chlorinated Acid Herbicides (GC) by Method 8151 - Dilution due to matrix.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
IH	This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.
IK	The recalculated concentration of the calibration standard(s) did not meet method acceptance criteria; this result should be considered an estimated value.
IL	This analyte exceeded secondary source verification criteria low for the initial calibration. The reported results should be considered an estimated value.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S0	Surrogate recovery outside laboratory control limits.
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

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QUALIFIERS

Project: Colonels Island/App. IX
Pace Project No.: 92481385

ANALYTE QUALIFIERS

S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
v1	The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias.
v3	The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have low bias.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92481385001	MW-38A-060920	8151A	1492547	EPA 8151	1492547
92481385002	MW-47A-060920	8151A	1492547	EPA 8151	1492547
92481385003	MW-53-060920	8151A	1492547	EPA 8151	1492547
92481385005	MW-62A-061020	8151A	1492612	EPA 8151	1492612
92481385001	MW-38A-060920	EPA 8011	547304	EPA 8011	547407
92481385002	MW-47A-060920	EPA 8011	547304	EPA 8011	547407
92481385003	MW-53-060920	EPA 8011	547304	EPA 8011	547407
92481385004	Trip Blank 1	EPA 8011	547304	EPA 8011	547407
92481385005	MW-62A-061020	EPA 8011	547304	EPA 8011	547407
92481385006	Trip Blank 2	EPA 8011	547510	EPA 8011	547678
92481385001	MW-38A-060920	EPA 3510C	546870	EPA 8081B	547213
92481385002	MW-47A-060920	EPA 3510C	546870	EPA 8081B	547213
92481385003	MW-53-060920	EPA 3510C	546870	EPA 8081B	547213
92481385005	MW-62A-061020	EPA 3510C	546870	EPA 8081B	547213
92481385001	MW-38A-060920	EPA 3510C	546871	EPA 8082A	547214
92481385002	MW-47A-060920	EPA 3510C	546871	EPA 8082A	547214
92481385003	MW-53-060920	EPA 3510C	546871	EPA 8082A	547214
92481385005	MW-62A-061020	EPA 3510C	546871	EPA 8082A	547214
92481385001	MW-38A-060920	EPA 3005A	546796	EPA 6020B	546800
92481385002	MW-47A-060920	EPA 3005A	546796	EPA 6020B	546800
92481385003	MW-53-060920	EPA 3005A	546796	EPA 6020B	546800
92481385005	MW-62A-061020	EPA 3005A	546796	EPA 6020B	546800
92481385001	MW-38A-060920	EPA 7470A	547246	EPA 7470A	547324
92481385002	MW-47A-060920	EPA 7470A	547246	EPA 7470A	547324
92481385003	MW-53-060920	EPA 7470A	547246	EPA 7470A	547324
92481385005	MW-62A-061020	EPA 7470A	547246	EPA 7470A	547324
92481385001	MW-38A-060920	EPA 3510C	546959	EPA 8270E	547231
92481385002	MW-47A-060920	EPA 3510C	546959	EPA 8270E	547231
92481385003	MW-53-060920	EPA 3510C	546959	EPA 8270E	547231
92481385005	MW-62A-061020	EPA 3510C	546959	EPA 8270E	547231
92481385001	MW-38A-060920	EPA 8260D	547303		
92481385002	MW-47A-060920	EPA 8260D	547303		
92481385003	MW-53-060920	EPA 8260D	547583		
92481385004	Trip Blank 1	EPA 8260D	547303		
92481385005	MW-62A-061020	EPA 8260D	547303		
92481385006	Trip Blank 2	EPA 8260D	547303		
92481385001	MW-38A-060920	EPA 9034	189118		
92481385002	MW-47A-060920	EPA 9034	189118		
92481385003	MW-53-060920	EPA 9034	189118		
92481385005	MW-62A-061020	EPA 9034	189118		
92481385001	MW-38A-060920	EPA 9012B	547092	EPA 9012B	547116
92481385002	MW-47A-060920	EPA 9012B	547092	EPA 9012B	547116

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Colonels Island/App. IX
Pace Project No.: 92481385

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92481385003	**MW-53-060920**	EPA 9012B	547092	EPA 9012B	547116
92481385005	**MW-62A-061020**	EPA 9012B	547092	EPA 9012B	547116

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Newfields	Report To: Nick DiLuzio	Attention:
Address: 1349 West Peachtree Street	Copy To:	Company Name:
Atlanta, GA 30309		Address:
Email: ndiluzio@newfields.com	Purchase Order #:	Pace Quote:
Phone: (404)969-0731 Fax:	Project Name: Colonels Island	Pace Project Manager: maiya.parks@pacelabs.com,
Requested Due Date: See below	Project #:	Pace Profile #: 187

Regulatory Agency: —

State / Location: GA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): App. IX VOC 8260	App. IX SVOC 8270	App. IX Cyanide	App. IX EDB/DBCP 8011	App. IX Herbicides 8151	App. IX Pest/PCB 8081/8082	App. IX Sulfide	App. IX Dioxin/Furans 8290	App. IX Metals + Hg	Residual Chlorine (Y/N)	
1	MW-38A-060920			6/9	1400				16			X	X	X					X	X	X	X	X	X	X	X	
2	MW-47A-060920				1515				1										X	X	X	X	X	X	X	X	
3	MW-53-060920				1700				↓										X	X	X	X	X	X	X	X	
4	Trip Blank 1			—	—				3										X			X					
5	MW-62A-061020			6/10	0945				16										X	X	X	X	X	X	X	X	
6	Trip Blank 2			—	—				3			↓	↓	↓					X			X					
7																											
8																											
9																											
10																											
11																											
12																											

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Metals, SVOCs & VOCs = 3 day TAT		6/11	0930		6/11/20	0930	6.1	Y	N	Y
All others = standard TAT										

WO# : 92481385

92481385

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick DiLuzio

SIGNATURE of SAMPLER: [signature]

DATE Signed: 6/10/2020

Pace Analytical

Sample Condition Upon Rec

Client Name: NewFields

WO#: 92481385

PM: MP **Due Date: 06/22/20**

CLIENT: GA-Neufields

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used 233 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 4.1°C **Biological Tissue is Frozen:** Yes No

Date and initials of person examining contents: 6/11/20 CM

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☑Yes ☐No ☐N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	Initial when completed: Lot # of added preservative:
Samples checked for dechlorination:	☐Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☑No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Nicole Gasiorowski
PACE Charlotte
9800 Kincey Ave.
Suite 100
Huntersville NC 28078

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

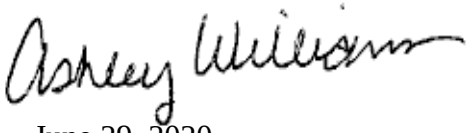
Pace Project #: 10521495
Sample Receipt Date: 06/13/2020
Client Project #: 92481385
Client Sub PO #: N/A
State Cert #: 959

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 3 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Ashley Williams, your Pace Project Manager.

This report has been reviewed by:



June 29, 2020

Ashley Williams, Project Manager
(612) 346-8158
(612) 607-6444 (fax)
ashley.williams@pacelabs.com

Report Prepared Date:
June 29, 2020

Report of Laboratory Analysis

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on four samples submitted by a representative of Pace Analytical Services, LLC. The samples were analyzed for the presence or absence of Appendix IX List polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The estimated detection limits (EDLs) were based on signal-to-noise measurements.

The isotopically-labeled PCDD/PCDF internal standards in the sample extracts were recovered at 60-94%. All of the labeled internal standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained. Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

A laboratory method blank was prepared and analyzed with each sample batch as part of our routine quality control procedures. The results show that the target PCDDs and PCDFs were not detected.

Laboratory spike samples were also prepared with the sample batches using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 78-131% with relative percent differences of 1.7-15.4%. The recovery value obtained for 1,2,3,7,8,9-HxCDD in LCSD-80188 was above the 70-130% target range for the method, flagged "R" on the results table, and may indicate a high bias for this congener in these determinations. Matrix spikes were not prepared with the sample batches.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Minnesota - De	via MN-ELAP
Alabama	40770	Minnesota - Pet	1240
Alaska - DW	MN00064	Mississippi	MN00064
Alaska - UST	17-009	Missouri - DW	10100
Arizona	AZ0014	Montana	CERT0092
Arkansas - DW	MN00064	Nebraska	NE-OS-18-06
Arkansas - WW	19-039-0 (88-06	Nevada	MN000642020-
CNMI Saipan	MP0003	New Hampshire	208120-B (2081
California	2929	New Jersey (NE	NLC 190003 (M
Colorado	MN00064	New York	11647
Connecticut	PH-0256	North Carolina -	27700
EPA Region 8+	via MN 027-053	North Carolina -	530
Florida (NELAP	E87605	North Dakota	R-036
Georgia	959	Ohio - DW	41244
Guam	20-001R	Ohio - VAP	CL101
Hawaii	MN00064	Oklahoma	2019-041 (9507
Idaho	MN00064	Oregon - Primar	MN300001-012
Illinois	004575 (20001	Oregon - Secon	MN200001-013
Indiana	C-MN-01	Pennsylvania	018 (68-00563)
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003001 (740
Kentucky - DW	90062	Tennessee	TN02818
Kentucky - WW	90062	Texas	T104704192
Louisiana - DE	03086 (84596)	Utah (NELAP)	MN000642019-
Louisiana - DH	LA006	Vermont	VT-027053137
Louisiana - DW	MN00064	Virginia	10570 (460163)
Maine	2019018 (238)(	Washington	C486-20 (C486)
Maryland	322	West Virginia -	382
Massachusetts	M-MN064	West Virginia -	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	1857409	Wyoming - UST	2926.01

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interferencepresent

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDEInterference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = SeeDiscussion

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Sample ID Cross Reference

Client Sample ID	Pace Sample ID	Date Received	Sample Type
MW-38A-060920	92481385001	06/13/2020	Water
MW-47A-060920	92481385002	06/18/2020	Water
MW-53-060920	92481385003	06/13/2020	Water
MW-62A-061020	92481385005	06/13/2020	Water

REPORT OF LABORATORY ANALYSIS

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No

Pace Analytical® www.pacelabs.com

Workorder: 92481385 **Workorder Name:** Colonels Island/App. IX
Owner Received Date: 6/11/2020 **Results Requested By:** 6/22/2020

Report No:....10521495_8290FC_DER

Report To	Subcontract To
Maiya Parks Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)734-4200	Pace Analytical Minnesota 1700 Elm Street SE Suite 200 Minneapolis, MN 55414 Phone (612)607-1700

Requested Analysis

WO# : 10521495
10521495

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	8290 Dioxins/Furans	LAB USE ONLY
1	MW-38A-060920	PS	6/9/2020 14:00	92481385001	Water	1	X	001
2	MW-47A-060920	PS	6/9/2020 15:15	92481385002	Water	1	X	
3	MW-53-060920	PS	6/9/2020 17:00	92481385003	Water	1	X	002
4	MW-62A-0661020	PS	6/10/2020 09:45	92481385005	Water	1	X	003

Transfers	Released By	Date/Time	Received By	Date/Time
1	CB/Pace	6/12/20 1200	DA/Pace	6/13/20 1000
2				
3				

Comments
App. IX List (see workorder 2631454)
Level III DP

Cooler Temperature on Receipt 2.5 °C | **Custody Seal** Y or (N) | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical®	Document Name: Sample Condition Upon Receipt (SCUR) - MN	Document Revised: 27Mar2020 Page 1 of 1
	Document No.: ENV-FRM-MIN4-0150 Rev.00	Pace Analytical Services - Minneapolis

Sample Condition Upon Receipt **Client Name:** Pace - GA **Project #:** WO#: 10521495

PM: AW1 Due Date: 06/29/20
CLIENT: PASI-CHRLT

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial **See Exceptions** ☐

Tracking Number: 1057 9509 5031

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☒ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other:_____ **Temp Blank?** ☐ Yes ☒ No

Thermometer: ☒ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No **Were All Container Temps Taken?** ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:**_____ °C **Average Corrected Temp (no temp blank only):** ☒ See Exceptions 2.5 °C ☐ 1 Container

Correction Factor: -0.1 **Cooler Temp Corrected w/temp blank:**_____ °C

USDA Regulated Soil: (☒ N/A, water sample/Other:_____) **Date/Initials of Person Examining Contents:** 8/6/13/20

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☐ No	☒ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other_____
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used?	☒ Yes	☐ No		8.
-Pace Containers Used?	☒ Yes	☐ No		
Containers Intact?	~~☐ Yes~~	☒ No		9. 8/6/13/20 See exceptions, many containers arrive broken.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other_____				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☒ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☒ N/A	13. **See Exception** ☐
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased):_____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted:_____ Date/Time:_____

Comments/Resolution:_____

Project Manager Review: Ashley Williams **Date:** 06/15/2020

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

SCUR Exceptions:

Workorder #:

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank		
Read Temp	Corrected Temp	Average Temp
1.4	1.5	2.5
3.6	3.5	
2.8	2.7	
2.7	2.6	

Tracking Number/Temperature	

Issue Type: Arrived Broke

Sample ID	Container Type	# of Containers
001	AG1U	1
002	" "	2
005	" "	1

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Comments:

Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 6/11/2020 **Results Requested By:** 6/22/2020

Workorder: 92481385 **Workorder Name:** Colonels Island/App. IX

Report To

Maiya Parks
Pace Analytical Atlanta
110 Technology Parkway
Peachtree Corners, GA 30092
Phone (770)734-4200

Subcontract To

Pace Analytical Minnesota
1700 Elm Street SE
Suite 200
Minneapolis, MN 55414
Phone (612)607-1700

Requested Analysis

WO# : 10521495

10521495

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	8290 Dioxins/Furans	LAB USE ONLY
1	MW-38A-060920	PS	6/9/2020 14:00	92481385001	Water	1	X	001
2	MW-47A-060920	PS	6/9/2020 15:15	92481385002	Water	1	X	004
3	MW-53-060920	PS	6/9/2020 17:00	92481385003	Water	1	X	002
4	MW-62A-0661020	PS	6/10/2020 09:45	92481385005	Water	1	X	003

Transfers	Released By	Date/Time	Received By	Date/Time
1	CB/Pace	6/12/20 1200	Pace	6/13/20 0800
2			Pace	6/18/20 0.6°C 9:10AM
3				

Comments

App. IX List (see workorder 2631454)
Level III DP

Cooler Temperature on Receipt 2.5 °C | **Custody Seal** Y or (N) | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) - MN**	Document Revised: 27Mar2020 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0150 Rev.00**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: Pace Atlanta

Project #: WO# : 10521495

PM: AW1 Due Date: 06/29/20

CLIENT: PASI-CHRLT

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial **See Exceptions** ☐

Tracking Number: 1922 0798 7397

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☐ N/A

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☒ Other: pb **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☒ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No **Were All Container Temps Taken?** ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.7 °C

Correction Factor: -0.1 **Cooler Temp Corrected w/temp blank :** 0.6 °C

Average Corrected Temp (no temp blank only): ☐ See Exceptions ☐ 1 Container ____ °C

USDA Regulated Soil: (☒ N/A, water sample/Other: WT)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Date/Initials of Person Examining Contents: MK 6/18/20

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☐ No	☒ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other____
Rush Turn Around Time Requested?	☒ Yes	☐ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used?	☒ Yes	☐ No		8. Received sample 002 - TAGIO
-Pace Containers Used?	☒ Yes	☐ No		
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other____				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☒ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine / 0-6 Roll / 0-6 Strip / 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☒ N/A	13. **See Exception** ☐
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased):____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: ____ Date/Time: ____

Comments/Resolution: ____

Project Manager Review: Ashley Williams **Date:** 06/18/2020

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: MVU

Appendix B

Sample Analysis Summary

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 8290 Sample Analysis Results

Client - PACE Charlotte

Client's Sample ID	MW-38A-060920		
Lab Sample ID	92481385001		
Filename	U200618A_07		
Injected By	SMT		
Total Amount Extracted	993 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2020 14:00
ICAL ID	U200419	Received	06/13/2020 10:00
CCal Filename(s)	U200617B_18 & U200618A_17	Extracted	06/16/2020 12:50
Method Blank ID	BLANK-80186	Analyzed	06/18/2020 07:13

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.1		2,3,7,8-TCDF-13C	2.00	92
Total TCDF	ND	-----	1.1		2,3,7,8-TCDD-13C	2.00	84
					1,2,3,7,8-PeCDF-13C	2.00	91
2,3,7,8-TCDD	ND	-----	1.0		2,3,4,7,8-PeCDF-13C	2.00	89
Total TCDD	1.3	-----	1.0	J	1,2,3,7,8-PeCDD-13C	2.00	94
					1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	ND	-----	1.2		1,2,3,6,7,8-HxCDF-13C	2.00	86
2,3,4,7,8-PeCDF	ND	-----	0.70		2,3,4,6,7,8-HxCDF-13C	2.00	90
Total PeCDF	ND	-----	0.70		1,2,3,7,8,9-HxCDF-13C	2.00	93
					1,2,3,4,7,8-HxCDD-13C	2.00	78
1,2,3,7,8-PeCDD	ND	-----	1.1		1,2,3,6,7,8-HxCDD-13C	2.00	76
Total PeCDD	ND	-----	1.1				
					1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	0.73		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	0.85				
2,3,4,6,7,8-HxCDF	ND	-----	0.82		2,3,7,8-TCDD-37Cl4	0.20	89
1,2,3,7,8,9-HxCDF	ND	-----	1.4				
Total HxCDF	ND	-----	0.73				
1,2,3,4,7,8-HxCDD	ND	-----	1.1				
1,2,3,6,7,8-HxCDD	ND	-----	1.4				
1,2,3,7,8,9-HxCDD	ND	-----	1.0				
Total HxCDD	ND	-----	1.0				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Method 8290 Sample Analysis Results

Client - PACE Charlotte

Client's Sample ID	MW-47A-060920		
Lab Sample ID	92481385002		
Filename	U200626B_16		
Injected By	BAL		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2020 15:15
ICAL ID	U200419	Received	06/18/2020 09:10
CCal Filename(s)	U200626B_01 & U200626B_18	Extracted	06/24/2020 12:30
Method Blank ID	BLANK-80402	Analyzed	06/27/2020 01:43

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	2.6	2,3,7,8-TCDF-13C	2.00	89
Total TCDF	ND	-----	2.6	2,3,7,8-TCDD-13C	2.00	84
				1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	ND	-----	4.6	2,3,4,7,8-PeCDF-13C	2.00	87
Total TCDD	ND	-----	4.6	1,2,3,7,8-PeCDD-13C	2.00	91
				1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	ND	-----	3.8	1,2,3,6,7,8-HxCDF-13C	2.00	89
2,3,4,7,8-PeCDF	ND	-----	2.3	2,3,4,6,7,8-HxCDF-13C	2.00	93
Total PeCDF	ND	-----	2.3	1,2,3,7,8,9-HxCDF-13C	2.00	93
				1,2,3,4,7,8-HxCDD-13C	2.00	84
1,2,3,7,8-PeCDD	ND	-----	3.1	1,2,3,6,7,8-HxCDD-13C	2.00	77
Total PeCDD	ND	-----	3.1			
				1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	3.5	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	2.3			
2,3,4,6,7,8-HxCDF	ND	-----	2.9	2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,7,8,9-HxCDF	ND	-----	4.5			
Total HxCDF	ND	-----	2.3			
1,2,3,4,7,8-HxCDD	ND	-----	2.7			
1,2,3,6,7,8-HxCDD	ND	-----	3.0			
1,2,3,7,8,9-HxCDD	ND	-----	3.6			
Total HxCDD	ND	-----	2.7			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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Tel: 612-607-1700
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Method 8290 Sample Analysis Results

Client - PACE Charlotte

Client's Sample ID	MW-53-060920		
Lab Sample ID	92481385003		
Filename	U200618A_08		
Injected By	SMT		
Total Amount Extracted	1010 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/09/2020 17:00
ICAL ID	U200419	Received	06/13/2020 10:00
CCal Filename(s)	U200617B_18 & U200618A_17	Extracted	06/16/2020 12:50
Method Blank ID	BLANK-80186	Analyzed	06/18/2020 07:55

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.92	2,3,7,8-TCDF-13C	2.00	90
Total TCDF	ND	-----	0.92	2,3,7,8-TCDD-13C	2.00	80
				1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	ND	-----	1.2	2,3,4,7,8-PeCDF-13C	2.00	88
Total TCDD	ND	-----	1.2	1,2,3,7,8-PeCDD-13C	2.00	87
				1,2,3,4,7,8-HxCDF-13C	2.00	77
1,2,3,7,8-PeCDF	ND	-----	0.53	1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND	-----	0.50	2,3,4,6,7,8-HxCDF-13C	2.00	85
Total PeCDF	ND	-----	0.50	1,2,3,7,8,9-HxCDF-13C	2.00	91
				1,2,3,4,7,8-HxCDD-13C	2.00	74
1,2,3,7,8-PeCDD	ND	-----	0.83	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	-----	0.83			
				1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	0.90	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	0.89			
2,3,4,6,7,8-HxCDF	ND	-----	0.84	2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,7,8,9-HxCDF	ND	-----	0.54			
Total HxCDF	ND	-----	0.54			
1,2,3,4,7,8-HxCDD	ND	-----	1.3			
1,2,3,6,7,8-HxCDD	ND	-----	1.0			
1,2,3,7,8,9-HxCDD	ND	-----	0.96			
Total HxCDD	ND	-----	0.96			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Method 8290 Sample Analysis Results

Client - PACE Charlotte

Client's Sample ID	MW-62A-061020		
Lab Sample ID	92481385005		
Filename	U200618A_09		
Injected By	SMT		
Total Amount Extracted	1020 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/10/2020 09:45
ICAL ID	U200419	Received	06/13/2020 10:00
CCal Filename(s)	U200617B_18 & U200618A_17	Extracted	06/16/2020 12:50
Method Blank ID	BLANK-80186	Analyzed	06/18/2020 08:37

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.93	2,3,7,8-TCDF-13C	2.00	77
Total TCDF	ND	-----	0.93	2,3,7,8-TCDD-13C	2.00	71
				1,2,3,7,8-PeCDF-13C	2.00	75
2,3,7,8-TCDD	ND	-----	1.8	2,3,4,7,8-PeCDF-13C	2.00	75
Total TCDD	ND	-----	1.8	1,2,3,7,8-PeCDD-13C	2.00	75
				1,2,3,4,7,8-HxCDF-13C	2.00	64
1,2,3,7,8-PeCDF	ND	-----	0.72	1,2,3,6,7,8-HxCDF-13C	2.00	68
2,3,4,7,8-PeCDF	ND	-----	0.75	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	ND	-----	0.72	1,2,3,7,8,9-HxCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDD-13C	2.00	62
1,2,3,7,8-PeCDD	ND	-----	1.5	1,2,3,6,7,8-HxCDD-13C	2.00	60
Total PeCDD	ND	-----	1.5			
				1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	1.2	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	0.98			
2,3,4,6,7,8-HxCDF	ND	-----	1.3	2,3,7,8-TCDD-37Cl4	0.20	90
1,2,3,7,8,9-HxCDF	ND	-----	0.59			
Total HxCDF	ND	-----	0.59			
1,2,3,4,7,8-HxCDD	ND	-----	0.92			
1,2,3,6,7,8-HxCDD	ND	-----	1.5			
1,2,3,7,8,9-HxCDD	ND	-----	0.80			
Total HxCDD	ND	-----	0.80			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Appendix C

QC and Calibration Results Summary

Pace Analytical Services, LLC
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Minneapolis, MN 55414

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Method 8290 Blank Analysis Results

Lab Sample Name	DFBLKFH		
Lab Sample ID	BLANK-80186	Matrix	Water
Filename	U200618A_14	Dilution	NA
Total Amount Extracted	1050 mL	Extracted	06/16/2020 12:50
ICAL ID	U200419	Analyzed	06/18/2020 12:07
CCal Filename(s)	U200617B_18 & U200618A_17	Injected By	SMT

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.57	2,3,7,8-TCDF-13C	2.00	99
Total TCDF	ND	-----	0.57	2,3,7,8-TCDD-13C	2.00	91
				1,2,3,7,8-PeCDF-13C	2.00	100
2,3,7,8-TCDD	ND	-----	0.90	2,3,4,7,8-PeCDF-13C	2.00	97
Total TCDD	ND	-----	0.90	1,2,3,7,8-PeCDD-13C	2.00	97
				1,2,3,4,7,8-HxCDF-13C	2.00	96
1,2,3,7,8-PeCDF	ND	-----	0.76	1,2,3,6,7,8-HxCDF-13C	2.00	96
2,3,4,7,8-PeCDF	ND	-----	0.45	2,3,4,6,7,8-HxCDF-13C	2.00	104
Total PeCDF	ND	-----	0.45	1,2,3,7,8,9-HxCDF-13C	2.00	101
				1,2,3,4,7,8-HxCDD-13C	2.00	87
1,2,3,7,8-PeCDD	ND	-----	0.67	1,2,3,6,7,8-HxCDD-13C	2.00	85
Total PeCDD	ND	-----	0.67			
				1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	1.3	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	1.1			
2,3,4,6,7,8-HxCDF	ND	-----	1.1	2,3,7,8-TCDD-37Cl4	0.20	92
1,2,3,7,8,9-HxCDF	ND	-----	1.7			
Total HxCDF	ND	-----	1.1			
1,2,3,4,7,8-HxCDD	ND	-----	1.2			
1,2,3,6,7,8-HxCDD	ND	-----	1.1			
1,2,3,7,8,9-HxCDD	ND	-----	1.0			
Total HxCDD	ND	-----	1.0			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

REPORT OF LABORATORY ANALYSIS

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Method 8290 Blank Analysis Results

Lab Sample Name	DFBLKIY		
Lab Sample ID	BLANK-80402	Matrix	Water
Filename	U200626B_10	Dilution	NA
Total Amount Extracted	1050 mL	Extracted	06/24/2020 12:30
ICAL ID	U200419	Analyzed	06/26/2020 21:32
CCal Filename(s)	U200626B_01 & U200626B_18	Injected By	BAL

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	2.2	2,3,7,8-TCDF-13C	2.00	108
Total TCDF	ND	-----	2.2	2,3,7,8-TCDD-13C	2.00	103
				1,2,3,7,8-PeCDF-13C	2.00	104
2,3,7,8-TCDD	ND	-----	3.9	2,3,4,7,8-PeCDF-13C	2.00	100
Total TCDD	ND	-----	3.9	1,2,3,7,8-PeCDD-13C	2.00	107
				1,2,3,4,7,8-HxCDF-13C	2.00	112
1,2,3,7,8-PeCDF	ND	-----	1.5	1,2,3,6,7,8-HxCDF-13C	2.00	109
2,3,4,7,8-PeCDF	ND	-----	1.0	2,3,4,6,7,8-HxCDF-13C	2.00	112
Total PeCDF	ND	-----	1.0	1,2,3,7,8,9-HxCDF-13C	2.00	115
				1,2,3,4,7,8-HxCDD-13C	2.00	96
1,2,3,7,8-PeCDD	ND	-----	1.9	1,2,3,6,7,8-HxCDD-13C	2.00	95
Total PeCDD	ND	-----	1.9			
				1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	1.6	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	1.2			
2,3,4,6,7,8-HxCDF	ND	-----	1.2	2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,7,8,9-HxCDF	ND	-----	2.1			
Total HxCDF	ND	-----	1.2			
1,2,3,4,7,8-HxCDD	ND	-----	1.6			
1,2,3,6,7,8-HxCDD	ND	-----	1.5			
1,2,3,7,8,9-HxCDD	ND	-----	1.2			
Total HxCDD	ND	-----	1.2			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

REPORT OF LABORATORY ANALYSIS

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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-80187		
Filename	U200618A_15	Matrix	Water
Total Amount Extracted	1050 mL	Dilution	NA
ICAL ID	U200419	Extracted	06/16/2020 12:50
CCal Filename(s)	U200617B_18 & U200618A_17	Analyzed	06/18/2020 12:48
Method Blank ID	BLANK-80186	Injected By	SMT

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.23	115	2,3,7,8-TCDF-13C	2.0	112
Total TCDF				2,3,7,8-TCDD-13C	2.0	102
				1,2,3,7,8-PeCDF-13C	2.0	113
2,3,7,8-TCDD	0.20	0.22	110	2,3,4,7,8-PeCDF-13C	2.0	109
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	112
				1,2,3,4,7,8-HxCDF-13C	2.0	87
1,2,3,7,8-PeCDF	1.0	1.1	109	1,2,3,6,7,8-HxCDF-13C	2.0	93
2,3,4,7,8-PeCDF	1.0	1.1	110	2,3,4,6,7,8-HxCDF-13C	2.0	104
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	109
				1,2,3,4,7,8-HxCDD-13C	2.0	91
1,2,3,7,8-PeCDD	1.0	1.0	104	1,2,3,6,7,8-HxCDD-13C	2.0	83
Total PeCDD						
				1,2,3,4-TCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDF	1.0	1.2	123	1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,6,7,8-HxCDF	1.0	1.1	112			
2,3,4,6,7,8-HxCDF	1.0	1.1	115	2,3,7,8-TCDD-37Cl4	0.20	108
1,2,3,7,8,9-HxCDF	1.0	1.1	110			
Total HxCDF						
1,2,3,4,7,8-HxCDD	1.0	1.1	108			
1,2,3,6,7,8-HxCDD	1.0	1.3	129			
1,2,3,7,8,9-HxCDD	1.0	1.2	120			
Total HxCDD						

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-80403		
Filename	U200626B_05	Matrix	Water
Total Amount Extracted	1030 mL	Dilution	NA
ICAL ID	U200419	Extracted	06/24/2020 12:30
CCal Filename(s)	U200626B_01 & U200626B_18	Analyzed	06/26/2020 18:02
Method Blank ID	BLANK-80402	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.20	98	2,3,7,8-TCDF-13C	2.0	105
Total TCDF				2,3,7,8-TCDD-13C	2.0	101
				1,2,3,7,8-PeCDF-13C	2.0	100
2,3,7,8-TCDD	0.20	0.17	83	2,3,4,7,8-PeCDF-13C	2.0	101
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	105
				1,2,3,4,7,8-HxCDF-13C	2.0	108
1,2,3,7,8-PeCDF	1.0	0.89	89	1,2,3,6,7,8-HxCDF-13C	2.0	103
2,3,4,7,8-PeCDF	1.0	0.89	89	2,3,4,6,7,8-HxCDF-13C	2.0	108
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	121
				1,2,3,4,7,8-HxCDD-13C	2.0	103
1,2,3,7,8-PeCDD	1.0	0.78	78	1,2,3,6,7,8-HxCDD-13C	2.0	88
Total PeCDD						
				1,2,3,4-TCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDF	1.0	0.95	95	1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,6,7,8-HxCDF	1.0	0.91	91			
2,3,4,6,7,8-HxCDF	1.0	0.91	91	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,7,8,9-HxCDF	1.0	0.86	86			
Total HxCDF						
1,2,3,4,7,8-HxCDD	1.0	0.92	92			
1,2,3,6,7,8-HxCDD	1.0	0.92	92			
1,2,3,7,8,9-HxCDD	1.0	0.94	94			
Total HxCDD						

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414

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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-80188		
Filename	U200618A_16	Matrix	Water
Total Amount Extracted	1050 mL	Dilution	NA
ICAL ID	U200419	Extracted	06/16/2020 12:50
CCal Filename(s)	U200617B_18 & U200618A_17	Analyzed	06/18/2020 13:30
Method Blank ID	BLANK-80186	Injected By	SMT

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.23	117	2,3,7,8-TCDF-13C	2.0	100
Total TCDF				2,3,7,8-TCDD-13C	2.0	90
				1,2,3,7,8-PeCDF-13C	2.0	101
2,3,7,8-TCDD	0.20	0.23	117	2,3,4,7,8-PeCDF-13C	2.0	101
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	101
				1,2,3,4,7,8-HxCDF-13C	2.0	81
1,2,3,7,8-PeCDF	1.0	1.2	118	1,2,3,6,7,8-HxCDF-13C	2.0	86
2,3,4,7,8-PeCDF	1.0	1.2	116	2,3,4,6,7,8-HxCDF-13C	2.0	93
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	100
				1,2,3,4,7,8-HxCDD-13C	2.0	80
1,2,3,7,8-PeCDD	1.0	1.1	106	1,2,3,6,7,8-HxCDD-13C	2.0	76
Total PeCDD						
				1,2,3,4-TCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDF	1.0	1.3	127	1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,6,7,8-HxCDF	1.0	1.2	121			
2,3,4,6,7,8-HxCDF	1.0	1.1	113	2,3,7,8-TCDD-37Cl4	0.20	93
1,2,3,7,8,9-HxCDF	1.0	1.1	113			
Total HxCDF						
1,2,3,4,7,8-HxCDD	1.0	1.3	126			
1,2,3,6,7,8-HxCDD	1.0	1.2	121			
1,2,3,7,8,9-HxCDD	1.0	1.3	131 R			
Total HxCDD						

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-80404		
Filename	U200626B_06	Matrix	Water
Total Amount Extracted	1050 mL	Dilution	NA
ICAL ID	U200419	Extracted	06/24/2020 12:30
CCal Filename(s)	U200626B_01 & U200626B_18	Analyzed	06/26/2020 18:44
Method Blank ID	BLANK-80402	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.21	106	2,3,7,8-TCDF-13C	2.0	97
Total TCDF				2,3,7,8-TCDD-13C	2.0	96
				1,2,3,7,8-PeCDF-13C	2.0	95
2,3,7,8-TCDD	0.20	0.19	95	2,3,4,7,8-PeCDF-13C	2.0	95
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	100
				1,2,3,4,7,8-HxCDF-13C	2.0	103
1,2,3,7,8-PeCDF	1.0	0.96	96	1,2,3,6,7,8-HxCDF-13C	2.0	95
2,3,4,7,8-PeCDF	1.0	0.99	99	2,3,4,6,7,8-HxCDF-13C	2.0	104
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	118
				1,2,3,4,7,8-HxCDD-13C	2.0	93
1,2,3,7,8-PeCDD	1.0	0.86	86	1,2,3,6,7,8-HxCDD-13C	2.0	91
Total PeCDD						
				1,2,3,4-TCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDF	1.0	1.1	106	1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,6,7,8-HxCDF	1.0	1.0	101			
2,3,4,6,7,8-HxCDF	1.0	0.99	99	2,3,7,8-TCDD-37Cl4	0.20	83
1,2,3,7,8,9-HxCDF	1.0	0.90	90			
Total HxCDF						
1,2,3,4,7,8-HxCDD	1.0	1.0	101			
1,2,3,6,7,8-HxCDD	1.0	0.98	98			
1,2,3,7,8,9-HxCDD	1.0	0.96	96			
Total HxCDD						

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client	PACE Charlotte		
Spike 1 ID	LCS-80187	Spike 2 ID	LCSD-80188
Spike 1 Filename	U200618A_15	Spike 2 Filename	U200618A_16

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	115	117	1.7
2,3,7,8-TCDD	110	117	6.2
1,2,3,7,8-PeCDF	109	118	7.9
2,3,4,7,8-PeCDF	110	116	5.3
1,2,3,7,8-PeCDD	104	106	1.9
1,2,3,4,7,8-HxCDF	123	127	3.2
1,2,3,6,7,8-HxCDF	112	121	7.7
2,3,4,6,7,8-HxCDF	115	113	1.8
1,2,3,7,8,9-HxCDF	110	113	2.7
1,2,3,4,7,8-HxCDD	108	126	15.4
1,2,3,6,7,8-HxCDD	129	121	6.4
1,2,3,7,8,9-HxCDD	120	131	8.8

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

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Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client	PACE Charlotte		
Spike 1 ID	LCS-80403	Spike 2 ID	LCSD-80404
Spike 1 Filename	U200626B_05	Spike 2 Filename	U200626B_06

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	98	106	7.8
2,3,7,8-TCDD	83	95	13.5
1,2,3,7,8-PeCDF	89	96	7.6
2,3,4,7,8-PeCDF	89	99	10.6
1,2,3,7,8-PeCDD	78	86	9.8
1,2,3,4,7,8-HxCDF	95	106	10.9
1,2,3,6,7,8-HxCDF	91	101	10.4
2,3,4,6,7,8-HxCDF	91	99	8.4
1,2,3,7,8,9-HxCDF	86	90	4.5
1,2,3,4,7,8-HxCDD	92	101	9.3
1,2,3,6,7,8-HxCDD	92	98	6.3
1,2,3,7,8,9-HxCDD	94	96	2.1

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

Method 1613B
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	**U200419**	Data Files:		Time	Injected
Calibration Date	04/19/2020	CS-1	U200419A_04	15:02	JRH
Instrument	10MSHR06 (U)	CS-2	U200419A_03	14:09	JRH
Column Phase	DB-5MS 0.25mm	CS-3	U200419A_02	13:08	JRH
Column ID No.	US0177521H	CS-4	U200419A_06	16:42	JRH
		CS-5	U200419A_05	15:58	JRH

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	0.8073	0.7863	0.8152	0.7976	0.8117	0.8036	1.46
2,3,7,8-TCDD	1.0343	1.0302	1.0718	1.0183	1.0058	1.0321	2.41
1,2,3,7,8-PeCDF	0.7641	0.7936	0.7710	0.7689	0.7774	0.7750	1.48
2,3,4,7,8-PeCDF	0.8355	0.7986	0.8577	0.8249	0.8246	0.8283	2.58
1,2,3,7,8-PeCDD	0.8517	0.8691	0.8432	0.8557	0.8667	0.8572	1.25
1,2,3,4,7,8-HxCDF	0.9154	0.9553	0.8963	0.9339	0.9566	0.9315	2.79
1,2,3,6,7,8-HxCDF	0.9021	0.9053	0.9035	0.9058	0.8934	0.9020	0.56
2,3,4,6,7,8-HxCDF	0.9574	0.9265	0.9323	0.9872	0.9658	0.9538	2.61
1,2,3,7,8,9-HxCDF	0.8892	0.9001	0.8940	0.8871	0.8982	0.8937	0.63
1,2,3,4,7,8-HxCDD	0.9494	0.8149	0.8990	0.9250	0.9073	0.8991	5.66
1,2,3,6,7,8-HxCDD	0.9356	0.9317	0.8666	0.9090	0.8861	0.9058	3.26
1,2,3,7,8,9-HxCDD	0.9446	0.9150	0.9300	0.9226	0.8987	0.9222	1.85
Total TCDF	0.8073	0.7863	0.8152	0.7976	0.8117	0.8036	1.46
Total TCDD	1.0343	1.0302	1.0718	1.0183	1.0058	1.0321	2.41
Total PeCDF	0.7998	0.7961	0.8144	0.7969	0.8010	0.8016	0.92
Total PeCDD	0.8517	0.8691	0.8432	0.8557	0.8667	0.8572	1.25
Total HxCDF	0.9160	0.9218	0.9065	0.9285	0.9285	0.9203	1.01
Total HxCDD	0.9432	0.8872	0.8985	0.9189	0.8974	0.9090	2.45
2,3,7,8-TCDF-13C	1.2296	1.2438	1.1732	1.2195	1.2186	1.2169	2.18
2,3,7,8-TCDD-13C	0.9881	0.9967	0.9881	1.0040	1.0418	1.0037	2.22
2,3,7,8-TCDD-37Cl4	1.0151	0.9997	0.9790	1.0216	1.0416	1.0114	2.33
1,2,3,7,8-PeCDF-13C	0.9675	0.9526	0.8764	0.9825	1.0832	0.9724	7.63
2,3,4,7,8-PeCDF-13C	1.0122	1.0196	0.8250	1.0329	1.1384	1.0056	11.25
1,2,3,7,8-PeCDD-13C	0.7496	0.7519	0.6646	0.7927	0.8550	0.7628	9.12
1,2,3,4,7,8-HxCDF-13C	0.8315	0.7967	0.8800	0.8723	0.8066	0.8374	4.50
1,2,3,6,7,8-HxCDF-13C	1.1241	1.1309	1.1208	1.0988	1.0663	1.1082	2.38
2,3,4,6,7,8-HxCDF-13C	0.8776	0.9151	0.9467	0.8810	0.8947	0.9030	3.16
1,2,3,7,8,9-HxCDF-13C	0.7260	0.7176	0.7141	0.7341	0.6948	0.7173	2.06
1,2,3,4,7,8-HxCDD-13C	0.7547	0.7908	0.7703	0.7701	0.8198	0.7811	3.22
1,2,3,6,7,8-HxCDD-13C	1.0445	1.0285	1.0572	1.0570	1.0354	1.0445	1.23

REPORT OF LABORATORY ANALYSIS

Method 1613B
Initial Calibration (ICAL) - Isotope Ratio Summary

ICAL ID	**U200419**	Data Files:		Time	Injected
Calibration Date	04/19/2020	CS-1	U200419A_04	15:02	JRH
Instrument	10MSHR06 (U)	CS-2	U200419A_03	14:09	JRH
Column Phase	DB-5MS 0.25mm	CS-3	U200419A_02	13:08	JRH
Column ID No.	US0177521H	CS-4	U200419A_06	16:42	JRH
		CS-5	U200419A_05	15:58	JRH

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.84	0.76	0.74	0.73	0.76	0.65 - 0.89
2,3,7,8-TCDD	0.75	0.75	0.74	0.78	0.75	0.65 - 0.89
1,2,3,7,8-PeCDF	1.32	1.48	1.51	1.49	1.50	1.32 - 1.78
2,3,4,7,8-PeCDF	1.51	1.47	1.41	1.47	1.51	1.32 - 1.78
1,2,3,7,8-PeCDD	0.59	0.63	0.62	0.59	0.61	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.21	1.18	1.11	1.20	1.18	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.27	1.24	1.21	1.20	1.19	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.27	1.19	1.13	1.16	1.21	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.25	1.23	1.14	1.31	1.22	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.22	1.18	1.20	1.19	1.19	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.12	1.21	1.23	1.20	1.20	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.31	1.16	1.21	1.21	1.16	1.05 - 1.43
1,2,3,4-TCDD-13C	0.78	0.79	0.80	0.79	0.79	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.25	1.28	1.20	1.18	1.22	1.05 - 1.43
2,3,7,8-TCDF-13C	0.78	0.77	0.76	0.75	0.78	0.65 - 0.89
2,3,7,8-TCDD-13C	0.78	0.81	0.78	0.79	0.78	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.54	1.50	1.54	1.55	1.58	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.54	1.46	1.49	1.55	1.53	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.57	1.58	1.52	1.61	1.58	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.51	0.50	0.51	0.51	0.50	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.50	0.51	0.50	0.49	0.51	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.51	0.50	0.52	0.52	0.51	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.51	0.51	0.50	0.50	0.53	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.25	1.23	1.26	1.29	1.25	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.22	1.26	1.26	1.22	1.23	1.05 - 1.43

REPORT OF LABORATORY ANALYSIS

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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U200617B_18	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-20-123-006	GC Column ID	US0177521H
Analyzed	06/18/2020 02:19	ICAL ID	U200419

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	11.1	0.78	0.8036	0.8936	11.2
2,3,7,8-TCDD	10	10.8	0.79	1.0321	1.1152	8.1
1,2,3,7,8-PeCDF	50	53.3	1.51	0.7750	0.8269	6.7
2,3,4,7,8-PeCDF	50	54.6	1.48	0.8283	0.9045	9.2
1,2,3,7,8-PeCDD	50	53.4	0.62	0.8572	0.9155	6.8
1,2,3,4,7,8-HxCDF	50	52.3	1.21	0.9315	0.9743	4.6
1,2,3,6,7,8-HxCDF	50	54.4	1.21	0.9020	0.9818	8.8
2,3,4,6,7,8-HxCDF	50	53.5	1.20	0.9538	1.0201	6.9
1,2,3,7,8,9-HxCDF	50	53.1	1.19	0.8937	0.9485	6.1
1,2,3,4,7,8-HxCDD	50	54.1	1.21	0.8991	0.9732	8.2
1,2,3,6,7,8-HxCDD	50	50.7	1.21	0.9058	0.9183	1.4
1,2,3,7,8,9-HxCDD	50	53.6	1.22	0.9222	0.9883	7.2
2,3,7,8-TCDF-13C	100	116.2	0.78	1.2169	1.4137	16.2
2,3,7,8-TCDD-13C	100	109.4	0.76	1.0037	1.0978	9.4
2,3,7,8-TCDD-37Cl4	10	10.4	0.00	1.0114	1.0474	3.6
1,2,3,7,8-PeCDF-13C	100	113.7	1.53	0.9724	1.1057	13.7
2,3,4,7,8-PeCDF-13C	100	107.0	1.53	1.0056	1.0760	7.0
1,2,3,7,8-PeCDD-13C	100	103.6	1.54	0.7628	0.7904	3.6
1,2,3,4,7,8-HxCDF-13C	100	108.9	0.51	0.8374	0.9121	8.9
1,2,3,6,7,8-HxCDF-13C	100	107.9	0.53	1.1082	1.2108	9.3
2,3,4,6,7,8-HxCDF-13C	200	213.3	0.53	0.9030	1.0189	12.8
1,2,3,7,8,9-HxCDF-13C	150	158.4	0.50	0.7173	0.7479	4.3
1,2,3,4,7,8-HxCDD-13C	100	98.2	1.25	0.7811	0.7571	-3.1
1,2,3,6,7,8-HxCDD-13C	100	102.1	1.25	1.0445	1.0661	2.1
1,2,3,4-TCDD-13C	100	NA	0.78	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.23	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U200618A_17	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-20-123-006	GC Column ID	US0177521H
Analyzed	06/18/2020 14:12	ICAL ID	U200419

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	10.7	0.77	0.8036	0.8629	7.4
2,3,7,8-TCDD	10	10.6	0.77	1.0321	1.0975	6.3
1,2,3,7,8-PeCDF	50	52.8	1.54	0.7750	0.8183	5.6
2,3,4,7,8-PeCDF	50	54.4	1.50	0.8283	0.9013	8.8
1,2,3,7,8-PeCDD	50	52.8	0.62	0.8572	0.9049	5.6
1,2,3,4,7,8-HxCDF	50	52.2	1.20	0.9315	0.9716	4.3
1,2,3,6,7,8-HxCDF	50	53.8	1.27	0.9020	0.9702	7.6
2,3,4,6,7,8-HxCDF	50	52.4	1.20	0.9538	0.9989	4.7
1,2,3,7,8,9-HxCDF	50	51.4	1.23	0.8937	0.9195	2.9
1,2,3,4,7,8-HxCDD	50	54.5	1.24	0.8991	0.9797	9.0
1,2,3,6,7,8-HxCDD	50	49.5	1.27	0.9058	0.8973	-0.9
1,2,3,7,8,9-HxCDD	50	55.3	1.23	0.9222	1.0202	10.6
2,3,7,8-TCDF-13C	100	114.9	0.76	1.2169	1.3981	14.9
2,3,7,8-TCDD-13C	100	105.1	0.79	1.0037	1.0550	5.1
2,3,7,8-TCDD-37Cl4	10	9.7	0.00	1.0114	0.9823	-2.9
1,2,3,7,8-PeCDF-13C	100	110.8	1.58	0.9724	1.0773	10.8
2,3,4,7,8-PeCDF-13C	100	107.3	1.56	1.0056	1.0792	7.3
1,2,3,7,8-PeCDD-13C	100	106.2	1.59	0.7628	0.8098	6.2
1,2,3,4,7,8-HxCDF-13C	100	102.6	0.50	0.8374	0.8589	2.6
1,2,3,6,7,8-HxCDF-13C	100	107.2	0.51	1.1082	1.1460	3.4
2,3,4,6,7,8-HxCDF-13C	200	209.7	0.51	0.9030	0.9734	7.8
1,2,3,7,8,9-HxCDF-13C	150	159.3	0.51	0.7173	0.8082	12.7
1,2,3,4,7,8-HxCDD-13C	100	98.8	1.26	0.7811	0.7157	-8.4
1,2,3,6,7,8-HxCDD-13C	100	97.9	1.22	1.0445	1.0221	-2.1
1,2,3,4-TCDD-13C	100	NA	0.80	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.22	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U200626B_01	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-20-123-006	GC Column ID	US0177521H
Analyzed	06/26/2020 15:05	ICAL ID	U200419

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	11.0	0.78	0.8036	0.8842	10.0
2,3,7,8-TCDD	10	10.4	0.74	1.0321	1.0757	4.2
1,2,3,7,8-PeCDF	50	54.5	1.60	0.7750	0.8443	8.9
2,3,4,7,8-PeCDF	50	55.4	1.58	0.8283	0.9181	10.8
1,2,3,7,8-PeCDD	50	50.5	0.61	0.8572	0.8662	1.0
1,2,3,4,7,8-HxCDF	50	53.0	1.22	0.9315	0.9875	6.0
1,2,3,6,7,8-HxCDF	50	56.3	1.20	0.9020	1.0164	12.7
2,3,4,6,7,8-HxCDF	50	52.9	1.19	0.9538	1.0082	5.7
1,2,3,7,8,9-HxCDF	50	51.4	1.20	0.8937	0.9192	2.8
1,2,3,4,7,8-HxCDD	50	53.5	1.20	0.8991	0.9625	7.0
1,2,3,6,7,8-HxCDD	50	51.8	1.23	0.9058	0.9385	3.6
1,2,3,7,8,9-HxCDD	50	51.2	1.28	0.9222	0.9452	2.5
2,3,7,8-TCDF-13C	100	111.1	0.79	1.2169	1.3521	11.1
2,3,7,8-TCDD-13C	100	105.9	0.79	1.0037	1.0627	5.9
2,3,7,8-TCDD-37Cl4	10	10.1	0.00	1.0114	1.0167	0.5
1,2,3,7,8-PeCDF-13C	100	93.7	1.54	0.9724	0.9108	-6.3
2,3,4,7,8-PeCDF-13C	100	86.9	1.55	1.0056	0.8737	-13.1
1,2,3,7,8-PeCDD-13C	100	90.7	1.55	0.7628	0.6918	-9.3
1,2,3,4,7,8-HxCDF-13C	100	111.0	0.54	0.8374	0.9296	11.0
1,2,3,6,7,8-HxCDF-13C	100	109.9	0.49	1.1082	1.1371	2.6
2,3,4,6,7,8-HxCDF-13C	200	213.6	0.51	0.9030	0.9891	9.5
1,2,3,7,8,9-HxCDF-13C	150	156.6	0.51	0.7173	0.8287	15.5
1,2,3,4,7,8-HxCDD-13C	100	100.3	1.20	0.7811	0.8066	3.3
1,2,3,6,7,8-HxCDD-13C	100	95.7	1.24	1.0445	0.9997	-4.3
1,2,3,4-TCDD-13C	100	NA	0.76	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.18	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U200626B_18	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-20-123-006	GC Column ID	US0177521H
Analyzed	06/27/2020 03:07	ICAL ID	U200419

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	10.7	0.77	0.8036	0.8570	6.6
2,3,7,8-TCDD	10	10.3	0.73	1.0321	1.0654	3.2
1,2,3,7,8-PeCDF	50	55.4	1.54	0.7750	0.8587	10.8
2,3,4,7,8-PeCDF	50	56.1	1.49	0.8283	0.9292	12.2
1,2,3,7,8-PeCDD	50	52.0	0.61	0.8572	0.8907	3.9
1,2,3,4,7,8-HxCDF	50	55.0	1.07	0.9315	1.0243	10.0
1,2,3,6,7,8-HxCDF	50	54.8	1.24	0.9020	0.9889	9.6
2,3,4,6,7,8-HxCDF	50	52.1	1.29	0.9538	0.9938	4.2
1,2,3,7,8,9-HxCDF	50	50.0	1.20	0.8937	0.8935	0.0
1,2,3,4,7,8-HxCDD	50	54.8	1.25	0.8991	0.9856	9.6
1,2,3,6,7,8-HxCDD	50	51.2	1.22	0.9058	0.9270	2.3
1,2,3,7,8,9-HxCDD	50	53.4	1.18	0.9222	0.9853	6.8
2,3,7,8-TCDF-13C	100	110.7	0.79	1.2169	1.3471	10.7
2,3,7,8-TCDD-13C	100	109.5	0.77	1.0037	1.0988	9.5
2,3,7,8-TCDD-37Cl4	10	9.7	0.00	1.0114	0.9854	-2.6
1,2,3,7,8-PeCDF-13C	100	101.6	1.56	0.9724	0.9884	1.6
2,3,4,7,8-PeCDF-13C	100	93.9	1.55	1.0056	0.9444	-6.1
1,2,3,7,8-PeCDD-13C	100	94.8	1.52	0.7628	0.7230	-5.2
1,2,3,4,7,8-HxCDF-13C	100	108.7	0.54	0.8374	0.9106	8.7
1,2,3,6,7,8-HxCDF-13C	100	111.5	0.50	1.1082	1.2045	8.7
2,3,4,6,7,8-HxCDF-13C	200	211.9	0.52	0.9030	1.0503	16.3
1,2,3,7,8,9-HxCDF-13C	150	159.4	0.52	0.7173	0.8229	14.7
1,2,3,4,7,8-HxCDD-13C	100	97.0	1.26	0.7811	0.7596	-2.8
1,2,3,6,7,8-HxCDD-13C	100	103.4	1.25	1.0445	1.0801	3.4
1,2,3,4-TCDD-13C	100	NA	0.78	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.25	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

July 27, 2020

Nick DiLuzio
Newfields
1349 West Peachtree Street
Suite 2000
Atlanta, GA 30309

RE: Project: Colonels Island/App.IX
Pace Project No.: 2631454

Dear Nick DiLuzio:

Enclosed are the analytical results for sample(s) received by the laboratory on April 30, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet
- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Atlanta, GA
- Pace Analytical Services - New Orleans

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Pace Analytical Services New Orleans

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Mold Certification #: LAB0152
Texas Certification #: T 104704245-17-14
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

Pace Analytical Services Charlotte

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Pace Analytical Services Charlotte
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2631454001	**MW-69-042820**	Water	04/28/20 16:15	04/30/20 11:40
2631454003	**MW-66-042920**	Water	04/29/20 15:45	04/30/20 11:40
2631454004	**Trip Blank**	Water	04/28/20 00:00	04/30/20 11:40

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2631454001	**MW-69-042820**	EPA 8151	LEL	5	PAN
		EPA 8011	JMS1	3	PASI-C
		EPA 8081B	SEM	22	PASI-C
		EPA 8082A	SEM	8	PASI-C
		EPA 6020B	CSW	16	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		EPA 8270E	PKS	149	PASI-C
		EPA 9034	LJL	1	PASI-N
		EPA 9012B	CJL	1	PASI-A
2631454003	**MW-66-042920**	EPA 8151	HMH	5	PAN
		EPA 8011	JMS1	3	PASI-C
		EPA 8081B	SEM	22	PASI-C
		EPA 8082A	SEM	8	PASI-C
		EPA 6020B	CSW	16	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		EPA 8270E	PKS	149	PASI-C
		EPA 9034	LJL	1	PASI-N
		EPA 9012B	CJL	1	PASI-A
2631454004	**Trip Blank**	EPA 8011	JMS1	3	PASI-C

PAN = Pace National - Mt. Juliet
PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Atlanta, GA
PASI-N = Pace Analytical Services - New Orleans

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Method: **EPA 8151**
Description: Chlorinated Herb. (GC) 8151
Client: Newfields
Date: July 27, 2020

General Information:
2 samples were analyzed for EPA 8151 by Pace National Mt. Juliet. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 1471637

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: R3526526-2)
  - 2,4,5-T
  - 2,4,5-TP (Silvex)
  - 2,4-D

R1: RPD value was outside control limits.

- LCSD (Lab ID: R3526526-3)
  - 2,4,5-T
  - 2,4,5-TP (Silvex)
  - 2,4-D
  - Dinoseb

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Method: **EPA 8011**
Description: 8011 GCS EDB and DBCP
Client: Newfields
Date: July 27, 2020

General Information:
3 samples were analyzed for EPA 8011 by Pace Analytical Services Charlotte. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 8011 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Method: **EPA 8081B**
Description: 8081 OC Pesticides RVE
Client: Newfields
Date: July 27, 2020

General Information:
2 samples were analyzed for EPA 8081B by Pace Analytical Services Charlotte. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Method: **EPA 8082A**
Description: 8082 GCS PCB RVE
Client: Newfields
Date: July 27, 2020

General Information:
2 samples were analyzed for EPA 8082A by Pace Analytical Services Charlotte. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Method: **EPA 6020B**
Description: 6020B MET ICPMS
Client: Newfields
Date: July 27, 2020

General Information:
2 samples were analyzed for EPA 6020B by Pace Analytical Services Atlanta, GA. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Method: **EPA 7470A**
Description: 7470 Mercury
Client: Newfields
Date: July 27, 2020

General Information:
2 samples were analyzed for EPA 7470A by Pace Analytical Services Atlanta, GA. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

PROJECT NARRATIVE

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Method: **EPA 8270E**
Description: 8270E APP9 RV
Client: Newfields
Date: July 27, 2020

General Information:
2 samples were analyzed for EPA 8270E by Pace Analytical Services Charlotte. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 539625

S0: Surrogate recovery outside laboratory control limits.
- LCS (Lab ID: 2876381)
  - Terphenyl-d14 (S)

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
- BLANK (Lab ID: 2876380)
  - Terphenyl-d14 (S)

S4: Surrogate recovery not evaluated against control limits due to sample dilution.
- MW-69-042820 (Lab ID: 2631454001)
  - 2,4,6-Tribromophenol (S)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Nitrobenzene-d5 (S)
  - Phenol-d6 (S)
  - Terphenyl-d14 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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PROJECT NARRATIVE

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Method: **EPA 8270E**
Description: 8270E APP9 RV
Client: Newfields
Date: July 27, 2020

QC Batch: 539625

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 2876381)
  - 1,2-Diphenylhydrazine
  - 1,3,5-Trinitrobenzene
  - 2,2'-Oxybis(1-chloropropane)
  - 3&4-Methylphenol(m&p Cresol)
  - 3,3'-Dimethylbenzidine
  - Benzophenone
  - Di-n-octylphthalate
  - Methyl parathion
  - Parathion (Ethyl parathion)
  - Phenacetin
  - Phorate
  - bis(2-Ethylhexyl)phthalate
  - n-Octadecane

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2876381)
  - p-Phenylenediamine

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 539625

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- MW-69-042820 (Lab ID: 2631454001)
  - Nitrobenzene-d5 (S)

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PROJECT NARRATIVE

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Method: **EPA 9034**
Description: 9034 Sulfide, Titration
Client: Newfields
Date: July 27, 2020

General Information:
2 samples were analyzed for EPA 9034 by Pace Analytical Services New Orleans. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Method: **EPA 9012B**
Description: 9012B Cyanide, Total
Client: Newfields
Date: July 27, 2020

General Information:
2 samples were analyzed for EPA 9012B by Pace Analytical Services Asheville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 9012B with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-69-042820 **Lab ID: 2631454001** Collected: 04/28/20 16:15 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Chlorinated Herb. (GC) 8151	Analytical Method: EPA 8151 Preparation Method: 8151A Pace National - Mt. Juliet								
2,4-D	ND	ug/L	2.54		1.27	05/06/20 18:02	05/08/20 14:49	94-75-7	L0,R1
Dinoseb	ND	ug/L	2.54		1.27	05/06/20 18:02	05/08/20 14:49	88-85-7	R1
2,4,5-T	ND	ug/L	2.54		1.27	05/06/20 18:02	05/08/20 14:49	93-76-5	L0,R1
2,4,5-TP (Silvex)	ND	ug/L	2.54		1.27	05/06/20 18:02	05/08/20 14:49	93-72-1	L0,R1
Surrogates									
2,4-DCAA (S)	2360	%	14.0-158		1.27	05/06/20 18:02	05/08/20 14:49	19719-28-9	ST
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011 Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.020		1	05/11/20 09:34	05/11/20 19:02	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.020		1	05/11/20 09:34	05/11/20 19:02	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	91	%	60-140		1	05/11/20 09:34	05/11/20 19:02	301-79-56	
8081 OC Pesticides RVE	Analytical Method: EPA 8081B Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Aldrin	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	309-00-2	
alpha-BHC	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	319-84-6	
beta-BHC	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	319-85-7	
delta-BHC	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20		1	05/04/20 22:04	05/06/20 17:07	57-74-9	
4,4'-DDD	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	72-54-8	
4,4'-DDE	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	72-55-9	
4,4'-DDT	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	50-29-3	
Dieldrin	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	60-57-1	
Endosulfan I	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	959-98-8	
Endosulfan II	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	1031-07-8	
Endrin	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	72-20-8	
Endrin aldehyde	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	7421-93-4	
Heptachlor	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:07	118-74-1	
Methoxychlor	ND	ug/L	0.15		1	05/04/20 22:04	05/06/20 17:07	72-43-5	
Toxaphene	ND	ug/L	0.20		1	05/04/20 22:04	05/06/20 17:07	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	88	%	10-130		1	05/04/20 22:04	05/06/20 17:07	877-09-8	
Decachlorobiphenyl (S)	56	%	10-130		1	05/04/20 22:04	05/06/20 17:07	2051-24-3	
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:08	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:08	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:08	11141-16-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-69-042820 **Lab ID: 2631454001** Collected: 04/28/20 16:15 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:08	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:08	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:08	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:08	11096-82-5	
Surrogates									
Decachlorobiphenyl (S)	58	%	10-130		1	05/04/20 22:04	05/09/20 03:08	2051-24-3	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:34	7440-36-0	
Arsenic	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:34	7440-38-2	
Barium	**10.4**	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:34	7440-39-3	
Beryllium	ND	ug/L	0.50		1	05/01/20 17:00	05/04/20 19:34	7440-41-7	
Cadmium	ND	ug/L	0.50		1	05/01/20 17:00	05/04/20 19:34	7440-43-9	
Chromium	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:34	7440-47-3	
Cobalt	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:34	7440-48-4	
Copper	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:34	7440-50-8	
Lead	ND	ug/L	1.0		1	05/01/20 17:00	05/04/20 19:34	7439-92-1	
Nickel	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:34	7440-02-0	
Selenium	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:34	7782-49-2	
Silver	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:34	7440-22-4	
Thallium	ND	ug/L	1.0		1	05/01/20 17:00	05/04/20 19:34	7440-28-0	
Tin	ND	ug/L	20.0		1	05/01/20 17:00	05/04/20 19:34	7440-31-5	
Vanadium	ND	ug/L	10.0		1	05/01/20 17:00	05/04/20 19:34	7440-62-2	
Zinc	ND	ug/L	10.0		1	05/01/20 17:00	05/04/20 19:34	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	ug/L	0.20		1	05/01/20 07:40	05/01/20 14:07	7439-97-6	
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Acenaphthene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	83-32-9	
Acenaphthylene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	208-96-8	
Acetophenone	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	98-86-2	
2-Acetylaminofluorene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	53-96-3	v1
4-Aminobiphenyl	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	92-67-1	
Aniline	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	62-53-3	
Anthracene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	120-12-7	
Aramite	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	140-57-8	
Atrazine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	1912-24-9	
Benzal chloride	ND	ug/L	500		10	05/04/20 20:32	05/07/20 18:22	98-87-3	
Benzaldehyde	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	100-52-7	
Benzidine	ND	ug/L	500		10	05/04/20 20:32	05/07/20 18:22	92-87-5	
Benzo(a)anthracene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	56-55-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-69-042820 **Lab ID: 2631454001** Collected: 04/28/20 16:15 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Benzo(a)pyrene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	207-08-9	
Benzoic Acid	ND	ug/L	500		10	05/04/20 20:32	05/07/20 18:22	65-85-0	
Benzophenone	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	119-61-9	L1,v1
Benzyl alcohol	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	100-51-6	
Biphenyl (Diphenyl)	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	101-55-3	
Butylbenzylphthalate	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	85-68-7	v1
Caprolactam	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	105-60-2	v1
Carbazole	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	59-50-7	
4-Chloroaniline	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	106-47-8	
Chlorobenzilate	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	510-15-6	
bis(2-Chloroethoxy)methane	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	111-44-4	
2-Chloronaphthalene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	91-58-7	
2-Chlorophenol	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	7005-72-3	
Chrysene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	218-01-9	
n-Decane	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	124-18-5	v1
Diallate	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	2303-16-4	v1
Dibenz(a,h)anthracene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	53-70-3	
Dibenzo(a,e)pyrene	ND	ug/L	500		10	05/04/20 20:32	05/07/20 18:22	192-65-4	v2
Dibenzofuran	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	132-64-9	
2,3-Dibromo-1-propanol phosph	ND	ug/L	500		10	05/04/20 20:32	05/07/20 18:22	126-72-7	
1,2-Dichlorobenzene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	91-94-1	
2,4-Dichlorophenol	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	120-83-2	
2,6-Dichlorophenol	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	87-65-0	
2,3-Dichloroaniline	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	608-27-5	
Diethylphthalate	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	84-66-2	
Dimethoate	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	60-51-5	v1
P-Dimethylaminoazobenzene	ND	ug/L	50.0		10	05/04/20 20:32	05/07/20 18:22	60-11-7	
7,12-Dimethylbenz(a)anthracene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	57-97-6	
3,3'-Dimethylbenzidine	ND	ug/L	250		10	05/04/20 20:32	05/07/20 18:22	119-93-7	L1
2,4-Dimethylphenol	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	105-67-9	
a,a-Dimethylphenylethylamine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	122-09-8	
Dimethylphthalate	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	131-11-3	
Di-n-butylphthalate	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	534-52-1	
1,3-Dinitrobenzene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	99-65-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-69-042820 **Lab ID: 2631454001** Collected: 04/28/20 16:15 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
1,4-Dinitrobenzene	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	100-25-4	v1
2,4-Dinitrophenol	ND	ug/L	500		10	05/04/20 20:32	05/07/20 18:22	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	606-20-2	
Di-n-octylphthalate	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	117-84-0	L1,v1
Dinoseb	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	88-85-7	
Diphenylamine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	122-39-4	
Diphenyl ether (Phenyl ether)	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	101-84-8	
1,2-Diphenylhydrazine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	122-66-7	L1
Disulfoton	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	298-04-4	
bis(2-Ethylhexyl)phthalate	ND	ug/L	60.0		10	05/04/20 20:32	05/07/20 18:22	117-81-7	L1
Ethyl methanesulfonate	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	62-50-0	
Famphur	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	52-85-7	
Fluoranthene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	206-44-0	
Fluorene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	87-68-3	
Hexachlorobenzene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	77-47-4	
Hexachloroethane	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	67-72-1	
Hexachlorophene	ND	ug/L	1000		10	05/04/20 20:32	05/07/20 18:22	70-30-4	v2
Hexachloropropene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	1888-71-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	193-39-5	
Isodrin	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	465-73-6	
Isophorone	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	78-59-1	
Isosafrole	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	120-58-1	
Kepone	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	143-50-0	v1
Methapyrilene	ND	ug/L	500		10	05/04/20 20:32	05/07/20 18:22	91-80-5	v2
3-Methylcholanthrene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	56-49-5	
4,4'-Methylene-bis(2-chloroani	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	101-14-4	
Methyl methanesulfonate	ND	ug/L	50.0		10	05/04/20 20:32	05/07/20 18:22	66-27-3	
1-Methylnaphthalene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	90-12-0	
2-Methylnaphthalene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	91-57-6	
2-Methyl-5-nitroaniline	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	99-55-8	
Methyl parathion	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	298-00-0	L1,v1
2-Methylphenol(o-Cresol)	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	15831-10-4	L1
1-Naphthalenamine	ND	ug/L	50.0		10	05/04/20 20:32	05/07/20 18:22	134-32-7	
2-Naphthalenamine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	91-59-8	
Naphthalene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	91-20-3	
1,4-Naphthoquinone	ND	ug/L	50.0		10	05/04/20 20:32	05/07/20 18:22	130-15-4	v1
2-Nitroaniline	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	88-74-4	
3-Nitroaniline	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	99-09-2	
4-Nitroaniline	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	100-01-6	
Nitrobenzene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	98-95-3	
2-Nitrophenol	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	88-75-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-69-042820 **Lab ID: 2631454001** Collected: 04/28/20 16:15 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
4-Nitrophenol	ND	ug/L	500		10	05/04/20 20:32	05/07/20 18:22	100-02-7	
4-Nitroquinoline-n-oxide	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	56-57-5	
5-Nitro-o-toluidine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	99-55-8	
N-Nitrosodiethylamine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	55-18-5	
N-Nitrosodimethylamine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	62-75-9	
N-Nitroso-di-n-butylamine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	924-16-3	
N-Nitroso-di-n-propylamine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	86-30-6	
N-Nitrosomethylethylamine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	10595-95-6	
N-Nitrosomorpholine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	59-89-2	v1
N-Nitrosopiperidine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	100-75-4	
N-Nitrosopyrrolidine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	930-55-2	
n-Octadecane	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	593-45-3	L1,v1
O,O,O-Triethylphosphorothioate	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	126-68-1	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	108-60-1	L1,v1
Parathion (Ethyl parathion)	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	56-38-2	L1,v1
Pentachlorobenzene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	608-93-5	
Pentachloroethane	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	76-01-7	
Pentachloronitrobenzene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	82-68-8	
Pentachlorophenol	ND	ug/L	200		10	05/04/20 20:32	05/07/20 18:22	87-86-5	
Phenacetin	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	62-44-2	L1,v1
Phenanthrene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	85-01-8	
Phenol	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	108-95-2	
p-Phenylenediamine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	106-50-3	L2
Phorate	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	298-02-2	L1,v1
2-Picoline	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	109-06-8	v2
Pronamide	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	23950-58-5	
Pyrene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	129-00-0	
Pyridine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	110-86-1	
Safrole	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	94-59-7	
Sulfotepp (Thiodiphosphoric Ac	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	3689-24-5	
Terpineol	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	98-55-5	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	58-90-2	
Thionazin	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	297-97-2	v1
O-Toluidine	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	95-53-4	
1,2,4-Trichlorobenzene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	88-06-2	
1,3,5-Trinitrobenzene	ND	ug/L	100		10	05/04/20 20:32	05/07/20 18:22	99-35-4	L1,v1
Surrogates									
Nitrobenzene-d5 (S)	0	%	13-130		10	05/04/20 20:32	05/07/20 18:22	4165-60-0	D3,S4
2-Fluorobiphenyl (S)	0	%	13-130		10	05/04/20 20:32	05/07/20 18:22	321-60-8	S4
Terphenyl-d14 (S)	0	%	25-130		10	05/04/20 20:32	05/07/20 18:22	1718-51-0	S4
Phenol-d6 (S)	0	%	10-130		10	05/04/20 20:32	05/07/20 18:22	13127-88-3	S4

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-69-042820 **Lab ID: 2631454001** Collected: 04/28/20 16:15 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Surrogates									
2-Fluorophenol (S)	0	%	10-130		10	05/04/20 20:32	05/07/20 18:22	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	10-137		10	05/04/20 20:32	05/07/20 18:22	118-79-6	S4
9034 Sulfide, Titration	Analytical Method: EPA 9034 Pace Analytical Services - New Orleans								
Sulfide	ND	mg/L	1.0		1		05/04/20 13:54		
9012B Cyanide, Total	Analytical Method: EPA 9012B Preparation Method: EPA 9012B Pace Analytical Services - Asheville								
Cyanide	ND	mg/L	0.0080		1	05/11/20 10:54	05/11/20 13:10	57-12-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-66-042920 **Lab ID: 2631454003** Collected: 04/29/20 15:45 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Chlorinated Herb. (GC) 8151	Analytical Method: EPA 8151 Preparation Method: 8151A Pace National - Mt. Juliet								
2,4-D	ND	ug/L	2.00		1	05/04/20 03:46	05/05/20 16:54	94-75-7	
Dinoseb	ND	ug/L	2.00		1	05/04/20 03:46	05/05/20 16:54	88-85-7	
2,4,5-T	ND	ug/L	2.00		1	05/04/20 03:46	05/05/20 16:54	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	2.00		1	05/04/20 03:46	05/05/20 16:54	93-72-1	
Surrogates									
2,4-DCAA (S)	53.0	%	14.0-158		1	05/04/20 03:46	05/05/20 16:54	19719-28-9	
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011 Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.019		1	05/11/20 09:34	05/11/20 19:26	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.019		1	05/11/20 09:34	05/11/20 19:26	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	88	%	60-140		1	05/11/20 09:34	05/11/20 19:26	301-79-56	
8081 OC Pesticides RVE	Analytical Method: EPA 8081B Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Aldrin	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	309-00-2	
alpha-BHC	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	319-84-6	
beta-BHC	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	319-85-7	
delta-BHC	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20		1	05/04/20 22:04	05/06/20 17:36	57-74-9	
4,4'-DDD	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	72-54-8	
4,4'-DDE	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	72-55-9	
4,4'-DDT	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	50-29-3	
Dieldrin	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	60-57-1	
Endosulfan I	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	959-98-8	
Endosulfan II	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	1031-07-8	
Endrin	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	72-20-8	
Endrin aldehyde	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	7421-93-4	
Heptachlor	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050		1	05/04/20 22:04	05/06/20 17:36	118-74-1	
Methoxychlor	ND	ug/L	0.15		1	05/04/20 22:04	05/06/20 17:36	72-43-5	
Toxaphene	ND	ug/L	0.20		1	05/04/20 22:04	05/06/20 17:36	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	92	%	10-130		1	05/04/20 22:04	05/06/20 17:36	877-09-8	
Decachlorobiphenyl (S)	41	%	10-130		1	05/04/20 22:04	05/06/20 17:36	2051-24-3	
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:37	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:37	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:37	11141-16-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-66-042920 **Lab ID: 2631454003** Collected: 04/29/20 15:45 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:37	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:37	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:37	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50		1	05/04/20 22:04	05/09/20 03:37	11096-82-5	
Surrogates									
Decachlorobiphenyl (S)	41	%	10-130		1	05/04/20 22:04	05/09/20 03:37	2051-24-3	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:46	7440-36-0	
Arsenic	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:46	7440-38-2	
Barium	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:46	7440-39-3	
Beryllium	ND	ug/L	0.50		1	05/01/20 17:00	05/04/20 19:46	7440-41-7	
Cadmium	ND	ug/L	0.50		1	05/01/20 17:00	05/04/20 19:46	7440-43-9	
Chromium	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:46	7440-47-3	
Cobalt	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:46	7440-48-4	
Copper	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:46	7440-50-8	
Lead	ND	ug/L	1.0		1	05/01/20 17:00	05/04/20 19:46	7439-92-1	
Nickel	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:46	7440-02-0	
Selenium	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:46	7782-49-2	
Silver	ND	ug/L	5.0		1	05/01/20 17:00	05/04/20 19:46	7440-22-4	
Thallium	ND	ug/L	1.0		1	05/01/20 17:00	05/04/20 19:46	7440-28-0	
Tin	ND	ug/L	20.0		1	05/01/20 17:00	05/04/20 19:46	7440-31-5	
Vanadium	**12.3**	ug/L	10.0		1	05/01/20 17:00	05/04/20 19:46	7440-62-2	
Zinc	**11.4**	ug/L	10.0		1	05/01/20 17:00	05/04/20 19:46	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	ug/L	0.20		1	05/01/20 07:40	05/01/20 14:12	7439-97-6	
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Acenaphthene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	83-32-9	
Acenaphthylene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	208-96-8	
Acetophenone	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	98-86-2	
2-Acetylaminofluorene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	53-96-3	v1
4-Aminobiphenyl	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	92-67-1	
Aniline	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	62-53-3	
Anthracene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	120-12-7	
Aramite	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	140-57-8	v1
Atrazine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	1912-24-9	
Benzal chloride	ND	ug/L	50.0		1	05/04/20 20:32	05/09/20 00:26	98-87-3	
Benzaldehyde	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	100-52-7	
Benzidine	ND	ug/L	50.0		1	05/04/20 20:32	05/09/20 00:26	92-87-5	
Benzo(a)anthracene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	56-55-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-66-042920 **Lab ID: 2631454003** Collected: 04/29/20 15:45 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Benzo(a)pyrene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	207-08-9	
Benzoic Acid	ND	ug/L	50.0		1	05/04/20 20:32	05/09/20 00:26	65-85-0	
Benzophenone	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	119-61-9	L1,v1
Benzyl alcohol	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	100-51-6	
Biphenyl (Diphenyl)	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	85-68-7	v1
Caprolactam	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	105-60-2	v1
Carbazole	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	59-50-7	
4-Chloroaniline	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	106-47-8	
Chlorobenzilate	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	510-15-6	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	91-58-7	
2-Chlorophenol	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	7005-72-3	
Chrysene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	218-01-9	
n-Decane	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	124-18-5	v1
Diallate	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	2303-16-4	v1
Dibenz(a,h)anthracene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	53-70-3	
Dibenzo(a,e)pyrene	ND	ug/L	50.0		1	05/04/20 20:32	05/09/20 00:26	192-65-4	v2
Dibenzofuran	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	132-64-9	
2,3-Dibromo-1-propanol phosph	ND	ug/L	50.0		1	05/04/20 20:32	05/09/20 00:26	126-72-7	
1,2-Dichlorobenzene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	120-83-2	
2,6-Dichlorophenol	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	87-65-0	
2,3-Dichloroaniline	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	608-27-5	
Diethylphthalate	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	84-66-2	
Dimethoate	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	60-51-5	v1
P-Dimethylaminoazobenzene	ND	ug/L	5.0		1	05/04/20 20:32	05/09/20 00:26	60-11-7	
7,12-Dimethylbenz(a)anthracene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	57-97-6	
3,3'-Dimethylbenzidine	ND	ug/L	25.0		1	05/04/20 20:32	05/09/20 00:26	119-93-7	L1
2,4-Dimethylphenol	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	105-67-9	
a,a-Dimethylphenylethylamine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	122-09-8	
Dimethylphthalate	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	534-52-1	
1,3-Dinitrobenzene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	99-65-0	v1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-66-042920 **Lab ID: 2631454003** Collected: 04/29/20 15:45 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
1,4-Dinitrobenzene	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	100-25-4	v1
2,4-Dinitrophenol	ND	ug/L	50.0		1	05/04/20 20:32	05/09/20 00:26	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	117-84-0	L1,v1
Dinoseb	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	88-85-7	v1
Diphenylamine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	122-39-4	
Diphenyl ether (Phenyl ether)	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	101-84-8	
1,2-Diphenylhydrazine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	122-66-7	L1
Disulfoton	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	298-04-4	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0		1	05/04/20 20:32	05/09/20 00:26	117-81-7	L1,v1
Ethyl methanesulfonate	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	62-50-0	
Famphur	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	52-85-7	
Fluoranthene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	206-44-0	
Fluorene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	77-47-4	
Hexachloroethane	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	67-72-1	
Hexachlorophene	ND	ug/L	100		1	05/04/20 20:32	05/09/20 00:26	70-30-4	v2
Hexachloropropene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	1888-71-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	193-39-5	
Isodrin	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	465-73-6	
Isophorone	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	78-59-1	
Isosafrole	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	120-58-1	
Kepone	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	143-50-0	v1
Methapyrilene	ND	ug/L	50.0		1	05/04/20 20:32	05/09/20 00:26	91-80-5	v2
3-Methylcholanthrene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	56-49-5	
4,4'-Methylene-bis(2-chloroani	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	101-14-4	
Methyl methanesulfonate	ND	ug/L	5.0		1	05/04/20 20:32	05/09/20 00:26	66-27-3	
1-Methylnaphthalene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	91-57-6	
2-Methyl-5-nitroaniline	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	99-55-8	
Methyl parathion	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	298-00-0	L1,v1
2-Methylphenol(o-Cresol)	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	15831-10-4	L1
1-Naphthalenamine	ND	ug/L	5.0		1	05/04/20 20:32	05/09/20 00:26	134-32-7	
2-Naphthalenamine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	91-59-8	
Naphthalene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	91-20-3	
1,4-Naphthoquinone	ND	ug/L	5.0		1	05/04/20 20:32	05/09/20 00:26	130-15-4	v1
2-Nitroaniline	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	88-74-4	
3-Nitroaniline	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	99-09-2	
4-Nitroaniline	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	100-01-6	
Nitrobenzene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	98-95-3	
2-Nitrophenol	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	88-75-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-66-042920 **Lab ID: 2631454003** Collected: 04/29/20 15:45 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
4-Nitrophenol	ND	ug/L	50.0		1	05/04/20 20:32	05/09/20 00:26	100-02-7	
4-Nitroquinoline-n-oxide	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	56-57-5	
5-Nitro-o-toluidine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	99-55-8	
N-Nitrosodiethylamine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	55-18-5	
N-Nitrosodimethylamine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	62-75-9	
N-Nitroso-di-n-butylamine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	924-16-3	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	86-30-6	
N-Nitrosomethylethylamine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	10595-95-6	
N-Nitrosomorpholine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	59-89-2	v1
N-Nitrosopiperidine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	100-75-4	
N-Nitrosopyrrolidine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	930-55-2	v1
n-Octadecane	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	593-45-3	L1,v1
O,O,O-Triethylphosphorothioate	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	126-68-1	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	108-60-1	L1,v1
Parathion (Ethyl parathion)	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	56-38-2	L1,v1
Pentachlorobenzene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	608-93-5	
Pentachloroethane	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	76-01-7	
Pentachloronitrobenzene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	82-68-8	
Pentachlorophenol	ND	ug/L	20.0		1	05/04/20 20:32	05/09/20 00:26	87-86-5	
Phenacetin	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	62-44-2	L1,v1
Phenanthrene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	85-01-8	
Phenol	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	108-95-2	
p-Phenylenediamine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	106-50-3	L2
Phorate	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	298-02-2	L1,v1
2-Picoline	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	109-06-8	v2
Pronamide	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	23950-58-5	v1
Pyrene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	129-00-0	
Pyridine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	110-86-1	
Safrole	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	94-59-7	
Sulfotepp (Thiodiphosphoric Ac	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	3689-24-5	
Terpineol	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	98-55-5	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	58-90-2	
Thionazin	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	297-97-2	v1
O-Toluidine	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	95-53-4	
1,2,4-Trichlorobenzene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	88-06-2	
1,3,5-Trinitrobenzene	ND	ug/L	10.0		1	05/04/20 20:32	05/09/20 00:26	99-35-4	L1,v1
Surrogates									
Nitrobenzene-d5 (S)	79	%	13-130		1	05/04/20 20:32	05/09/20 00:26	4165-60-0	
2-Fluorobiphenyl (S)	75	%	13-130		1	05/04/20 20:32	05/09/20 00:26	321-60-8	
Terphenyl-d14 (S)	126	%	25-130		1	05/04/20 20:32	05/09/20 00:26	1718-51-0	
Phenol-d6 (S)	43	%	10-130		1	05/04/20 20:32	05/09/20 00:26	13127-88-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: MW-66-042920 **Lab ID: 2631454003** Collected: 04/29/20 15:45 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Surrogates									
2-Fluorophenol (S)	54	%	10-130		1	05/04/20 20:32	05/09/20 00:26	367-12-4	
2,4,6-Tribromophenol (S)	92	%	10-137		1	05/04/20 20:32	05/09/20 00:26	118-79-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034 Pace Analytical Services - New Orleans								
Sulfide	ND	mg/L	1.0		1		05/04/20 13:54		
9012B Cyanide, Total	Analytical Method: EPA 9012B Preparation Method: EPA 9012B Pace Analytical Services - Asheville								
Cyanide	ND	mg/L	0.0080		1	05/11/20 10:54	05/11/20 13:13	57-12-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Sample: Trip Blank **Lab ID: 2631454004** Collected: 04/28/20 00:00 Received: 04/30/20 11:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
	Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.020		1	05/11/20 09:34	05/11/20 19:37	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.020		1	05/11/20 09:34	05/11/20 19:37	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	93	%	60-140		1	05/11/20 09:34	05/11/20 19:37	301-79-56	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

QC Batch: 1470047
QC Batch Method: 8151A
Analysis Method: EPA 8151
Analysis Description: Chlorinated Herb. (GC) 8151
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 2631454003

METHOD BLANK: R3524957-1 Matrix: Water
Associated Lab Samples: 2631454003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4-D	ug/L	ND	2.00	05/05/20 11:36	
Dinoseb	ug/L	ND	2.00	05/05/20 11:36	
2,4,5-T	ug/L	ND	2.00	05/05/20 11:36	
2,4,5-TP (Silvex)	ug/L	ND	2.00	05/05/20 11:36	
2,4-DCAA (S)	%	64.6	14.0-158	05/05/20 11:36	

LABORATORY CONTROL SAMPLE & LCSD: R3524957-2 R3524957-3

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4-D	ug/L	5.00	2.71	2.82	54.2	56.4	50.0-120	3.98	20	
Dinoseb	ug/L	5.00	3.02	3.43	60.4	68.6	36.0-134	12.7	20	
2,4,5-T	ug/L	5.00	3.16	3.46	63.2	69.2	54.0-120	9.06	20	
2,4,5-TP (Silvex)	ug/L	5.00	3.00	3.22	60.0	64.4	50.0-125	7.07	20	
2,4-DCAA (S)	%				62.8	67.6	14.0-158			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

QC Batch: 1471637
QC Batch Method: 8151A
Analysis Method: EPA 8151
Analysis Description: Chlorinated Herb. (GC) 8151
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 2631454001

METHOD BLANK: R3526526-1 Matrix: Water
Associated Lab Samples: 2631454001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4-D	ug/L	ND	2.00	05/08/20 14:07	
Dinoseb	ug/L	ND	2.00	05/08/20 14:07	
2,4,5-T	ug/L	ND	2.00	05/08/20 14:07	
2,4,5-TP (Silvex)	ug/L	ND	2.00	05/08/20 14:07	
2,4-DCAA (S)	%	95	14.0-158	05/08/20 14:07	

LABORATORY CONTROL SAMPLE & LCSD: R3526526-2 R3526526-3

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4-D	ug/L	5.00	6.45	3.54	129	70.8	50.0-120	58.3	20	L0,R1
Dinoseb	ug/L	5.00	5.74	3.03	115	60.6	36.0-134	61.8	20	R1
2,4,5-T	ug/L	5.00	6.62	3.81	132	76.2	54.0-120	53.9	20	L0,R1
2,4,5-TP (Silvex)	ug/L	5.00	6.74	3.88	135	77.6	50.0-125	53.9	20	L0,R1
2,4-DCAA (S)	%				108	63.2	14.0-158			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

QC Batch: 45992
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2631454001, 2631454003

METHOD BLANK: 212913 Matrix: Water
Associated Lab Samples: 2631454001, 2631454003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/01/20 13:24	

LABORATORY CONTROL SAMPLE: 212914

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 212915 212916

Parameter	Units	92474591001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.3	2.2	91	89	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

QC Batch: 46039
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2631454001, 2631454003

METHOD BLANK: 213267 Matrix: Water
Associated Lab Samples: 2631454001, 2631454003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	05/04/20 17:19	
Arsenic	ug/L	ND	5.0	05/04/20 17:19	
Barium	ug/L	ND	5.0	05/04/20 17:19	
Beryllium	ug/L	ND	0.50	05/04/20 17:19	
Cadmium	ug/L	ND	0.50	05/04/20 17:19	
Chromium	ug/L	ND	5.0	05/04/20 17:19	
Cobalt	ug/L	ND	5.0	05/04/20 17:19	
Copper	ug/L	ND	5.0	05/04/20 17:19	
Lead	ug/L	ND	1.0	05/04/20 17:19	
Nickel	ug/L	ND	5.0	05/04/20 17:19	
Selenium	ug/L	ND	5.0	05/04/20 17:19	
Silver	ug/L	ND	5.0	05/04/20 17:19	
Thallium	ug/L	ND	1.0	05/04/20 17:19	
Tin	ug/L	ND	20.0	05/04/20 17:19	
Vanadium	ug/L	ND	10.0	05/04/20 17:19	
Zinc	ug/L	ND	10.0	05/04/20 17:19	

LABORATORY CONTROL SAMPLE: 213268

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	100	110	110	80-120	
Arsenic	ug/L	100	102	102	80-120	
Barium	ug/L	100	104	104	80-120	
Beryllium	ug/L	100	104	104	80-120	
Cadmium	ug/L	100	103	103	80-120	
Chromium	ug/L	100	105	105	80-120	
Cobalt	ug/L	100	100	100	80-120	
Copper	ug/L	100	104	104	80-120	
Lead	ug/L	100	105	105	80-120	
Nickel	ug/L	100	103	103	80-120	
Selenium	ug/L	100	99.9	100	80-120	
Silver	ug/L	100	104	104	80-120	
Thallium	ug/L	100	103	103	80-120	
Tin	ug/L	100	103	103	80-120	
Vanadium	ug/L	100	105	105	80-120	
Zinc	ug/L	100	107	107	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 213269 213270

Parameter	Units	92475750005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	110	110	110	110	75-125	0	20	
Arsenic	ug/L	ND	100	100	104	106	103	105	75-125	2	20	
Barium	ug/L	93.2	100	100	200	202	107	108	75-125	1	20	
Beryllium	ug/L	ND	100	100	99.3	96.7	99	97	75-125	3	20	
Cadmium	ug/L	ND	100	100	102	103	102	103	75-125	1	20	
Chromium	ug/L	ND	100	100	108	112	103	107	75-125	4	20	
Cobalt	ug/L	ND	100	100	103	103	102	102	75-125	0	20	
Copper	ug/L	ND	100	100	104	102	103	100	75-125	2	20	
Lead	ug/L	ND	100	100	102	104	101	104	75-125	2	20	
Nickel	ug/L	ND	100	100	104	104	103	102	75-125	0	20	
Selenium	ug/L	ND	100	100	97.4	101	97	101	75-125	4	20	
Silver	ug/L	ND	100	100	102	101	102	100	75-125	2	20	
Thallium	ug/L	ND	100	100	102	102	102	102	75-125	1	20	
Tin	ug/L	ND	100	100	105	105	105	105	75-125	1	20	
Vanadium	ug/L	ND	100	100	117	121	103	107	75-125	3	20	
Zinc	ug/L	ND	100	100	108	107	104	103	75-125	1	20	

SAMPLE DUPLICATE: 213271

Parameter	Units	92475750006 Result	Dup Result	RPD	Max RPD	Qualifiers
Antimony	ug/L	ND	ND		20	
Arsenic	ug/L	ND	.68J		20	
Barium	ug/L	29.4	30.5	3	20	
Beryllium	ug/L	ND	ND		20	
Cadmium	ug/L	ND	ND		20	
Chromium	ug/L	ND	.83J		20	
Cobalt	ug/L	ND	.82J		20	
Copper	ug/L	ND	.48J		20	
Lead	ug/L	ND	ND		20	
Nickel	ug/L	ND	.75J		20	
Selenium	ug/L	ND	ND		20	
Silver	ug/L	ND	ND		20	
Thallium	ug/L	ND	ND		20	
Tin	ug/L	ND	ND		20	
Vanadium	ug/L	ND	6.3J		20	
Zinc	ug/L	ND	2.1J		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

QC Batch: 540757
QC Batch Method: EPA 8011
Analysis Method: EPA 8011
Analysis Description: GCS 8011 EDB DBCP
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 2631454001, 2631454003, 2631454004

METHOD BLANK: 2882142 Matrix: Water
Associated Lab Samples: 2631454001, 2631454003, 2631454004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	ND	0.020	05/11/20 18:27	
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	05/11/20 18:27	
1-Chloro-2-bromopropane (S)	%	99	60-140	05/11/20 18:27	

LABORATORY CONTROL SAMPLE & LCSD: 2882143 2882144

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.25	0.25	0.25	101	101	60-140	0	20	
1,2-Dibromoethane (EDB)	ug/L	0.25	0.26	0.26	107	107	60-140	0	20	
1-Chloro-2-bromopropane (S)	%				100	99	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2882146 2882147

Parameter	Units	92476627003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	ND	0.25	0.25	0.27	0.26	106	103	60-140	1	20	
1,2-Dibromoethane (EDB)	ug/L	ND	0.25	0.25	0.29	0.29	117	114	60-140	1	20	
1-Chloro-2-bromopropane (S)	%						106	102	60-140			

SAMPLE DUPLICATE: 2882145

Parameter	Units	92476627002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		20	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	100	102			

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

QC Batch: 539627
QC Batch Method: EPA 3510C
Analysis Method: EPA 8081B
Analysis Description: 8081 OC Pesticides Red Vol
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 2631454001, 2631454003

METHOD BLANK: 2876388 Matrix: Water
Associated Lab Samples: 2631454001, 2631454003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	05/06/20 18:49	
4,4'-DDE	ug/L	ND	0.050	05/06/20 18:49	
4,4'-DDT	ug/L	ND	0.050	05/06/20 18:49	
Aldrin	ug/L	ND	0.050	05/06/20 18:49	
alpha-BHC	ug/L	ND	0.050	05/06/20 18:49	
beta-BHC	ug/L	ND	0.050	05/06/20 18:49	
Chlordane (Technical)	ug/L	ND	0.20	05/06/20 18:49	
delta-BHC	ug/L	ND	0.050	05/06/20 18:49	
Dieldrin	ug/L	ND	0.050	05/06/20 18:49	
Endosulfan I	ug/L	ND	0.050	05/06/20 18:49	
Endosulfan II	ug/L	ND	0.050	05/06/20 18:49	
Endosulfan sulfate	ug/L	ND	0.050	05/06/20 18:49	
Endrin	ug/L	ND	0.050	05/06/20 18:49	
Endrin aldehyde	ug/L	ND	0.050	05/06/20 18:49	
gamma-BHC (Lindane)	ug/L	ND	0.050	05/06/20 18:49	
Heptachlor	ug/L	ND	0.050	05/06/20 18:49	
Heptachlor epoxide	ug/L	ND	0.050	05/06/20 18:49	
Hexachlorobenzene	ug/L	ND	0.050	05/06/20 18:49	
Methoxychlor	ug/L	ND	0.15	05/06/20 18:49	
Toxaphene	ug/L	ND	0.20	05/06/20 18:49	
Decachlorobiphenyl (S)	%	82	10-130	05/06/20 18:49	
Tetrachloro-m-xylene (S)	%	77	10-130	05/06/20 18:49	

LABORATORY CONTROL SAMPLE: 2876389

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	0.25	0.20	80	49-130	
4,4'-DDE	ug/L	0.25	0.14	58	56-130	
4,4'-DDT	ug/L	0.25	0.16	66	45-130	
Aldrin	ug/L	0.25	0.11	44	25-130	
alpha-BHC	ug/L	0.25	0.18	70	53-130	
beta-BHC	ug/L	0.25	0.25	101	46-130	
delta-BHC	ug/L	0.25	0.19	74	54-130	
Dieldrin	ug/L	0.25	0.19	76	54-130	
Endosulfan I	ug/L	0.25	0.19	77	43-130	
Endosulfan II	ug/L	0.25	0.21	84	64-130	
Endosulfan sulfate	ug/L	0.25	0.22	87	66-130	
Endrin	ug/L	0.25	0.21	82	56-130	
Endrin aldehyde	ug/L	0.25	0.21	85	59-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

LABORATORY CONTROL SAMPLE: 2876389

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
gamma-BHC (Lindane)	ug/L	0.25	0.21	83	57-130	
Heptachlor	ug/L	0.25	0.12	50	37-130	
Heptachlor epoxide	ug/L	0.25	0.18	72	56-130	
Hexachlorobenzene	ug/L	0.25	0.19	75	24-130	
Methoxychlor	ug/L	0.75	0.60	81	46-130	
Decachlorobiphenyl (S)	%			64	10-130	
Tetrachloro-m-xylene (S)	%			62	10-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2876390 2876391

Parameter	Units	92475870001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4,4'-DDD	ug/L	ND	0.25	0.25	0.26	0.24	105	97	28-130	7	30	
4,4'-DDE	ug/L	ND	0.25	0.25	0.24	0.22	95	89	26-130	7	30	
4,4'-DDT	ug/L	ND	0.25	0.25	0.27	0.26	107	103	11-130	4	30	
Aldrin	ug/L	ND	0.25	0.25	0.17	0.17	70	67	10-130	3	30	
alpha-BHC	ug/L	ND	0.25	0.25	0.20	0.20	78	81	27-130	3	30	
beta-BHC	ug/L	ND	0.25	0.25	0.28	0.27	110	107	15-130	3	30	
delta-BHC	ug/L	ND	0.25	0.25	0.22	0.22	87	86	44-130	1	30	
Dieldrin	ug/L	ND	0.25	0.25	0.24	0.24	97	96	20-130	1	30	
Endosulfan I	ug/L	ND	0.25	0.25	0.24	0.23	96	92	10-139	5	30	
Endosulfan II	ug/L	ND	0.25	0.25	0.25	0.24	98	97	36-130	1	30	
Endosulfan sulfate	ug/L	ND	0.25	0.25	0.25	0.25	98	98	45-130	0	30	
Endrin	ug/L	ND	0.25	0.25	0.25	0.24	99	96	26-130	3	30	
Endrin aldehyde	ug/L	ND	0.25	0.25	0.25	0.24	99	98	19-160	1	30	
gamma-BHC (Lindane)	ug/L	ND	0.25	0.25	0.24	0.24	94	94	33-130	0	30	
Heptachlor	ug/L	ND	0.25	0.25	0.18	0.16	72	64	25-130	11	30	
Heptachlor epoxide	ug/L	ND	0.25	0.25	0.21	0.21	86	85	18-130	1	30	
Hexachlorobenzene	ug/L	ND	0.25	0.25	0.18	0.19	71	76	10-130	7	30	
Methoxychlor	ug/L	ND	0.75	0.75	0.73	0.74	97	99	10-130	2	30	
Decachlorobiphenyl (S)	%						61	64	10-130			
Tetrachloro-m-xylene (S)	%						77	78	10-130			

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

QC Batch: 539626
QC Batch Method: EPA 3510C
Analysis Method: EPA 8082A
Analysis Description: 8082 GCS PCB
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 2631454001, 2631454003

METHOD BLANK: 2876384 Matrix: Water
Associated Lab Samples: 2631454001, 2631454003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.50	05/09/20 05:20	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.50	05/09/20 05:20	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.50	05/09/20 05:20	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.50	05/09/20 05:20	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.50	05/09/20 05:20	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.50	05/09/20 05:20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.50	05/09/20 05:20	
Decachlorobiphenyl (S)	%	81	10-130	05/09/20 05:20	

LABORATORY CONTROL SAMPLE: 2876385

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	5	3.7	74	41-130	
PCB-1260 (Aroclor 1260)	ug/L	5	4.4	87	42-130	
Decachlorobiphenyl (S)	%			95	10-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2876386 2876387

Parameter	Units	92475870001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	ND	5	5	4.0	3.8	81	76	15-130	6	30	
PCB-1260 (Aroclor 1260)	ug/L	ND	5	5	3.4	3.1	68	62	10-130	8	30	
Decachlorobiphenyl (S)	%						68	63	10-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

QC Batch: 539625
QC Batch Method: EPA 3510C
Analysis Method: EPA 8270E
Analysis Description: 8270E Water APP9 RV MSSV
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 2631454001, 2631454003

METHOD BLANK: 2876380 Matrix: Water
Associated Lab Samples: 2631454001, 2631454003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	05/07/20 16:53	
1,2,4-Trichlorobenzene	ug/L	ND	10.0	05/07/20 16:53	
1,2-Dichlorobenzene	ug/L	ND	10.0	05/07/20 16:53	
1,2-Diphenylhydrazine	ug/L	ND	10.0	05/07/20 16:53	
1,3,5-Trinitrobenzene	ug/L	ND	10.0	05/07/20 16:53	v1
1,3-Dichlorobenzene	ug/L	ND	10.0	05/07/20 16:53	
1,3-Dinitrobenzene	ug/L	ND	10.0	05/07/20 16:53	
1,4-Dichlorobenzene	ug/L	ND	10.0	05/07/20 16:53	
1,4-Dinitrobenzene	ug/L	ND	20.0	05/07/20 16:53	v1
1,4-Naphthoquinone	ug/L	ND	5.0	05/07/20 16:53	v1
1-Methylnaphthalene	ug/L	ND	10.0	05/07/20 16:53	
1-Naphthalenamine	ug/L	ND	5.0	05/07/20 16:53	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	05/07/20 16:53	v1
2,3,4,6-Tetrachlorophenol	ug/L	ND	10.0	05/07/20 16:53	
2,3-Dibromo-1-propanol phosph	ug/L	ND	50.0	05/07/20 16:53	
2,3-Dichloroaniline	ug/L	ND	10.0	05/07/20 16:53	
2,4,5-Trichlorophenol	ug/L	ND	10.0	05/07/20 16:53	
2,4,6-Trichlorophenol	ug/L	ND	10.0	05/07/20 16:53	
2,4-Dichlorophenol	ug/L	ND	10.0	05/07/20 16:53	
2,4-Dimethylphenol	ug/L	ND	10.0	05/07/20 16:53	
2,4-Dinitrophenol	ug/L	ND	50.0	05/07/20 16:53	
2,4-Dinitrotoluene	ug/L	ND	10.0	05/07/20 16:53	
2,6-Dichlorophenol	ug/L	ND	10.0	05/07/20 16:53	
2,6-Dinitrotoluene	ug/L	ND	10.0	05/07/20 16:53	
2-Acetylaminofluorene	ug/L	ND	10.0	05/07/20 16:53	v1
2-Chloronaphthalene	ug/L	ND	10.0	05/07/20 16:53	
2-Chlorophenol	ug/L	ND	10.0	05/07/20 16:53	
2-Methyl-5-nitroaniline	ug/L	ND	10.0	05/07/20 16:53	
2-Methylnaphthalene	ug/L	ND	10.0	05/07/20 16:53	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/07/20 16:53	
2-Naphthalenamine	ug/L	ND	10.0	05/07/20 16:53	
2-Nitroaniline	ug/L	ND	20.0	05/07/20 16:53	
2-Nitrophenol	ug/L	ND	10.0	05/07/20 16:53	
2-Picoline	ug/L	ND	10.0	05/07/20 16:53	v2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	05/07/20 16:53	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	05/07/20 16:53	
3,3'-Dimethylbenzidine	ug/L	ND	25.0	05/07/20 16:53	
3-Methylcholanthrene	ug/L	ND	10.0	05/07/20 16:53	
3-Nitroaniline	ug/L	ND	20.0	05/07/20 16:53	
4,4'-Methylene-bis(2-chloroani	ug/L	ND	20.0	05/07/20 16:53	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

METHOD BLANK: 2876380 Matrix: Water
Associated Lab Samples: 2631454001, 2631454003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	05/07/20 16:53	
4-Aminobiphenyl	ug/L	ND	10.0	05/07/20 16:53	
4-Bromophenylphenyl ether	ug/L	ND	10.0	05/07/20 16:53	
4-Chloro-3-methylphenol	ug/L	ND	10.0	05/07/20 16:53	
4-Chloroaniline	ug/L	ND	20.0	05/07/20 16:53	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	05/07/20 16:53	
4-Nitroaniline	ug/L	ND	20.0	05/07/20 16:53	
4-Nitrophenol	ug/L	ND	50.0	05/07/20 16:53	
4-Nitroquinoline-n-oxide	ug/L	ND	20.0	05/07/20 16:53	
5-Nitro-o-toluidine	ug/L	ND	10.0	05/07/20 16:53	
7,12-Dimethylbenz(a)anthracene	ug/L	ND	10.0	05/07/20 16:53	
a,a-Dimethylphenylethylamine	ug/L	ND	10.0	05/07/20 16:53	
Acenaphthene	ug/L	ND	10.0	05/07/20 16:53	
Acenaphthylene	ug/L	ND	10.0	05/07/20 16:53	
Acetophenone	ug/L	ND	10.0	05/07/20 16:53	
Aniline	ug/L	ND	10.0	05/07/20 16:53	
Anthracene	ug/L	ND	10.0	05/07/20 16:53	
Aramite	ug/L	ND	10.0	05/07/20 16:53	
Atrazine	ug/L	ND	10.0	05/07/20 16:53	
Benzal chloride	ug/L	ND	50.0	05/07/20 16:53	
Benzaldehyde	ug/L	ND	10.0	05/07/20 16:53	
Benzidine	ug/L	ND	50.0	05/07/20 16:53	
Benzo(a)anthracene	ug/L	ND	10.0	05/07/20 16:53	
Benzo(a)pyrene	ug/L	ND	10.0	05/07/20 16:53	
Benzo(b)fluoranthene	ug/L	ND	10.0	05/07/20 16:53	
Benzo(g,h,i)perylene	ug/L	ND	10.0	05/07/20 16:53	
Benzo(k)fluoranthene	ug/L	ND	10.0	05/07/20 16:53	
Benzoic Acid	ug/L	ND	50.0	05/07/20 16:53	
Benzophenone	ug/L	ND	10.0	05/07/20 16:53	v1
Benzyl alcohol	ug/L	ND	20.0	05/07/20 16:53	
Biphenyl (Diphenyl)	ug/L	ND	10.0	05/07/20 16:53	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	05/07/20 16:53	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	05/07/20 16:53	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	05/07/20 16:53	
Butylbenzylphthalate	ug/L	ND	10.0	05/07/20 16:53	v1
Caprolactam	ug/L	ND	10.0	05/07/20 16:53	v1
Carbazole	ug/L	ND	10.0	05/07/20 16:53	
Chlorobenzilate	ug/L	ND	10.0	05/07/20 16:53	
Chrysene	ug/L	ND	10.0	05/07/20 16:53	
Di-n-butylphthalate	ug/L	ND	10.0	05/07/20 16:53	
Di-n-octylphthalate	ug/L	ND	10.0	05/07/20 16:53	v1
Diallate	ug/L	ND	10.0	05/07/20 16:53	v1
Dibenz(a,h)anthracene	ug/L	ND	10.0	05/07/20 16:53	
Dibenzo(a,e)pyrene	ug/L	ND	50.0	05/07/20 16:53	v2
Dibenzofuran	ug/L	ND	10.0	05/07/20 16:53	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

METHOD BLANK: 2876380 Matrix: Water
Associated Lab Samples: 2631454001, 2631454003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diethylphthalate	ug/L	ND	10.0	05/07/20 16:53	
Dimethoate	ug/L	ND	10.0	05/07/20 16:53	v1
Dimethylphthalate	ug/L	ND	10.0	05/07/20 16:53	
Dinoseb	ug/L	ND	10.0	05/07/20 16:53	
Diphenyl ether (Phenyl ether)	ug/L	ND	10.0	05/07/20 16:53	
Diphenylamine	ug/L	ND	10.0	05/07/20 16:53	
Disulfoton	ug/L	ND	10.0	05/07/20 16:53	
Ethyl methanesulfonate	ug/L	ND	20.0	05/07/20 16:53	
Famphur	ug/L	ND	10.0	05/07/20 16:53	
Fluoranthene	ug/L	ND	10.0	05/07/20 16:53	
Fluorene	ug/L	ND	10.0	05/07/20 16:53	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	05/07/20 16:53	
Hexachlorobenzene	ug/L	ND	10.0	05/07/20 16:53	
Hexachlorocyclopentadiene	ug/L	ND	10.0	05/07/20 16:53	
Hexachloroethane	ug/L	ND	10.0	05/07/20 16:53	
Hexachlorophene	ug/L	ND	100	05/07/20 16:53	v2
Hexachloropropene	ug/L	ND	10.0	05/07/20 16:53	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	05/07/20 16:53	
Isodrin	ug/L	ND	10.0	05/07/20 16:53	
Isophorone	ug/L	ND	10.0	05/07/20 16:53	
Isosafrole	ug/L	ND	10.0	05/07/20 16:53	
Kepone	ug/L	ND	10.0	05/07/20 16:53	v1
Methapyrilene	ug/L	ND	50.0	05/07/20 16:53	v2
Methyl methanesulfonate	ug/L	ND	5.0	05/07/20 16:53	
Methyl parathion	ug/L	ND	10.0	05/07/20 16:53	v1
n-Decane	ug/L	ND	10.0	05/07/20 16:53	v1
N-Nitroso-di-n-butylamine	ug/L	ND	10.0	05/07/20 16:53	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	05/07/20 16:53	
N-Nitrosodiethylamine	ug/L	ND	10.0	05/07/20 16:53	
N-Nitrosodimethylamine	ug/L	ND	10.0	05/07/20 16:53	
N-Nitrosodiphenylamine	ug/L	ND	10.0	05/07/20 16:53	
N-Nitrosomethylethylamine	ug/L	ND	10.0	05/07/20 16:53	
N-Nitrosomorpholine	ug/L	ND	10.0	05/07/20 16:53	v1
N-Nitrosopiperidine	ug/L	ND	10.0	05/07/20 16:53	
N-Nitrosopyrrolidine	ug/L	ND	10.0	05/07/20 16:53	
n-Octadecane	ug/L	ND	10.0	05/07/20 16:53	
Naphthalene	ug/L	ND	10.0	05/07/20 16:53	
Nitrobenzene	ug/L	ND	10.0	05/07/20 16:53	
O,O,O-Triethylphosphorothioate	ug/L	ND	10.0	05/07/20 16:53	
O-Toluidine	ug/L	ND	10.0	05/07/20 16:53	
P-Dimethylaminoazobenzene	ug/L	ND	5.0	05/07/20 16:53	
p-Phenylenediamine	ug/L	ND	10.0	05/07/20 16:53	
Parathion (Ethyl parathion)	ug/L	ND	10.0	05/07/20 16:53	v1
Pentachlorobenzene	ug/L	ND	10.0	05/07/20 16:53	
Pentachloroethane	ug/L	ND	10.0	05/07/20 16:53	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

METHOD BLANK: 2876380 Matrix: Water
Associated Lab Samples: 2631454001, 2631454003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Pentachloronitrobenzene	ug/L	ND	10.0	05/07/20 16:53	
Pentachlorophenol	ug/L	ND	20.0	05/07/20 16:53	
Phenacetin	ug/L	ND	10.0	05/07/20 16:53	v1
Phenanthrene	ug/L	ND	10.0	05/07/20 16:53	
Phenol	ug/L	ND	10.0	05/07/20 16:53	
Phorate	ug/L	ND	10.0	05/07/20 16:53	v1
Pronamide	ug/L	ND	10.0	05/07/20 16:53	v1
Pyrene	ug/L	ND	10.0	05/07/20 16:53	
Pyridine	ug/L	ND	10.0	05/07/20 16:53	
Safrole	ug/L	ND	10.0	05/07/20 16:53	
Sulfotepp (Thiodiphosphoric Ac	ug/L	ND	10.0	05/07/20 16:53	
Terpineol	ug/L	ND	10.0	05/07/20 16:53	
Thionazin	ug/L	ND	10.0	05/07/20 16:53	v1
2,4,6-Tribromophenol (S)	%	117	10-137	05/07/20 16:53	
2-Fluorobiphenyl (S)	%	104	13-130	05/07/20 16:53	
2-Fluorophenol (S)	%	85	10-130	05/07/20 16:53	
Nitrobenzene-d5 (S)	%	117	13-130	05/07/20 16:53	
Phenol-d6 (S)	%	67	10-130	05/07/20 16:53	
Terphenyl-d14 (S)	%	159	25-130	05/07/20 16:53	S3

LABORATORY CONTROL SAMPLE: 2876381

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	39.3	79	10-130	
1,2,4-Trichlorobenzene	ug/L	50	40.4	81	30-130	
1,2-Dichlorobenzene	ug/L	50	44.6	89	30-130	
1,2-Diphenylhydrazine	ug/L	50	76.4	153	40-130	L1
1,3,5-Trinitrobenzene	ug/L	50	89.7	179	50-130	L1,v1
1,3-Dichlorobenzene	ug/L	50	41.7	83	20-130	
1,3-Dinitrobenzene	ug/L	50	60.2	120	30-130	
1,4-Dichlorobenzene	ug/L	50	44.3	89	30-130	
1,4-Dinitrobenzene	ug/L	50	63.0	126	50-130	v1
1,4-Naphthoquinone	ug/L	50	38.5	77	30-130	v1
1-Methylnaphthalene	ug/L	50	45.7	91	30-130	
1-Naphthalenamine	ug/L	50	44.7	89	30-130	
2,2'-Oxybis(1-chloropropane)	ug/L	50	70.0	140	20-130	L1,v1
2,3,4,6-Tetrachlorophenol	ug/L	50	45.4	91	40-200	
2,3-Dibromo-1-propanol phosph	ug/L	200	254	127	40-130	
2,3-Dichloroaniline	ug/L	50	50.7	101	40-130	
2,4,5-Trichlorophenol	ug/L	50	47.8	96	40-130	
2,4,6-Trichlorophenol	ug/L	50	45.1	90	40-130	
2,4-Dichlorophenol	ug/L	50	48.2	96	31-130	
2,4-Dimethylphenol	ug/L	50	49.2	98	30-130	
2,4-Dinitrophenol	ug/L	250	202	81	30-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

LABORATORY CONTROL SAMPLE: 2876381

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/L	50	58.1	116	49-130	
2,6-Dichlorophenol	ug/L	50	47.4	95	50-130	
2,6-Dinitrotoluene	ug/L	50	58.8	118	50-130	
2-Acetylaminofluorene	ug/L	50	61.8	124	70-150	v1
2-Chloronaphthalene	ug/L	50	47.1	94	30-130	
2-Chlorophenol	ug/L	50	48.0	96	30-130	
2-Methyl-5-nitroaniline	ug/L	50	59.8	120	50-200	
2-Methylnaphthalene	ug/L	50	48.5	97	30-130	
2-Methylphenol(o-Cresol)	ug/L	50	47.9	96	30-130	
2-Naphthalenamine	ug/L	50	40.5	81	30-130	
2-Nitroaniline	ug/L	100	101	101	40-130	
2-Nitrophenol	ug/L	50	54.0	108	20-130	
2-Picoline	ug/L	50	25.5	51	20-130	v3
3&4-Methylphenol(m&p Cresol)	ug/L	50	90.7	181	20-130	L1
3,3'-Dichlorobenzidine	ug/L	100	107	107	10-150	
3,3'-Dimethylbenzidine	ug/L	100	188	188	10-150	L1
3-Methylcholanthrene	ug/L	50	55.2	110	40-130	
3-Nitroaniline	ug/L	100	117	117	40-130	
4,4'-Methylene-bis(2-chloroani	ug/L	100	109	109	50-130	
4,6-Dinitro-2-methylphenol	ug/L	100	94.4	94	40-130	
4-Aminobiphenyl	ug/L	50	54.6	109	20-130	
4-Bromophenylphenyl ether	ug/L	50	47.5	95	30-130	
4-Chloro-3-methylphenol	ug/L	100	101	101	30-130	
4-Chloroaniline	ug/L	100	95.9	96	20-130	
4-Chlorophenylphenyl ether	ug/L	50	45.5	91	20-130	
4-Nitroaniline	ug/L	100	113	113	40-130	
4-Nitrophenol	ug/L	250	121	49	10-130	
4-Nitroquinoline-n-oxide	ug/L	100	88.6	89	10-130	
5-Nitro-o-toluidine	ug/L	50	59.8	120	50-150	
7,12-Dimethylbenz(a)anthracene	ug/L	50	37.7	75	50-130	
a,a-Dimethylphenylethylamine	ug/L	50	35.2	70	10-200	
Acenaphthene	ug/L	50	50.4	101	30-130	
Acenaphthylene	ug/L	50	53.1	106	30-130	
Acetophenone	ug/L	50	47.0	94	20-130	
Aniline	ug/L	50	44.5	89	20-130	
Anthracene	ug/L	50	51.3	103	50-130	
Aramite	ug/L	100	61.9	62	30-130	
Atrazine	ug/L	50	63.3	127	30-150	
Benzal chloride	ug/L	50	34.4J	69	20-150	
Benzaldehyde	ug/L	50	60.2	120	10-130	
Benzidine	ug/L	100	75.2	75	10-130	
Benzo(a)anthracene	ug/L	50	55.2	110	50-130	
Benzo(a)pyrene	ug/L	50	55.7	111	50-130	
Benzo(b)fluoranthene	ug/L	50	58.4	117	50-130	
Benzo(g,h,i)perylene	ug/L	50	54.2	108	50-130	
Benzo(k)fluoranthene	ug/L	50	57.2	114	50-130	
Benzoic Acid	ug/L	250	107	43	10-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

LABORATORY CONTROL SAMPLE: 2876381

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzophenone	ug/L	50	71.3	143	20-130	L1,v1
Benzyl alcohol	ug/L	100	92.2	92	20-130	
Biphenyl (Diphenyl)	ug/L	50	48.5	97	20-130	
bis(2-Chloroethoxy)methane	ug/L	50	49.4	99	30-130	
bis(2-Chloroethyl) ether	ug/L	50	50.7	101	30-130	
bis(2-Ethylhexyl)phthalate	ug/L	50	67.6	135	50-130	L1
Butylbenzylphthalate	ug/L	50	70.6	141	50-150	v1
Caprolactam	ug/L	50	31.7	63	10-130	v1
Carbazole	ug/L	50	52.9	106	40-130	
Chlorobenzilate	ug/L	50	57.7	115	50-130	
Chrysene	ug/L	50	53.6	107	50-130	
Di-n-butylphthalate	ug/L	50	60.1	120	50-130	
Di-n-octylphthalate	ug/L	50	71.1	142	50-130	L1,v1
Diallate	ug/L	50	55.2	110	50-130	v1
Dibenz(a,h)anthracene	ug/L	50	53.5	107	40-130	
Dibenzo(a,e)pyrene	ug/L	50	44.9J	90	40-130	v3
Dibenzofuran	ug/L	50	49.7	99	40-130	
Diethylphthalate	ug/L	50	55.6	111	40-130	
Dimethoate	ug/L	50	63.1	126	50-150	v1
Dimethylphthalate	ug/L	50	52.6	105	40-130	
Dinoseb	ug/L	50	60.6	121	20-150	
Diphenyl ether (Phenyl ether)	ug/L	50	49.5	99	20-130	
Diphenylamine	ug/L	50	52.3	105	30-130	
Disulfoton	ug/L	50	51.6	103	40-150	
Ethyl methanesulfonate	ug/L	50	51.3	103	40-130	
Famphur	ug/L	100	37.6	38	30-150	
Fluoranthene	ug/L	50	52.0	104	30-130	
Fluorene	ug/L	50	50.3	101	20-130	
Hexachloro-1,3-butadiene	ug/L	50	35.9	72	10-130	
Hexachlorobenzene	ug/L	50	48.4	97	30-130	
Hexachlorocyclopentadiene	ug/L	50	37.3	75	10-150	
Hexachloroethane	ug/L	50	41.1	82	10-130	
Hexachlorophene	ug/L	500	260	52	10-130	v3
Hexachloropropene	ug/L	50	31.1	62	10-150	
Indeno(1,2,3-cd)pyrene	ug/L	50	53.8	108	40-130	
Isodrin	ug/L	50	52.2	104	40-130	
Isophorone	ug/L	50	51.9	104	30-130	
Isosafrole	ug/L	50	44.4	89	40-130	
Kepone	ug/L	100	62.9	63	10-130	v1
Methapyrilene	ug/L	50	49.5J	99	10-150	v3
Methyl methanesulfonate	ug/L	50	43.2	86	20-130	
Methyl parathion	ug/L	50	74.8	150	50-130	L1,v1
n-Decane	ug/L	50	49.9	100	10-130	v1
N-Nitroso-di-n-butylamine	ug/L	50	39.6	79	30-130	
N-Nitroso-di-n-propylamine	ug/L	50	49.4	99	30-130	
N-Nitrosodiethylamine	ug/L	50	52.1	104	40-130	
N-Nitrosodimethylamine	ug/L	50	41.8	84	10-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

LABORATORY CONTROL SAMPLE: 2876381

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
N-Nitrosodiphenylamine	ug/L	50	52.3	105	30-130	
N-Nitrosomethylethylamine	ug/L	50	48.9	98	30-130	
N-Nitrosomorpholine	ug/L	50	59.3	119	30-130	v1
N-Nitrosopiperidine	ug/L	50	54.6	109	30-130	
N-Nitrosopyrrolidine	ug/L	50	53.0	106	30-130	
n-Octadecane	ug/L	50	71.0	142	40-130	L1,v1
Naphthalene	ug/L	50	46.9	94	20-130	
Nitrobenzene	ug/L	50	48.8	98	20-130	
O,O,O-Triethylphosphorothioate	ug/L	50	45.9	92	40-130	
O-Toluidine	ug/L	50	47.4	95	20-130	
P-Dimethylaminoazobenzene	ug/L	50	26.4	53	10-130	
p-Phenylenediamine	ug/L	50	ND	0	70-140	L2
Parathion (Ethyl parathion)	ug/L	50	78.7	157	50-150	L1,v1
Pentachlorobenzene	ug/L	50	42.6	85	30-150	
Pentachloroethane	ug/L	50	36.9	74	20-130	
Pentachloronitrobenzene	ug/L	50	60.9	122	60-130	
Pentachlorophenol	ug/L	100	89.3	89	10-140	
Phenacetin	ug/L	50	65.4	131	60-130	L1,v1
Phenanthrene	ug/L	50	51.0	102	50-130	
Phenol	ug/L	50	30.5	61	10-130	
Phorate	ug/L	50	79.9	160	50-130	L1,v1
Pronamide	ug/L	50	61.0	122	70-130	v1
Pyrene	ug/L	50	59.4	119	50-130	
Pyridine	ug/L	50	33.5	67	10-130	
Safrole	ug/L	50	46.3	93	30-130	
Sulfotepp (Thiodiphosphoric Ac	ug/L	50	49.6	99	30-130	
Terpineol	ug/L	50	61.0	122	30-150	
Thionazin	ug/L	50	61.0	122	60-130	v1
2,4,6-Tribromophenol (S)	%			124	10-137	
2-Fluorobiphenyl (S)	%			107	13-130	
2-Fluorophenol (S)	%			81	10-130	
Nitrobenzene-d5 (S)	%			113	13-130	
Phenol-d6 (S)	%			70	10-130	
Terphenyl-d14 (S)	%			157	25-130	S0

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

QC Batch: 184234
QC Batch Method: EPA 9034
Analysis Method: EPA 9034
Analysis Description: 9034 Sulfide Waste Water
Laboratory: Pace Analytical Services - New Orleans
Associated Lab Samples: 2631454001, 2631454003

METHOD BLANK: 845489 Matrix: Water
Associated Lab Samples: 2631454001, 2631454003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	ND	1.0	05/04/20 13:54	

LABORATORY CONTROL SAMPLE: 845490

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	20	17.6	88	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

QC Batch: 540766
QC Batch Method: EPA 9012B
Analysis Method: EPA 9012B
Analysis Description: EPA 9012B Cyanide
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2631454001, 2631454003

METHOD BLANK: 2882182 Matrix: Water
Associated Lab Samples: 2631454001, 2631454003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0080	05/11/20 13:03	

LABORATORY CONTROL SAMPLE: 2882183

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	0.1	0.10	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2882184 2882185

Parameter	Units	2631474002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	ND	0.1	0.1	0.095	0.096	89	90	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2882186 2882187

Parameter	Units	92476275009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	ND	0.1	0.1	0.10	0.086	94	80	75-125	15	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
ST	Surrogate recovery was above laboratory control limits. Results may be biased high.
v1	The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias.
v2	The continuing calibration verification was below the method acceptance limit. The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard.
v3	The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have low bias.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Colonels Island/App.IX-Revised Report
Pace Project No.: 2631454

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2631454001	**MW-69-042820**	8151A	1471637	EPA 8151	1471637
2631454003	**MW-66-042920**	8151A	1470047	EPA 8151	1470047
2631454001	**MW-69-042820**	EPA 8011	540757	EPA 8011	540822
2631454003	**MW-66-042920**	EPA 8011	540757	EPA 8011	540822
2631454004	**Trip Blank**	EPA 8011	540757	EPA 8011	540822
2631454001	**MW-69-042820**	EPA 3510C	539627	EPA 8081B	539884
2631454003	**MW-66-042920**	EPA 3510C	539627	EPA 8081B	539884
2631454001	**MW-69-042820**	EPA 3510C	539626	EPA 8082A	539883
2631454003	**MW-66-042920**	EPA 3510C	539626	EPA 8082A	539883
2631454001	**MW-69-042820**	EPA 3005A	46039	EPA 6020B	46046
2631454003	**MW-66-042920**	EPA 3005A	46039	EPA 6020B	46046
2631454001	**MW-69-042820**	EPA 7470A	45992	EPA 7470A	46014
2631454003	**MW-66-042920**	EPA 7470A	45992	EPA 7470A	46014
2631454001	**MW-69-042820**	EPA 3510C	539625	EPA 8270E	540195
2631454003	**MW-66-042920**	EPA 3510C	539625	EPA 8270E	540195
2631454001	**MW-69-042820**	EPA 9034	184234		
2631454003	**MW-66-042920**	EPA 9034	184234		
2631454001	**MW-69-042820**	EPA 9012B	540766	EPA 9012B	540796
2631454003	**MW-66-042920**	EPA 9012B	540766	EPA 9012B	540796

Pace Analytical

Sample Condition Upon Rec

WO#: 2631454

PM: MZP Due Date: 05/18/20
CLIENT: Neufields

Client Name: Neufields

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used 230

Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 4.5°C

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 4/30/20 CAH

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 29, 2020

Nick Diluzio
NewFields
1349 West Peachtree Street
Suite 2000
Atlanta, GA 30309

RE: Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Dear Nick Diluzio:

Enclosed are the analytical results for sample(s) received by the laboratory on November 19, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet
- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - New Orleans

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Maiya Parks

Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Pace Analytical Services New Orleans

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Mold Certification #: LAB0152
Texas Certification #: T 104704245-17-14
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: VT2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 998093910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

Pace Analytical Services Charlotte

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Pace Analytical Services Peachtree Corners
110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92507266001	**UP-1-11920**	Water	11/19/20 08:30	11/19/20 15:40
92507266002	**Trip Blank**	Water	11/10/20 00:00	11/19/20 15:40

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92507266001	**UP-1-11920**	EPA 8151	TAB	5	PAN
		EPA 8011	JMS1	3	PASI-C
		EPA 8081B	SEM	21	PASI-C
		EPA 8082A	SEM	8	PASI-C
		EPA 6020B	KH	16	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 8270E	PKS	148	PASI-C
		EPA 8260D	CL	63	PASI-C
		EPA 9034	DWR	1	PASI-N
		EPA 9012B	CJL	1	PASI-A
92507266002	**Trip Blank**	EPA 8260D	GAW	64	PASI-C

PAN = Pace National - Mt. Juliet
PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA
PASI-N = Pace Analytical Services - New Orleans

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92507266001	**UP-1-11920**					
EPA 6020B	Barium	69.3	ug/L	5.0	11/24/20 14:57	
EPA 6020B	Beryllium	0.28J	ug/L	0.50	11/24/20 14:57	
EPA 6020B	Chromium	0.92J	ug/L	5.0	11/24/20 14:57	
EPA 6020B	Cobalt	0.42J	ug/L	5.0	11/24/20 14:57	
EPA 6020B	Nickel	0.80J	ug/L	5.0	11/24/20 14:57	
EPA 6020B	Zinc	3.6J	ug/L	10.0	11/24/20 14:57	

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Sample: UP-1-11920 **Lab ID: 92507266001** Collected: 11/19/20 08:30 Received: 11/19/20 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Chlorinated Herb. (GC) 8151	Analytical Method: EPA 8151 Preparation Method: 8151A Pace National - Mt. Juliet								
2,4-D	ND	ug/L	2.00		1	11/23/20 19:05	12/01/20 05:25	94-75-7	
Dinoseb	ND	ug/L	2.00		1	11/23/20 19:05	12/01/20 05:25	88-85-7	
2,4,5-T	ND	ug/L	2.00		1	11/23/20 19:05	12/01/20 05:25	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	2.00		1	11/23/20 19:05	12/01/20 05:25	93-72-1	
Surrogates									
2,4-DCAA (S)	84.4	%	14.0-158		1	11/23/20 19:05	12/01/20 05:25	19719-28-9	
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011 Pace Analytical Services - Charlotte								
1,2-Dibromo-3-chloropropane	ND	ug/L	0.020		1	11/30/20 08:37	12/01/20 02:22	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	0.020		1	11/30/20 08:37	12/01/20 02:22	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	92	%	60-140		1	11/30/20 08:37	12/01/20 02:22	301-79-56	
8081 OC Pesticides RVE	Analytical Method: EPA 8081B Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Aldrin	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	309-00-2	
alpha-BHC	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	319-84-6	
beta-BHC	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	319-85-7	
delta-BHC	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	319-86-8	L1
gamma-BHC (Lindane)	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20		1	11/23/20 06:43	11/24/20 15:18	57-74-9	
4,4'-DDD	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	72-54-8	
4,4'-DDE	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	72-55-9	
4,4'-DDT	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	50-29-3	
Dieldrin	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	60-57-1	
Endosulfan I	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	959-98-8	
Endosulfan II	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	1031-07-8	
Endrin	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	72-20-8	
Endrin aldehyde	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	7421-93-4	
Heptachlor	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050		1	11/23/20 06:43	11/24/20 15:18	1024-57-3	
Methoxychlor	ND	ug/L	0.15		1	11/23/20 06:43	11/24/20 15:18	72-43-5	
Toxaphene	ND	ug/L	0.20		1	11/23/20 06:43	11/24/20 15:18	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	54	%	10-184		1	11/23/20 06:43	11/24/20 15:18	877-09-8	
Decachlorobiphenyl (S)	101	%	10-154		1	11/23/20 06:43	11/24/20 15:18	2051-24-3	
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50		1	11/20/20 16:43	11/23/20 11:02	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50		1	11/20/20 16:43	11/23/20 11:02	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50		1	11/20/20 16:43	11/23/20 11:02	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50		1	11/20/20 16:43	11/23/20 11:02	53469-21-9	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Sample: UP-1-11920 **Lab ID: 92507266001** Collected: 11/19/20 08:30 Received: 11/19/20 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB RVE	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50		1	11/20/20 16:43	11/23/20 11:02	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50		1	11/20/20 16:43	11/23/20 11:02	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50		1	11/20/20 16:43	11/23/20 11:02	11096-82-5	
Surrogates									
Decachlorobiphenyl (S)	96	%	10-181		1	11/20/20 16:43	11/23/20 11:02	2051-24-3	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	ug/L	3.0		1	11/23/20 12:21	11/24/20 14:57	7440-36-0	
Arsenic	ND	ug/L	5.0		1	11/23/20 12:21	11/24/20 14:57	7440-38-2	
Barium	**69.3**	ug/L	5.0		1	11/23/20 12:21	11/24/20 14:57	7440-39-3	
Beryllium	**0.28J**	ug/L	0.50		1	11/23/20 12:21	11/24/20 14:57	7440-41-7	
Cadmium	ND	ug/L	0.50		1	11/23/20 12:21	11/24/20 14:57	7440-43-9	
Chromium	**0.92J**	ug/L	5.0		1	11/23/20 12:21	11/24/20 14:57	7440-47-3	
Cobalt	**0.42J**	ug/L	5.0		1	11/23/20 12:21	11/24/20 14:57	7440-48-4	
Copper	ND	ug/L	5.0		1	11/23/20 12:21	11/24/20 14:57	7440-50-8	
Lead	ND	ug/L	1.0		1	11/23/20 12:21	11/24/20 14:57	7439-92-1	
Nickel	**0.80J**	ug/L	5.0		1	11/23/20 12:21	11/24/20 14:57	7440-02-0	
Selenium	ND	ug/L	5.0		1	11/23/20 12:21	11/24/20 14:57	7782-49-2	
Silver	ND	ug/L	5.0		1	11/23/20 12:21	11/24/20 14:57	7440-22-4	
Thallium	ND	ug/L	1.0		1	11/23/20 12:21	11/24/20 14:57	7440-28-0	
Tin	ND	ug/L	20.0		1	11/23/20 12:21	11/24/20 14:57	7440-31-5	
Vanadium	ND	ug/L	10.0		1	11/23/20 12:21	11/24/20 14:57	7440-62-2	
Zinc	**3.6J**	ug/L	10.0		1	11/23/20 12:21	11/24/20 14:57	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	ug/L	0.20		1	11/24/20 07:15	11/24/20 12:05	7439-97-6	
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Acenaphthene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	83-32-9	
Acenaphthylene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	208-96-8	
Acetophenone	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	98-86-2	
2-Acetylaminofluorene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	53-96-3	
4-Aminobiphenyl	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	92-67-1	
Aniline	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	62-53-3	
Anthracene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	120-12-7	
Aramite	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	140-57-8	
Atrazine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	1912-24-9	
Benzal chloride	ND	ug/L	50.0		1	11/22/20 08:37	11/24/20 19:39	98-87-3	
Benzaldehyde	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	100-52-7	
Benzidine	ND	ug/L	50.0		1	11/22/20 08:37	11/24/20 19:39	92-87-5	
Benzo(a)anthracene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	50-32-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Sample: UP-1-11920 **Lab ID: 92507266001** Collected: 11/19/20 08:30 Received: 11/19/20 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Benzo(b)fluoranthene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	207-08-9	
Benzoic Acid	ND	ug/L	50.0		1	11/22/20 08:37	11/24/20 19:39	65-85-0	
Benzophenone	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	119-61-9	L1
Benzyl alcohol	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	100-51-6	
Biphenyl (Diphenyl)	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	85-68-7	
Caprolactam	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	105-60-2	
Carbazole	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	59-50-7	
4-Chloroaniline	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	106-47-8	
Chlorobenzilate	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	510-15-6	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	91-58-7	
2-Chlorophenol	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	7005-72-3	
Chrysene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	218-01-9	
n-Decane	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	124-18-5	
Diallate	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	2303-16-4	
Dibenz(a,h)anthracene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	53-70-3	
Dibenzo(a,e)pyrene	ND	ug/L	50.0		1	11/22/20 08:37	11/24/20 19:39	192-65-4	v1
Dibenzofuran	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	132-64-9	
2,3-Dibromo-1-propanol phosph	ND	ug/L	50.0		1	11/22/20 08:37	11/24/20 19:39	126-72-7	v2
1,2-Dichlorobenzene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	120-83-2	
2,6-Dichlorophenol	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	87-65-0	
2,3-Dichloroaniline	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	608-27-5	
Diethylphthalate	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	84-66-2	
Dimethoate	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	60-51-5	
P-Dimethylaminoazobenzene	ND	ug/L	5.0		1	11/22/20 08:37	11/24/20 19:39	60-11-7	IL
7,12-Dimethylbenz(a)anthracene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	57-97-6	
3,3'-Dimethylbenzidine	ND	ug/L	25.0		1	11/22/20 08:37	11/24/20 19:39	119-93-7	IH,L1
2,4-Dimethylphenol	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	105-67-9	
a,a-Dimethylphenylethylamine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	122-09-8	
Dimethylphthalate	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	534-52-1	
1,3-Dinitrobenzene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	99-65-0	
1,4-Dinitrobenzene	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	100-25-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Sample: UP-1-11920 **Lab ID: 92507266001** Collected: 11/19/20 08:30 Received: 11/19/20 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
2,4-Dinitrophenol	ND	ug/L	50.0		1	11/22/20 08:37	11/24/20 19:39	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	117-84-0	
Diphenylamine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	122-39-4	
Diphenyl ether (Phenyl ether)	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	101-84-8	
1,2-Diphenylhydrazine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	122-66-7	
Disulfoton	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	298-04-4	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0		1	11/22/20 08:37	11/24/20 19:39	117-81-7	
Ethyl methanesulfonate	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	62-50-0	
Famphur	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	52-85-7	IH
Fluoranthene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	206-44-0	
Fluorene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	77-47-4	
Hexachloroethane	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	67-72-1	
Hexachlorophene	ND	ug/L	100		1	11/22/20 08:37	11/24/20 19:39	70-30-4	IH,v2
Hexachloropropene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	1888-71-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	193-39-5	
Isodrin	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	465-73-6	
Isophorone	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	78-59-1	
Isosafrole	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	120-58-1	
Kepone	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	143-50-0	IL
Methapyrilene	ND	ug/L	50.0		1	11/22/20 08:37	11/24/20 19:39	91-80-5	
3-Methylcholanthrene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	56-49-5	
4,4'-Methylene-bis(2-chloroani	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	101-14-4	
Methyl methanesulfonate	ND	ug/L	5.0		1	11/22/20 08:37	11/24/20 19:39	66-27-3	
1-Methylnaphthalene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	91-57-6	
2-Methyl-5-nitroaniline	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	99-55-8	
Methyl parathion	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	298-00-0	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	15831-10-4	
1-Naphthalenamine	ND	ug/L	5.0		1	11/22/20 08:37	11/24/20 19:39	134-32-7	
2-Naphthalenamine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	91-59-8	
Naphthalene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	91-20-3	
1,4-Naphthoquinone	ND	ug/L	5.0		1	11/22/20 08:37	11/24/20 19:39	130-15-4	
2-Nitroaniline	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	88-74-4	
3-Nitroaniline	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	99-09-2	
4-Nitroaniline	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	100-01-6	
Nitrobenzene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	98-95-3	
2-Nitrophenol	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	88-75-5	
4-Nitrophenol	ND	ug/L	50.0		1	11/22/20 08:37	11/24/20 19:39	100-02-7	
4-Nitroquinoline-n-oxide	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	56-57-5	v2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Sample: UP-1-11920 **Lab ID: 92507266001** Collected: 11/19/20 08:30 Received: 11/19/20 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
5-Nitro-o-toluidine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	99-55-8	
N-Nitrosodiethylamine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	55-18-5	
N-Nitrosodimethylamine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	62-75-9	
N-Nitroso-di-n-butylamine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	924-16-3	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	86-30-6	
N-Nitrosomethylethylamine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	10595-95-6	
N-Nitrosomorpholine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	59-89-2	
N-Nitrosopiperidine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	100-75-4	
N-Nitrosopyrrolidine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	930-55-2	
n-Octadecane	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	593-45-3	v1
O,O,O-Triethylphosphorothioate	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	126-68-1	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	108-60-1	v1
Parathion (Ethyl parathion)	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	56-38-2	
Pentachlorobenzene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	608-93-5	
Pentachloroethane	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	76-01-7	
Pentachloronitrobenzene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	82-68-8	
Pentachlorophenol	ND	ug/L	20.0		1	11/22/20 08:37	11/24/20 19:39	87-86-5	
Phenacetin	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	62-44-2	
Phenanthrene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	85-01-8	
Phenol	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	108-95-2	
p-Phenylenediamine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	106-50-3	1g,IH, L2
Phorate	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	298-02-2	
2-Picoline	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	109-06-8	
Pronamide	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	23950-58-5	
Pyrene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	129-00-0	
Pyridine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	110-86-1	
Safrole	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	94-59-7	
Sulfotepp (Thiodiphosphoric Ac	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	3689-24-5	
Terpineol	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	98-55-5	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	58-90-2	
Thionazin	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	297-97-2	
O-Toluidine	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	95-53-4	
1,2,4-Trichlorobenzene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	88-06-2	
1,3,5-Trinitrobenzene	ND	ug/L	10.0		1	11/22/20 08:37	11/24/20 19:39	99-35-4	v1
Surrogates									
Nitrobenzene-d5 (S)	47	%	10-144		1	11/22/20 08:37	11/24/20 19:39	4165-60-0	
2-Fluorobiphenyl (S)	23	%	10-130		1	11/22/20 08:37	11/24/20 19:39	321-60-8	
Terphenyl-d14 (S)	137	%	34-163		1	11/22/20 08:37	11/24/20 19:39	1718-51-0	
Phenol-d6 (S)	23	%	10-130		1	11/22/20 08:37	11/24/20 19:39	13127-88-3	
2-Fluorophenol (S)	34	%	10-130		1	11/22/20 08:37	11/24/20 19:39	367-12-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Sample: UP-1-11920 **Lab ID: 92507266001** Collected: 11/19/20 08:30 Received: 11/19/20 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270E APP9 RV	Analytical Method: EPA 8270E Preparation Method: EPA 3510C Pace Analytical Services - Charlotte								
Surrogates									
2,4,6-Tribromophenol (S)	60	%	10-144		1	11/22/20 08:37	11/24/20 19:39	118-79-6	
8260D MSV Low Level	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Acetone	ND	ug/L	25.0		1		11/21/20 04:26	67-64-1	
Acetonitrile	ND	ug/L	50.0		1		11/21/20 04:26	75-05-8	
Acrolein	ND	ug/L	10.0		1		11/21/20 04:26	107-02-8	IH,v1
Acrylonitrile	ND	ug/L	10.0		1		11/21/20 04:26	107-13-1	
Allyl chloride	ND	ug/L	2.0		1		11/21/20 04:26	107-05-1	
Benzene	ND	ug/L	1.0		1		11/21/20 04:26	71-43-2	M1,R1
Bromobenzene	ND	ug/L	1.0		1		11/21/20 04:26	108-86-1	
Bromochloromethane	ND	ug/L	1.0		1		11/21/20 04:26	74-97-5	
Bromodichloromethane	ND	ug/L	1.0		1		11/21/20 04:26	75-27-4	
Bromoform	ND	ug/L	1.0		1		11/21/20 04:26	75-25-2	
Bromomethane	ND	ug/L	2.0		1		11/21/20 04:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0		1		11/21/20 04:26	78-93-3	
Carbon disulfide	ND	ug/L	2.0		1		11/21/20 04:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0		1		11/21/20 04:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0		1		11/21/20 04:26	108-90-7	
Chloroethane	ND	ug/L	1.0		1		11/21/20 04:26	75-00-3	
Chloroform	ND	ug/L	5.0		1		11/21/20 04:26	67-66-3	
Chloromethane	ND	ug/L	1.0		1		11/21/20 04:26	74-87-3	
Chloroprene	ND	ug/L	5.0		1		11/21/20 04:26	126-99-8	
Dibromochloromethane	ND	ug/L	1.0		1		11/21/20 04:26	124-48-1	
Dibromomethane	ND	ug/L	1.0		1		11/21/20 04:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0		1		11/21/20 04:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0		1		11/21/20 04:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0		1		11/21/20 04:26	106-46-7	IK,v1
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0		1		11/21/20 04:26	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0		1		11/21/20 04:26	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0		1		11/21/20 04:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0		1		11/21/20 04:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0		1		11/21/20 04:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0		1		11/21/20 04:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0		1		11/21/20 04:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0		1		11/21/20 04:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0		1		11/21/20 04:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0		1		11/21/20 04:26	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150		1		11/21/20 04:26	123-91-1	L1,R1
Ethylbenzene	ND	ug/L	1.0		1		11/21/20 04:26	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0		1		11/21/20 04:26	97-63-2	
2-Hexanone	ND	ug/L	5.0		1		11/21/20 04:26	591-78-6	
Iodomethane	ND	ug/L	20.0		1		11/21/20 04:26	74-88-4	IK
Isobutanol	ND	ug/L	100		1		11/21/20 04:26	78-83-1	L1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Sample: UP-1-11920 **Lab ID: 92507266001** Collected: 11/19/20 08:30 Received: 11/19/20 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Methacrylonitrile	ND	ug/L	10.0		1		11/21/20 04:26	126-98-7	
Methylene Chloride	ND	ug/L	5.0		1		11/21/20 04:26	75-09-2	
Methyl methacrylate	ND	ug/L	2.0		1		11/21/20 04:26	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0		1		11/21/20 04:26	108-10-1	
Propionitrile	ND	ug/L	20.0		1		11/21/20 04:26	107-12-0	M1,R1
Styrene	ND	ug/L	1.0		1		11/21/20 04:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0		1		11/21/20 04:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1		11/21/20 04:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0		1		11/21/20 04:26	127-18-4	
Toluene	ND	ug/L	1.0		1		11/21/20 04:26	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1		11/21/20 04:26	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1		11/21/20 04:26	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0		1		11/21/20 04:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0		1		11/21/20 04:26	79-00-5	
Trichloroethene	ND	ug/L	1.0		1		11/21/20 04:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0		1		11/21/20 04:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0		1		11/21/20 04:26	96-18-4	
Vinyl acetate	ND	ug/L	2.0		1		11/21/20 04:26	108-05-4	
Vinyl chloride	ND	ug/L	1.0		1		11/21/20 04:26	75-01-4	
Xylene (Total)	ND	ug/L	1.0		1		11/21/20 04:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/21/20 04:26	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		11/21/20 04:26	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		11/21/20 04:26	2037-26-5	
9034 Sulfide, Titration	Analytical Method: EPA 9034 Pace Analytical Services - New Orleans								
Sulfide	ND	mg/L	1.0		1		11/24/20 15:58		
9012B Cyanide, Total	Analytical Method: EPA 9012B Preparation Method: EPA 9012B Pace Analytical Services - Asheville								
Cyanide	ND	mg/L	0.0080		1	11/20/20 22:25	11/22/20 14:35	57-12-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Sample: Trip Blank **Lab ID: 92507266002** Collected: 11/10/20 00:00 Received: 11/19/20 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Acetone	ND	ug/L	25.0		1		11/21/20 05:51	67-64-1	
Acetonitrile	ND	ug/L	50.0		1		11/21/20 05:51	75-05-8	
Acrolein	ND	ug/L	10.0		1		11/21/20 05:51	107-02-8	
Acrylonitrile	ND	ug/L	10.0		1		11/21/20 05:51	107-13-1	
Allyl chloride	ND	ug/L	2.0		1		11/21/20 05:51	107-05-1	
Benzene	ND	ug/L	1.0		1		11/21/20 05:51	71-43-2	
Bromobenzene	ND	ug/L	1.0		1		11/21/20 05:51	108-86-1	
Bromochloromethane	ND	ug/L	1.0		1		11/21/20 05:51	74-97-5	
Bromodichloromethane	ND	ug/L	1.0		1		11/21/20 05:51	75-27-4	
Bromoform	ND	ug/L	1.0		1		11/21/20 05:51	75-25-2	
Bromomethane	ND	ug/L	2.0		1		11/21/20 05:51	74-83-9	v2
2-Butanone (MEK)	ND	ug/L	5.0		1		11/21/20 05:51	78-93-3	
Carbon disulfide	ND	ug/L	2.0		1		11/21/20 05:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0		1		11/21/20 05:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0		1		11/21/20 05:51	108-90-7	
Chloroethane	ND	ug/L	1.0		1		11/21/20 05:51	75-00-3	
Chloroform	ND	ug/L	5.0		1		11/21/20 05:51	67-66-3	
Chloromethane	ND	ug/L	1.0		1		11/21/20 05:51	74-87-3	v2
Chloroprene	ND	ug/L	5.0		1		11/21/20 05:51	126-99-8	
Dibromochloromethane	ND	ug/L	1.0		1		11/21/20 05:51	124-48-1	
Dibromomethane	ND	ug/L	1.0		1		11/21/20 05:51	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0		1		11/21/20 05:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0		1		11/21/20 05:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0		1		11/21/20 05:51	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0		1		11/21/20 05:51	110-57-6	IH
Dichlorodifluoromethane	ND	ug/L	1.0		1		11/21/20 05:51	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0		1		11/21/20 05:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0		1		11/21/20 05:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0		1		11/21/20 05:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0		1		11/21/20 05:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0		1		11/21/20 05:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0		1		11/21/20 05:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0		1		11/21/20 05:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0		1		11/21/20 05:51	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150		1		11/21/20 05:51	123-91-1	
Ethylbenzene	ND	ug/L	1.0		1		11/21/20 05:51	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0		1		11/21/20 05:51	97-63-2	
2-Hexanone	ND	ug/L	5.0		1		11/21/20 05:51	591-78-6	
Iodomethane	ND	ug/L	20.0		1		11/21/20 05:51	74-88-4	v2
Isobutanol	ND	ug/L	100		1		11/21/20 05:51	78-83-1	
Methacrylonitrile	ND	ug/L	10.0		1		11/21/20 05:51	126-98-7	
Methylene Chloride	ND	ug/L	5.0		1		11/21/20 05:51	75-09-2	
Methyl methacrylate	ND	ug/L	2.0		1		11/21/20 05:51	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0		1		11/21/20 05:51	108-10-1	
Pentachloroethane	ND	ug/L	50.0		1		11/21/20 05:51	76-01-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Sample: Trip Blank **Lab ID: 92507266002** Collected: 11/10/20 00:00 Received: 11/19/20 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level	Analytical Method: EPA 8260D Pace Analytical Services - Charlotte								
Propionitrile	ND	ug/L	20.0		1		11/21/20 05:51	107-12-0	
Styrene	ND	ug/L	1.0		1		11/21/20 05:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0		1		11/21/20 05:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1		11/21/20 05:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0		1		11/21/20 05:51	127-18-4	
Toluene	ND	ug/L	1.0		1		11/21/20 05:51	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1		11/21/20 05:51	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1		11/21/20 05:51	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0		1		11/21/20 05:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0		1		11/21/20 05:51	79-00-5	
Trichloroethene	ND	ug/L	1.0		1		11/21/20 05:51	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0		1		11/21/20 05:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0		1		11/21/20 05:51	96-18-4	
Vinyl acetate	ND	ug/L	2.0		1		11/21/20 05:51	108-05-4	
Vinyl chloride	ND	ug/L	1.0		1		11/21/20 05:51	75-01-4	
Xylene (Total)	ND	ug/L	1.0		1		11/21/20 05:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/21/20 05:51	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		1		11/21/20 05:51	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		11/21/20 05:51	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

QC Batch: 1581459
QC Batch Method: 8151A
Analysis Method: EPA 8151
Analysis Description: Chlorinated Herb. (GC) 8151
Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92507266001

METHOD BLANK: R3598453-1 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4-D	ug/L	ND	2.00	11/29/20 13:30	
Dinoseb	ug/L	ND	2.00	11/29/20 13:30	
2,4,5-T	ug/L	ND	2.00	11/29/20 13:30	
2,4,5-TP (Silvex)	ug/L	ND	2.00	11/29/20 13:30	
2,4-DCAA (S)	%	95.4	14.0-158	11/29/20 13:30	

LABORATORY CONTROL SAMPLE: R3598453-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-D	ug/L	5.00	4.37	87.4	50.0-120	
Dinoseb	ug/L	5.00	5.41	108	36.0-134	
2,4,5-T	ug/L	5.00	4.89	97.8	54.0-120	
2,4,5-TP (Silvex)	ug/L	5.00	4.75	95.0	50.0-125	
2,4-DCAA (S)	%			86.8	14.0-158	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3598548-1 R3598548-2

Parameter	Units	L1288345-04 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4-D	ug/L	ND	5.00	5.00	3.57	3.46	71.4	69.2	50.0-120	3.13	20	
Dinoseb	ug/L	ND	5.00	5.00	6.54	6.33	131	127	36.0-134	3.26	20	
2,4,5-T	ug/L	ND	5.00	5.00	6.28	6.21	126	124	54.0-120	1.12	20	MH
2,4,5-TP (Silvex)	ug/L	ND	5.00	5.00	6.23	6.00	125	120	50.0-125	3.76	20	
2,4-DCAA (S)	%						92.0	89.4	14.0-158			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

QC Batch: 582334
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92507266001

METHOD BLANK: 3079649 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	0.37J	3.0	11/24/20 13:16	
Arsenic	ug/L	ND	5.0	11/24/20 13:16	
Barium	ug/L	ND	5.0	11/24/20 13:16	
Beryllium	ug/L	ND	0.50	11/24/20 13:16	
Cadmium	ug/L	ND	0.50	11/24/20 13:16	
Chromium	ug/L	ND	5.0	11/24/20 13:16	
Cobalt	ug/L	ND	5.0	11/24/20 13:16	
Copper	ug/L	ND	5.0	11/24/20 13:16	
Lead	ug/L	ND	1.0	11/24/20 13:16	
Nickel	ug/L	ND	5.0	11/24/20 13:16	
Selenium	ug/L	ND	5.0	11/24/20 13:16	
Silver	ug/L	ND	5.0	11/24/20 13:16	
Thallium	ug/L	ND	1.0	11/24/20 13:16	
Tin	ug/L	ND	20.0	11/24/20 13:16	
Vanadium	ug/L	ND	10.0	11/24/20 13:16	
Zinc	ug/L	ND	10.0	11/24/20 13:16	

LABORATORY CONTROL SAMPLE: 3079650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	100	108	108	80-120	
Arsenic	ug/L	100	94.9	95	80-120	
Barium	ug/L	100	95.8	96	80-120	
Beryllium	ug/L	100	97.0	97	80-120	
Cadmium	ug/L	100	96.2	96	80-120	
Chromium	ug/L	100	95.9	96	80-120	
Cobalt	ug/L	100	99.5	99	80-120	
Copper	ug/L	100	97.6	98	80-120	
Lead	ug/L	100	95.8	96	80-120	
Nickel	ug/L	100	99.1	99	80-120	
Selenium	ug/L	100	94.8	95	80-120	
Silver	ug/L	100	99.9	100	80-120	
Thallium	ug/L	100	94.1	94	80-120	
Tin	ug/L	100	98.0	98	80-120	
Vanadium	ug/L	100	98.6	99	80-120	
Zinc	ug/L	100	100	100	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3079651 3079652

Parameter	Units	92507212001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	109	107	109	107	75-125	1	20	
Arsenic	ug/L	ND	100	100	97.8	98.6	94	95	75-125	1	20	
Barium	ug/L	31.3	100	100	127	125	95	94	75-125	1	20	
Beryllium	ug/L	ND	100	100	96.0	94.6	96	95	75-125	1	20	
Cadmium	ug/L	ND	100	100	97.8	98.3	98	98	75-125	1	20	
Chromium	ug/L	ND	100	100	97.8	98.3	98	98	75-125	0	20	
Cobalt	ug/L	ND	100	100	96.5	98.4	96	98	75-125	2	20	
Copper	ug/L	ND	100	100	96.9	96.7	97	96	75-125	0	20	
Lead	ug/L	ND	100	100	97.1	95.6	97	95	75-125	2	20	
Nickel	ug/L	ND	100	100	95.4	96.8	95	97	75-125	1	20	
Selenium	ug/L	ND	100	100	92.5	93.6	92	93	75-125	1	20	
Silver	ug/L	ND	100	100	100	98.7	100	99	75-125	1	20	
Thallium	ug/L	ND	100	100	96.1	93.1	96	93	75-125	3	20	
Tin	ug/L	ND	100	100	97.5	98.0	97	98	75-125	1	20	
Vanadium	ug/L	ND	100	100	101	99.7	101	100	75-125	2	20	
Zinc	ug/L	ND	100	100	99.7	99.3	98	98	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

QC Batch: 582393
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92507266001

METHOD BLANK: 3079927 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	11/24/20 11:43	

LABORATORY CONTROL SAMPLE: 3079928

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.4	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3079929 3079930

Parameter	Units	92507313001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.5	2.4	98	95	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

QC Batch: 581992
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV Low Level
Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92507266002

METHOD BLANK: 3078215 Matrix: Water
Associated Lab Samples: 92507266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/21/20 04:38	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/21/20 04:38	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/21/20 04:38	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/21/20 04:38	
1,1-Dichloroethane	ug/L	ND	1.0	11/21/20 04:38	
1,1-Dichloroethene	ug/L	ND	1.0	11/21/20 04:38	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/21/20 04:38	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/21/20 04:38	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/21/20 04:38	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/21/20 04:38	
1,2-Dichloroethane	ug/L	ND	1.0	11/21/20 04:38	
1,2-Dichloropropane	ug/L	ND	1.0	11/21/20 04:38	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/21/20 04:38	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/21/20 04:38	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	11/21/20 04:38	
2-Butanone (MEK)	ug/L	ND	5.0	11/21/20 04:38	
2-Hexanone	ug/L	ND	5.0	11/21/20 04:38	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/21/20 04:38	
Acetone	ug/L	ND	25.0	11/21/20 04:38	
Acetonitrile	ug/L	ND	50.0	11/21/20 04:38	
Acrolein	ug/L	ND	10.0	11/21/20 04:38	
Acrylonitrile	ug/L	ND	10.0	11/21/20 04:38	
Allyl chloride	ug/L	ND	2.0	11/21/20 04:38	
Benzene	ug/L	ND	1.0	11/21/20 04:38	
Bromobenzene	ug/L	ND	1.0	11/21/20 04:38	
Bromochloromethane	ug/L	ND	1.0	11/21/20 04:38	
Bromodichloromethane	ug/L	ND	1.0	11/21/20 04:38	
Bromoform	ug/L	ND	1.0	11/21/20 04:38	
Bromomethane	ug/L	ND	2.0	11/21/20 04:38	v2
Carbon disulfide	ug/L	ND	2.0	11/21/20 04:38	
Carbon tetrachloride	ug/L	ND	1.0	11/21/20 04:38	
Chlorobenzene	ug/L	ND	1.0	11/21/20 04:38	
Chloroethane	ug/L	ND	1.0	11/21/20 04:38	
Chloroform	ug/L	ND	5.0	11/21/20 04:38	
Chloromethane	ug/L	ND	1.0	11/21/20 04:38	v2
Chloroprene	ug/L	ND	5.0	11/21/20 04:38	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/21/20 04:38	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/21/20 04:38	
Dibromochloromethane	ug/L	ND	1.0	11/21/20 04:38	
Dibromomethane	ug/L	ND	1.0	11/21/20 04:38	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

METHOD BLANK: 3078215 Matrix: Water
Associated Lab Samples: 92507266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	11/21/20 04:38	
Ethyl methacrylate	ug/L	ND	1.0	11/21/20 04:38	
Ethylbenzene	ug/L	ND	1.0	11/21/20 04:38	
Iodomethane	ug/L	ND	20.0	11/21/20 04:38	v2
Isobutanol	ug/L	ND	100	11/21/20 04:38	
Methacrylonitrile	ug/L	ND	10.0	11/21/20 04:38	
Methyl methacrylate	ug/L	ND	2.0	11/21/20 04:38	
Methylene Chloride	ug/L	ND	5.0	11/21/20 04:38	
Pentachloroethane	ug/L	ND	50.0	11/21/20 04:38	
Propionitrile	ug/L	ND	20.0	11/21/20 04:38	
Styrene	ug/L	ND	1.0	11/21/20 04:38	
Tetrachloroethene	ug/L	ND	1.0	11/21/20 04:38	
Toluene	ug/L	ND	1.0	11/21/20 04:38	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/21/20 04:38	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/21/20 04:38	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	11/21/20 04:38	IH
Trichloroethene	ug/L	ND	1.0	11/21/20 04:38	
Trichlorofluoromethane	ug/L	ND	1.0	11/21/20 04:38	
Vinyl acetate	ug/L	ND	2.0	11/21/20 04:38	
Vinyl chloride	ug/L	ND	1.0	11/21/20 04:38	
Xylene (Total)	ug/L	ND	1.0	11/21/20 04:38	
1,2-Dichloroethane-d4 (S)	%	91	70-130	11/21/20 04:38	
4-Bromofluorobenzene (S)	%	100	70-130	11/21/20 04:38	
Toluene-d8 (S)	%	97	70-130	11/21/20 04:38	

LABORATORY CONTROL SAMPLE: 3078216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	56.5	113	70-130	
1,1,1-Trichloroethane	ug/L	50	50.0	100	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	54.3	109	70-130	
1,1,2-Trichloroethane	ug/L	50	53.5	107	70-130	
1,1-Dichloroethane	ug/L	50	49.2	98	70-130	
1,1-Dichloroethene	ug/L	50	54.0	108	70-132	
1,2,3-Trichlorobenzene	ug/L	50	54.6	109	70-134	
1,2,3-Trichloropropane	ug/L	50	55.1	110	70-130	
1,2,4-Trichlorobenzene	ug/L	50	55.0	110	70-130	
1,2-Dichlorobenzene	ug/L	50	54.6	109	70-130	
1,2-Dichloroethane	ug/L	50	47.1	94	70-130	
1,2-Dichloropropane	ug/L	50	52.7	105	70-130	
1,3-Dichlorobenzene	ug/L	50	55.2	110	70-130	
1,4-Dichlorobenzene	ug/L	50	54.9	110	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	1150	115	70-137	
2-Butanone (MEK)	ug/L	100	96.1	96	70-133	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

LABORATORY CONTROL SAMPLE: 3078216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Hexanone	ug/L	100	110	110	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	70-130	
Acetone	ug/L	100	97.8	98	70-144	
Acetonitrile	ug/L	500	491	98	68-134	
Acrolein	ug/L	250	314	126	32-200	
Acrylonitrile	ug/L	250	253	101	70-130	
Allyl chloride	ug/L	50	50.7	101	70-134	
Benzene	ug/L	50	52.3	105	70-130	
Bromobenzene	ug/L	50	53.3	107	70-130	
Bromochloromethane	ug/L	50	50.8	102	70-130	
Bromodichloromethane	ug/L	50	51.1	102	70-130	
Bromoform	ug/L	50	54.4	109	70-131	
Bromomethane	ug/L	50	30.6	61	30-177	v3
Carbon disulfide	ug/L	50	55.4	111	70-133	
Carbon tetrachloride	ug/L	50	52.9	106	70-130	
Chlorobenzene	ug/L	50	55.6	111	70-130	
Chloroethane	ug/L	50	44.3	89	46-131	
Chloroform	ug/L	50	45.8	92	70-130	
Chloromethane	ug/L	50	32.6	65	49-130	v3
Chloroprene	ug/L	50	46.0	92	70-130	
cis-1,2-Dichloroethene	ug/L	50	47.9	96	70-130	
cis-1,3-Dichloropropene	ug/L	50	52.6	105	70-130	
Dibromochloromethane	ug/L	50	56.0	112	70-130	
Dibromomethane	ug/L	50	53.5	107	70-130	
Dichlorodifluoromethane	ug/L	50	39.3	79	52-134	
Ethyl methacrylate	ug/L	50	54.4	109	70-130	
Ethylbenzene	ug/L	50	55.6	111	70-130	
Iodomethane	ug/L	100	96.8	97	47-140	v3
Isobutanol	ug/L	1000	1060	106	62-136	
Methacrylonitrile	ug/L	500	486	97	70-130	
Methyl methacrylate	ug/L	50	51.8	104	70-130	
Methylene Chloride	ug/L	50	44.9	90	68-130	
Pentachloroethane	ug/L	50	51.3	103	70-130	
Propionitrile	ug/L	500	496	99	70-130	
Styrene	ug/L	50	55.2	110	70-130	
Tetrachloroethene	ug/L	50	54.3	109	70-130	
Toluene	ug/L	50	53.4	107	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.3	97	70-130	
trans-1,3-Dichloropropene	ug/L	50	51.0	102	70-130	
trans-1,4-Dichloro-2-butene	ug/L	50	54.9	110	25-200	IH
Trichloroethene	ug/L	50	54.6	109	70-130	
Trichlorofluoromethane	ug/L	50	44.8	90	61-130	
Vinyl acetate	ug/L	100	101	101	70-140	
Vinyl chloride	ug/L	50	36.8	74	59-142	
Xylene (Total)	ug/L	150	169	113	70-130	
1,2-Dichloroethane-d4 (S)	%			89	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

LABORATORY CONTROL SAMPLE: 3078216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3078217 3078218

Parameter	Units	92507016002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	25.5	25.4	127	127	70-135	0	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	24.7	26.5	124	133	70-148	7	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	19.3	19.9	96	99	70-131	3	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	22.2	23.7	111	119	70-136	7	30	
1,1-Dichloroethane	ug/L	ND	20	20	20.6	21.2	103	106	70-147	3	30	
1,1-Dichloroethene	ug/L	ND	20	20	23.9	25.1	119	126	70-158	5	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	21.9	21.8	110	109	68-140	0	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	19.7	15.4	99	77	67-137	24	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	22.4	23.0	112	115	70-139	3	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	21.6	22.4	108	112	70-133	4	30	
1,2-Dichloroethane	ug/L	ND	20	20	23.5	24.2	117	121	67-138	3	30	
1,2-Dichloropropane	ug/L	ND	20	20	20.5	21.8	103	109	70-138	6	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	22.4	23.1	112	115	70-133	3	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	21.4	23.3	107	117	70-133	9	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	430	448	108	112	69-146	4	30	
2-Butanone (MEK)	ug/L	ND	40	40	37.2	37.6	93	94	61-147	1	30	
2-Hexanone	ug/L	ND	40	40	42.2	40.9	105	102	67-139	3	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	41.9	38.7	105	97	67-136	8	30	
Acetone	ug/L	ND	40	40	40.0	42.1	100	105	55-159	5	30	
Acetonitrile	ug/L	ND	200	200	162	170	81	85	66-145	4	30	
Acrolein	ug/L	ND	100	100	136	142	136	142	10-200	4	30	IH
Acrylonitrile	ug/L	ND	100	100	88.6	93.2	89	93	68-140	5	30	
Allyl chloride	ug/L	ND	20	20	18.1	20.4	90	102	70-147	12	30	
Benzene	ug/L	ND	20	20	20.6	22.0	103	110	67-150	6	30	
Bromobenzene	ug/L	ND	20	20	21.7	22.8	108	114	70-134	5	30	
Bromochloromethane	ug/L	ND	20	20	21.3	22.1	106	111	70-146	4	30	
Bromodichloromethane	ug/L	ND	20	20	23.5	25.4	118	127	70-138	8	30	
Bromoform	ug/L	ND	20	20	25.4	25.3	127	126	57-138	1	30	v1
Bromomethane	ug/L	ND	20	20	22.0	22.0	110	110	10-200	0	30	IK,v3
Carbon disulfide	ug/L	ND	20	20	21.9	22.7	109	113	70-152	4	30	
Carbon tetrachloride	ug/L	ND	20	20	27.2	28.6	136	143	70-147	5	30	v1
Chlorobenzene	ug/L	ND	20	20	22.6	23.1	113	115	70-137	2	30	
Chloroethane	ug/L	ND	20	20	21.2	22.6	106	113	51-166	6	30	
Chloroform	ug/L	ND	20	20	22.8	23.9	114	120	70-144	5	30	
Chloromethane	ug/L	ND	20	20	17.8	17.8	89	89	24-161	0	30	v3
Chloroprene	ug/L	ND	20	20	23.3	23.5	116	118	70-143	1	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	20.8	21.6	104	108	67-148	3	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	58.7	23.7	293	119	70-142	85	30	M1,R1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3078217 3078218

Parameter	Units	92507016002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	20	20	25.8	24.8	129	124	68-138	4	30	
Dibromomethane	ug/L	ND	20	20	24.1	25.3	121	127	70-134	5	30	
Dichlorodifluoromethane	ug/L	ND	20	20	23.9	23.2	119	116	43-155	3	30	
Ethyl methacrylate	ug/L	ND	20	20	20.4	22.2	102	111	70-137	9	30	
Ethylbenzene	ug/L	ND	20	20	22.6	23.9	113	120	68-143	6	30	
Iodomethane	ug/L	ND	40	40	37.8	41.3	95	103	20-161	9	30	v3
Isobutanol	ug/L	ND	400	400	328	332	82	83	44-145	1	30	
Methacrylonitrile	ug/L	ND	200	200	206	211	103	106	67-139	2	30	
Methyl methacrylate	ug/L	ND	20	20	21.4	22.3	107	111	70-130	4	30	
Methylene Chloride	ug/L	ND	20	20	15.3	17.1	76	86	64-148	11	30	
Pentachloroethane	ug/L	ND	20	20	22.9J	24.3J	115	121	70-130		30	
Propionitrile	ug/L	ND	200	200	194	192	97	96	70-138	1	30	
Styrene	ug/L	ND	20	20	26.4	23.8	132	119	70-136	11	30	
Tetrachloroethene	ug/L	1.2	20	20	23.4	24.4	111	116	70-139	4	30	
Toluene	ug/L	ND	20	20	21.3	22.2	106	111	47-157	4	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.9	21.9	104	109	70-149	4	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	33.6	24.6	168	123	70-138	31	30	M1,R1
trans-1,4-Dichloro-2-butene	ug/L	ND	20	20	20.4	19.3	102	96	31-145	6	30	
Trichloroethene	ug/L	ND	20	20	23.2	25.0	116	125	70-149	7	30	
Trichlorofluoromethane	ug/L	ND	20	20	24.8	25.4	124	127	61-154	2	30	
Vinyl acetate	ug/L	ND	40	40	46.0	46.4	115	116	48-156	1	30	
Vinyl chloride	ug/L	ND	20	20	17.9	18.1	89	90	55-172	1	30	v3
Xylene (Total)	ug/L	ND	60	60	80.2	71.9	134	120	66-145	11	30	MS,RS
1,2-Dichloroethane-d4 (S)	%						115	116	70-130			
4-Bromofluorobenzene (S)	%						108	105	70-130			
Toluene-d8 (S)	%						97	99	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

QC Batch: 582018
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV Low Level
Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92507266001

METHOD BLANK: 3078412 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/21/20 01:42	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/21/20 01:42	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/21/20 01:42	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/21/20 01:42	
1,1-Dichloroethane	ug/L	ND	1.0	11/21/20 01:42	
1,1-Dichloroethene	ug/L	ND	1.0	11/21/20 01:42	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/21/20 01:42	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/21/20 01:42	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/21/20 01:42	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/21/20 01:42	
1,2-Dichloroethane	ug/L	ND	1.0	11/21/20 01:42	
1,2-Dichloropropane	ug/L	ND	1.0	11/21/20 01:42	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/21/20 01:42	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/21/20 01:42	IK,v1
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	11/21/20 01:42	
2-Butanone (MEK)	ug/L	ND	5.0	11/21/20 01:42	
2-Hexanone	ug/L	ND	5.0	11/21/20 01:42	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/21/20 01:42	
Acetone	ug/L	ND	25.0	11/21/20 01:42	
Acetonitrile	ug/L	ND	50.0	11/21/20 01:42	
Acrolein	ug/L	ND	10.0	11/21/20 01:42	IH,v1
Acrylonitrile	ug/L	ND	10.0	11/21/20 01:42	
Allyl chloride	ug/L	ND	2.0	11/21/20 01:42	
Benzene	ug/L	ND	1.0	11/21/20 01:42	
Bromobenzene	ug/L	ND	1.0	11/21/20 01:42	
Bromochloromethane	ug/L	ND	1.0	11/21/20 01:42	
Bromodichloromethane	ug/L	ND	1.0	11/21/20 01:42	
Bromoform	ug/L	ND	1.0	11/21/20 01:42	
Bromomethane	ug/L	ND	2.0	11/21/20 01:42	
Carbon disulfide	ug/L	ND	2.0	11/21/20 01:42	
Carbon tetrachloride	ug/L	ND	1.0	11/21/20 01:42	
Chlorobenzene	ug/L	ND	1.0	11/21/20 01:42	
Chloroethane	ug/L	ND	1.0	11/21/20 01:42	
Chloroform	ug/L	ND	5.0	11/21/20 01:42	
Chloromethane	ug/L	ND	1.0	11/21/20 01:42	
Chloroprene	ug/L	ND	5.0	11/21/20 01:42	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/21/20 01:42	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/21/20 01:42	
Dibromochloromethane	ug/L	ND	1.0	11/21/20 01:42	
Dibromomethane	ug/L	ND	1.0	11/21/20 01:42	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

METHOD BLANK: 3078412 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	11/21/20 01:42	
Ethyl methacrylate	ug/L	ND	1.0	11/21/20 01:42	
Ethylbenzene	ug/L	ND	1.0	11/21/20 01:42	
Iodomethane	ug/L	ND	20.0	11/21/20 01:42	IK
Isobutanol	ug/L	ND	100	11/21/20 01:42	
Methacrylonitrile	ug/L	ND	10.0	11/21/20 01:42	
Methyl methacrylate	ug/L	ND	2.0	11/21/20 01:42	
Methylene Chloride	ug/L	ND	5.0	11/21/20 01:42	
Propionitrile	ug/L	ND	20.0	11/21/20 01:42	
Styrene	ug/L	ND	1.0	11/21/20 01:42	
Tetrachloroethene	ug/L	ND	1.0	11/21/20 01:42	
Toluene	ug/L	ND	1.0	11/21/20 01:42	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/21/20 01:42	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/21/20 01:42	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	11/21/20 01:42	
Trichloroethene	ug/L	ND	1.0	11/21/20 01:42	
Trichlorofluoromethane	ug/L	ND	1.0	11/21/20 01:42	
Vinyl acetate	ug/L	ND	2.0	11/21/20 01:42	
Vinyl chloride	ug/L	ND	1.0	11/21/20 01:42	
Xylene (Total)	ug/L	ND	1.0	11/21/20 01:42	
1,2-Dichloroethane-d4 (S)	%	118	70-130	11/21/20 01:42	
4-Bromofluorobenzene (S)	%	101	70-130	11/21/20 01:42	
Toluene-d8 (S)	%	101	70-130	11/21/20 01:42	

LABORATORY CONTROL SAMPLE: 3078413

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.1	102	70-130	
1,1,1-Trichloroethane	ug/L	50	54.0	108	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	48.6	97	70-130	
1,1,2-Trichloroethane	ug/L	50	51.6	103	70-130	
1,1-Dichloroethane	ug/L	50	52.4	105	70-130	
1,1-Dichloroethene	ug/L	50	57.7	115	70-132	
1,2,3-Trichlorobenzene	ug/L	50	54.0	108	70-134	
1,2,3-Trichloropropane	ug/L	50	51.5	103	70-130	
1,2,4-Trichlorobenzene	ug/L	50	53.9	108	70-130	
1,2-Dichlorobenzene	ug/L	50	49.7	99	70-130	
1,2-Dichloroethane	ug/L	50	56.3	113	70-130	
1,2-Dichloropropane	ug/L	50	50.1	100	70-130	
1,3-Dichlorobenzene	ug/L	50	48.8	98	70-130	
1,4-Dichlorobenzene	ug/L	50	48.5	97	70-130	IK,v1
1,4-Dioxane (p-Dioxane)	ug/L	1000	1820	182	70-137	L1
2-Butanone (MEK)	ug/L	100	113	113	70-133	
2-Hexanone	ug/L	100	109	109	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

LABORATORY CONTROL SAMPLE: 3078413

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	70-130	
Acetone	ug/L	100	125	125	70-144	
Acetonitrile	ug/L	500	629	126	68-134	
Acrolein	ug/L	250	327	131	32-200	IH,v1
Acrylonitrile	ug/L	250	260	104	70-130	
Allyl chloride	ug/L	50	46.8	94	70-134	
Benzene	ug/L	50	48.4	97	70-130	
Bromobenzene	ug/L	50	50.4	101	70-130	
Bromochloromethane	ug/L	50	52.2	104	70-130	
Bromodichloromethane	ug/L	50	49.5	99	70-130	
Bromoform	ug/L	50	49.3	99	70-131	
Bromomethane	ug/L	50	47.3	95	30-177	
Carbon disulfide	ug/L	50	51.4	103	70-133	
Carbon tetrachloride	ug/L	50	56.6	113	70-130	
Chlorobenzene	ug/L	50	48.2	96	70-130	
Chloroethane	ug/L	50	45.2	90	46-131	
Chloroform	ug/L	50	52.4	105	70-130	
Chloromethane	ug/L	50	43.6	87	49-130	
Chloroprene	ug/L	50	56.1	112	70-130	
cis-1,2-Dichloroethene	ug/L	50	52.1	104	70-130	
cis-1,3-Dichloropropene	ug/L	50	54.9	110	70-130	
Dibromochloromethane	ug/L	50	52.2	104	70-130	
Dibromomethane	ug/L	50	51.9	104	70-130	
Dichlorodifluoromethane	ug/L	50	47.3	95	52-134	
Ethyl methacrylate	ug/L	50	52.9	106	70-130	
Ethylbenzene	ug/L	50	47.5	95	70-130	
Iodomethane	ug/L	100	105	105	47-140	IK
Isobutanol	ug/L	1000	1390	139	62-136	L1
Methacrylonitrile	ug/L	500	514	103	70-130	
Methyl methacrylate	ug/L	50	53.2	106	70-130	
Methylene Chloride	ug/L	50	51.3	103	68-130	
Propionitrile	ug/L	500	602	120	70-130	
Styrene	ug/L	50	48.7	97	70-130	
Tetrachloroethene	ug/L	50	46.4	93	70-130	
Toluene	ug/L	50	49.5	99	70-130	
trans-1,2-Dichloroethene	ug/L	50	55.1	110	70-130	
trans-1,3-Dichloropropene	ug/L	50	53.9	108	70-130	
trans-1,4-Dichloro-2-butene	ug/L	50	62.5	125	25-200	
Trichloroethene	ug/L	50	53.5	107	70-130	
Trichlorofluoromethane	ug/L	50	51.8	104	61-130	
Vinyl acetate	ug/L	100	120	120	70-140	
Vinyl chloride	ug/L	50	45.7	91	59-142	
Xylene (Total)	ug/L	150	145	97	70-130	
1,2-Dichloroethane-d4 (S)	%			111	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			103	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3078414 3078415

Parameter	Units	92507266001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	21.5	21.3	107	107	70-135	1	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	23.3	22.4	116	112	70-148	4	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	19.6	19.4	98	97	70-131	1	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	20.7	20.2	104	101	70-136	2	30	
1,1-Dichloroethane	ug/L	ND	20	20	21.0	20.8	105	104	70-147	1	30	
1,1-Dichloroethene	ug/L	ND	20	20	24.5	24.0	123	120	70-158	2	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	22.6	21.2	113	106	68-140	6	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	20.0	20.0	100	100	67-137	0	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	21.0	21.0	105	105	70-139	0	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	19.9	19.6	100	98	70-133	2	30	
1,2-Dichloroethane	ug/L	ND	20	20	23.2	22.5	116	113	67-138	3	30	
1,2-Dichloropropane	ug/L	ND	20	20	20.6	20.5	103	103	70-138	0	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	19.6	20.2	98	101	70-133	3	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	19.2	19.2	96	96	70-133	0	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	421	299	105	75	69-146	34	30	R1
2-Butanone (MEK)	ug/L	ND	40	40	41.7	39.2	104	98	61-147	6	30	
2-Hexanone	ug/L	ND	40	40	42.0	39.6	105	99	67-139	6	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	40.8	38.1	102	95	67-136	7	30	
Acetone	ug/L	ND	40	40	45.8	45.5	115	114	55-159	1	30	
Acetonitrile	ug/L	ND	200	200	212	224	106	112	66-145	5	30	
Acrolein	ug/L	ND	100	100	90.7	88.0	91	88	10-200	3	30	
Acrylonitrile	ug/L	ND	100	100	94.5	95.3	95	95	68-140	1	30	
Allyl chloride	ug/L	ND	20	20	15.8	16.6	79	83	70-147	5	30	
Benzene	ug/L	ND	20	20	20.6	9.3	103	47	67-150	75	30	M1,R1
Bromobenzene	ug/L	ND	20	20	20.2	20.0	101	100	70-134	1	30	
Bromochloromethane	ug/L	ND	20	20	22.1	21.4	110	107	70-146	3	30	
Bromodichloromethane	ug/L	ND	20	20	20.0	19.7	100	98	70-138	2	30	
Bromoform	ug/L	ND	20	20	17.6	19.2	88	96	57-138	9	30	
Bromomethane	ug/L	ND	20	20	16.3	16.6	81	83	10-200	2	30	
Carbon disulfide	ug/L	ND	20	20	20.2	19.3	101	97	70-152	4	30	
Carbon tetrachloride	ug/L	ND	20	20	25.2	25.3	126	126	70-147	0	30	
Chlorobenzene	ug/L	ND	20	20	20.1	20.2	101	101	70-137	0	30	
Chloroethane	ug/L	ND	20	20	21.0	21.1	105	105	51-166	0	30	
Chloroform	ug/L	ND	20	20	20.1	22.0	100	110	70-144	9	30	
Chloromethane	ug/L	ND	20	20	17.2	17.1	86	86	24-161	0	30	
Chloroprene	ug/L	ND	20	20	21.8	23.1	109	115	70-143	6	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	20.4	19.6	102	98	67-148	4	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.0	18.5	90	92	70-142	3	30	
Dibromochloromethane	ug/L	ND	20	20	20.6	21.4	103	107	68-138	4	30	
Dibromomethane	ug/L	ND	20	20	21.0	20.9	105	104	70-134	0	30	
Dichlorodifluoromethane	ug/L	ND	20	20	19.5	19.0	97	95	43-155	3	30	
Ethyl methacrylate	ug/L	ND	20	20	19.5	19.7	97	99	70-137	1	30	
Ethylbenzene	ug/L	ND	20	20	20.2	20.2	101	101	68-143	0	30	
Iodomethane	ug/L	ND	40	40	35.0	40.1	88	100	20-161	14	30	
Isobutanol	ug/L	ND	400	400	495	432	124	108	44-145	14	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3078414 3078415

Parameter	Units	92507266001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Methacrylonitrile	ug/L	ND	200	200	197	190	98	95	67-139	3	30	
Methyl methacrylate	ug/L	ND	20	20	19.9	18.3	100	92	70-130	8	30	
Methylene Chloride	ug/L	ND	20	20	20.1	18.2	101	91	64-148	10	30	
Propionitrile	ug/L	ND	200	200	220	93.1	110	47	70-138	81	30	M1,R1
Styrene	ug/L	ND	20	20	19.3	19.8	97	99	70-136	2	30	
Tetrachloroethene	ug/L	ND	20	20	21.1	20.7	106	103	70-139	2	30	
Toluene	ug/L	ND	20	20	20.2	19.9	101	100	47-157	1	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	22.2	22.2	111	111	70-149	0	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.3	18.4	87	92	70-138	6	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	20	8.3	9.1	41	46	31-145	10	30	
Trichloroethene	ug/L	ND	20	20	22.7	22.4	114	112	70-149	1	30	
Trichlorofluoromethane	ug/L	ND	20	20	23.9	23.5	119	117	61-154	2	30	
Vinyl acetate	ug/L	ND	40	40	44.0	42.8	110	107	48-156	3	30	
Vinyl chloride	ug/L	ND	20	20	19.5	19.3	98	96	55-172	1	30	
Xylene (Total)	ug/L	ND	60	60	60.6	60.5	101	101	66-145	0	30	
1,2-Dichloroethane-d4 (S)	%						112	109	70-130			
4-Bromofluorobenzene (S)	%						101	103	70-130			
Toluene-d8 (S)	%						99	97	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

QC Batch: 583199
QC Batch Method: EPA 8011
Analysis Method: EPA 8011
Analysis Description: GCS 8011 EDB DBCP
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92507266001

METHOD BLANK: 3083674 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	ND	0.020	11/30/20 21:44	
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	11/30/20 21:44	
1-Chloro-2-bromopropane (S)	%	101	60-140	11/30/20 21:44	

LABORATORY CONTROL SAMPLE & LCSD: 3083675 3083676

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.25	0.23	0.23	93	92	60-140	1	20	
1,2-Dibromoethane (EDB)	ug/L	0.25	0.25	0.25	102	99	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				99	96	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3083678 3083679

Parameter	Units	92507653012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	ND	0.25	0.25	0.24	0.24	98	97	60-140	0	20	
1,2-Dibromoethane (EDB)	ug/L	0.14	0.25	0.25	0.35	0.35	85	83	60-140	1	20	
1-Chloro-2-bromopropane (S)	%						178	177	60-140			S1

SAMPLE DUPLICATE: 3083677

Parameter	Units	92507653011 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		20	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	95	93			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

QC Batch: 582215
QC Batch Method: EPA 3510C
Analysis Method: EPA 8081B
Analysis Description: 8081 OC Pesticides Red Vol
Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92507266001

METHOD BLANK: 3079075 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	11/24/20 16:15	
4,4'-DDE	ug/L	ND	0.050	11/24/20 16:15	
4,4'-DDT	ug/L	ND	0.050	11/24/20 16:15	
Aldrin	ug/L	ND	0.050	11/24/20 16:15	
alpha-BHC	ug/L	ND	0.050	11/24/20 16:15	
beta-BHC	ug/L	ND	0.050	11/24/20 16:15	
Chlordane (Technical)	ug/L	ND	0.20	11/24/20 16:15	
delta-BHC	ug/L	ND	0.050	11/24/20 16:15	
Dieldrin	ug/L	ND	0.050	11/24/20 16:15	
Endosulfan I	ug/L	ND	0.050	11/24/20 16:15	
Endosulfan II	ug/L	ND	0.050	11/24/20 16:15	
Endosulfan sulfate	ug/L	ND	0.050	11/24/20 16:15	
Endrin	ug/L	ND	0.050	11/24/20 16:15	
Endrin aldehyde	ug/L	ND	0.050	11/24/20 16:15	
gamma-BHC (Lindane)	ug/L	ND	0.050	11/24/20 16:15	
Heptachlor	ug/L	ND	0.050	11/24/20 16:15	
Heptachlor epoxide	ug/L	ND	0.050	11/24/20 16:15	
Methoxychlor	ug/L	ND	0.15	11/24/20 16:15	
Toxaphene	ug/L	ND	0.20	11/24/20 16:15	
Decachlorobiphenyl (S)	%	118	10-154	11/24/20 16:15	
Tetrachloro-m-xylene (S)	%	85	10-184	11/24/20 16:15	

LABORATORY CONTROL SAMPLE: 3079076

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	0.25	0.37	150	45-158	
4,4'-DDE	ug/L	0.25	0.34	137	37-141	
4,4'-DDT	ug/L	0.25	0.39	156	52-160	
Aldrin	ug/L	0.25	0.23	91	10-130	
alpha-BHC	ug/L	0.25	0.26	106	37-139	
beta-BHC	ug/L	0.25	0.35	139	39-176	
delta-BHC	ug/L	0.25	0.38	152	39-144	L1
Dieldrin	ug/L	0.25	0.34	136	40-149	
Endosulfan I	ug/L	0.25	0.35	139	44-145	
Endosulfan II	ug/L	0.25	0.34	138	47-153	
Endosulfan sulfate	ug/L	0.25	0.35	140	48-159	
Endrin	ug/L	0.25	0.34	136	41-155	
Endrin aldehyde	ug/L	0.25	0.37	146	45-146	
gamma-BHC (Lindane)	ug/L	0.25	0.29	114	42-146	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

LABORATORY CONTROL SAMPLE: 3079076

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Heptachlor	ug/L	0.25	0.24	97	23-135	
Heptachlor epoxide	ug/L	0.25	0.35	140	39-142	
Methoxychlor	ug/L	0.75	1.1	144	55-173	
Decachlorobiphenyl (S)	%			134	10-154	
Tetrachloro-m-xylene (S)	%			71	10-184	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3079077 3079078

Parameter	Units	92507570003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4,4'-DDD	ug/L	ND	0.25	0.25	0.28	0.29	114	114	36-169	1	30	
4,4'-DDE	ug/L	ND	0.25	0.25	0.27	0.27	109	107	31-154	2	30	
4,4'-DDT	ug/L	ND	0.25	0.25	0.28	0.28	111	111	23-187	0	30	
Aldrin	ug/L	ND	0.25	0.25	0.20	0.14	79	56	10-141	34	30	R1
alpha-BHC	ug/L	ND	0.25	0.25	0.22	0.17	90	70	25-151	25	30	
beta-BHC	ug/L	ND	0.25	0.25	0.28	0.26	114	105	30-188	8	30	
delta-BHC	ug/L	ND	0.25	0.25	0.26	0.27	103	106	32-157	3	30	
Dieldrin	ug/L	ND	0.25	0.25	0.28	0.26	112	102	24-165	9	30	
Endosulfan I	ug/L	ND	0.25	0.25	0.29	0.26	115	104	19-168	10	30	
Endosulfan II	ug/L	ND	0.25	0.25	0.27	0.27	109	106	27-176	2	30	
Endosulfan sulfate	ug/L	ND	0.25	0.25	0.28	0.28	113	112	31-174	1	30	
Endrin	ug/L	ND	0.25	0.25	0.25	0.24	101	96	23-171	6	30	
Endrin aldehyde	ug/L	ND	0.25	0.25	0.26	0.26	105	104	16-177	1	30	
gamma-BHC (Lindane)	ug/L	ND	0.25	0.25	0.24	0.20	96	79	29-157	19	30	
Heptachlor	ug/L	ND	0.25	0.25	0.23	0.17	91	70	11-149	27	30	
Heptachlor epoxide	ug/L	ND	0.25	0.25	0.26	0.23	102	92	21-157	11	30	
Methoxychlor	ug/L	ND	0.75	0.75	0.82	0.82	109	110	33-193	0	30	
Decachlorobiphenyl (S)	%						103	106	10-154			
Tetrachloro-m-xylene (S)	%						67	44	10-184			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

QC Batch: 581970
QC Batch Method: EPA 3510C
Analysis Method: EPA 8082A
Analysis Description: 8082 GCS PCB
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92507266001

METHOD BLANK: 3077995 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.50	11/23/20 08:22	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.50	11/23/20 08:22	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.50	11/23/20 08:22	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.50	11/23/20 08:22	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.50	11/23/20 08:22	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.50	11/23/20 08:22	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.50	11/23/20 08:22	
Decachlorobiphenyl (S)	%	92	10-181	11/23/20 08:22	

LABORATORY CONTROL SAMPLE: 3077996

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	5	4.2	84	41-137	
PCB-1260 (Aroclor 1260)	ug/L	5	5.7	114	42-156	
Decachlorobiphenyl (S)	%			90	10-181	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3077997 3077998

Parameter	Units	92507313001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	ND	5	5	3.5	3.2	71	64	22-145	10	30	
PCB-1260 (Aroclor 1260)	ug/L	ND	5	5	5.2	4.7	103	94	10-167	10	30	
Decachlorobiphenyl (S)	%						81	76	10-181			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

QC Batch: 582162
QC Batch Method: EPA 3510C
Analysis Method: EPA 8270E
Analysis Description: 8270E Water APP9 RV MSSV
Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92507266001

METHOD BLANK: 3078942 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	11/24/20 17:51	
1,2,4-Trichlorobenzene	ug/L	ND	10.0	11/24/20 17:51	
1,2-Dichlorobenzene	ug/L	ND	10.0	11/24/20 17:51	
1,2-Diphenylhydrazine	ug/L	ND	10.0	11/24/20 17:51	
1,3,5-Trinitrobenzene	ug/L	ND	10.0	11/24/20 17:51	v1
1,3-Dichlorobenzene	ug/L	ND	10.0	11/24/20 17:51	
1,3-Dinitrobenzene	ug/L	ND	10.0	11/24/20 17:51	
1,4-Dichlorobenzene	ug/L	ND	10.0	11/24/20 17:51	
1,4-Dinitrobenzene	ug/L	ND	20.0	11/24/20 17:51	
1,4-Naphthoquinone	ug/L	ND	5.0	11/24/20 17:51	
1-Methylnaphthalene	ug/L	ND	10.0	11/24/20 17:51	
1-Naphthalenamine	ug/L	ND	5.0	11/24/20 17:51	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	11/24/20 17:51	v1
2,3,4,6-Tetrachlorophenol	ug/L	ND	10.0	11/24/20 17:51	
2,3-Dibromo-1-propanol phosph	ug/L	ND	50.0	11/24/20 17:51	v2
2,3-Dichloroaniline	ug/L	ND	10.0	11/24/20 17:51	
2,4,5-Trichlorophenol	ug/L	ND	10.0	11/24/20 17:51	
2,4,6-Trichlorophenol	ug/L	ND	10.0	11/24/20 17:51	
2,4-Dichlorophenol	ug/L	ND	10.0	11/24/20 17:51	
2,4-Dimethylphenol	ug/L	ND	10.0	11/24/20 17:51	
2,4-Dinitrophenol	ug/L	ND	50.0	11/24/20 17:51	
2,4-Dinitrotoluene	ug/L	ND	10.0	11/24/20 17:51	
2,6-Dichlorophenol	ug/L	ND	10.0	11/24/20 17:51	
2,6-Dinitrotoluene	ug/L	ND	10.0	11/24/20 17:51	
2-Acetylaminofluorene	ug/L	ND	10.0	11/24/20 17:51	
2-Chloronaphthalene	ug/L	ND	10.0	11/24/20 17:51	
2-Chlorophenol	ug/L	ND	10.0	11/24/20 17:51	
2-Methyl-5-nitroaniline	ug/L	ND	10.0	11/24/20 17:51	
2-Methylnaphthalene	ug/L	ND	10.0	11/24/20 17:51	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	11/24/20 17:51	
2-Naphthalenamine	ug/L	ND	10.0	11/24/20 17:51	
2-Nitroaniline	ug/L	ND	20.0	11/24/20 17:51	
2-Nitrophenol	ug/L	ND	10.0	11/24/20 17:51	
2-Picoline	ug/L	ND	10.0	11/24/20 17:51	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	11/24/20 17:51	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	11/24/20 17:51	
3,3'-Dimethylbenzidine	ug/L	ND	25.0	11/24/20 17:51	IH
3-Methylcholanthrene	ug/L	ND	10.0	11/24/20 17:51	
3-Nitroaniline	ug/L	ND	20.0	11/24/20 17:51	
4,4'-Methylene-bis(2-chloroani	ug/L	ND	20.0	11/24/20 17:51	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

METHOD BLANK: 3078942 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	11/24/20 17:51	
4-Aminobiphenyl	ug/L	ND	10.0	11/24/20 17:51	
4-Bromophenylphenyl ether	ug/L	ND	10.0	11/24/20 17:51	
4-Chloro-3-methylphenol	ug/L	ND	10.0	11/24/20 17:51	
4-Chloroaniline	ug/L	ND	20.0	11/24/20 17:51	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	11/24/20 17:51	
4-Nitroaniline	ug/L	ND	20.0	11/24/20 17:51	
4-Nitrophenol	ug/L	ND	50.0	11/24/20 17:51	
4-Nitroquinoline-n-oxide	ug/L	ND	20.0	11/24/20 17:51	v2
5-Nitro-o-toluidine	ug/L	ND	10.0	11/24/20 17:51	
7,12-Dimethylbenz(a)anthracene	ug/L	ND	10.0	11/24/20 17:51	
a,a-Dimethylphenylethylamine	ug/L	ND	10.0	11/24/20 17:51	
Acenaphthene	ug/L	ND	10.0	11/24/20 17:51	
Acenaphthylene	ug/L	ND	10.0	11/24/20 17:51	
Acetophenone	ug/L	ND	10.0	11/24/20 17:51	
Aniline	ug/L	ND	10.0	11/24/20 17:51	
Anthracene	ug/L	ND	10.0	11/24/20 17:51	
Aramite	ug/L	ND	10.0	11/24/20 17:51	
Atrazine	ug/L	ND	10.0	11/24/20 17:51	
Benzal chloride	ug/L	ND	50.0	11/24/20 17:51	
Benzaldehyde	ug/L	ND	10.0	11/24/20 17:51	
Benzidine	ug/L	ND	50.0	11/24/20 17:51	
Benzo(a)anthracene	ug/L	ND	10.0	11/24/20 17:51	
Benzo(a)pyrene	ug/L	ND	10.0	11/24/20 17:51	
Benzo(b)fluoranthene	ug/L	ND	10.0	11/24/20 17:51	
Benzo(g,h,i)perylene	ug/L	ND	10.0	11/24/20 17:51	
Benzo(k)fluoranthene	ug/L	ND	10.0	11/24/20 17:51	
Benzoic Acid	ug/L	ND	50.0	11/24/20 17:51	
Benzophenone	ug/L	ND	10.0	11/24/20 17:51	
Benzyl alcohol	ug/L	ND	20.0	11/24/20 17:51	
Biphenyl (Diphenyl)	ug/L	ND	10.0	11/24/20 17:51	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	11/24/20 17:51	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	11/24/20 17:51	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	11/24/20 17:51	
Butylbenzylphthalate	ug/L	ND	10.0	11/24/20 17:51	
Caprolactam	ug/L	6.1J	10.0	11/24/20 17:51	
Carbazole	ug/L	ND	10.0	11/24/20 17:51	
Chlorobenzilate	ug/L	ND	10.0	11/24/20 17:51	
Chrysene	ug/L	ND	10.0	11/24/20 17:51	
Di-n-butylphthalate	ug/L	ND	10.0	11/24/20 17:51	
Di-n-octylphthalate	ug/L	ND	10.0	11/24/20 17:51	
Diallate	ug/L	ND	10.0	11/24/20 17:51	
Dibenz(a,h)anthracene	ug/L	ND	10.0	11/24/20 17:51	
Dibenzo(a,e)pyrene	ug/L	ND	50.0	11/24/20 17:51	v1
Dibenzofuran	ug/L	ND	10.0	11/24/20 17:51	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

METHOD BLANK: 3078942 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diethylphthalate	ug/L	ND	10.0	11/24/20 17:51	
Dimethoate	ug/L	ND	10.0	11/24/20 17:51	
Dimethylphthalate	ug/L	ND	10.0	11/24/20 17:51	
Diphenyl ether (Phenyl ether)	ug/L	ND	10.0	11/24/20 17:51	
Diphenylamine	ug/L	ND	10.0	11/24/20 17:51	
Disulfoton	ug/L	ND	10.0	11/24/20 17:51	
Ethyl methanesulfonate	ug/L	ND	20.0	11/24/20 17:51	
Famphur	ug/L	ND	10.0	11/24/20 17:51	IH
Fluoranthene	ug/L	ND	10.0	11/24/20 17:51	
Fluorene	ug/L	ND	10.0	11/24/20 17:51	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	11/24/20 17:51	
Hexachlorobenzene	ug/L	ND	10.0	11/24/20 17:51	
Hexachlorocyclopentadiene	ug/L	ND	10.0	11/24/20 17:51	
Hexachloroethane	ug/L	ND	10.0	11/24/20 17:51	
Hexachlorophene	ug/L	ND	100	11/24/20 17:51	IH,v2
Hexachloropropene	ug/L	ND	10.0	11/24/20 17:51	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	11/24/20 17:51	
Isodrin	ug/L	ND	10.0	11/24/20 17:51	
Isophorone	ug/L	ND	10.0	11/24/20 17:51	
Isosafrole	ug/L	ND	10.0	11/24/20 17:51	
Kepone	ug/L	ND	10.0	11/24/20 17:51	IL
Methapyrilene	ug/L	ND	50.0	11/24/20 17:51	IH,v2
Methyl methanesulfonate	ug/L	ND	5.0	11/24/20 17:51	
Methyl parathion	ug/L	ND	10.0	11/24/20 17:51	
n-Decane	ug/L	ND	10.0	11/24/20 17:51	
N-Nitroso-di-n-butylamine	ug/L	ND	10.0	11/24/20 17:51	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	11/24/20 17:51	
N-Nitrosodiethylamine	ug/L	ND	10.0	11/24/20 17:51	
N-Nitrosodimethylamine	ug/L	ND	10.0	11/24/20 17:51	
N-Nitrosodiphenylamine	ug/L	ND	10.0	11/24/20 17:51	
N-Nitrosomethylethylamine	ug/L	ND	10.0	11/24/20 17:51	
N-Nitrosomorpholine	ug/L	ND	10.0	11/24/20 17:51	
N-Nitrosopiperidine	ug/L	ND	10.0	11/24/20 17:51	
N-Nitrosopyrrolidine	ug/L	ND	10.0	11/24/20 17:51	
n-Octadecane	ug/L	ND	10.0	11/24/20 17:51	v1
Naphthalene	ug/L	ND	10.0	11/24/20 17:51	
Nitrobenzene	ug/L	ND	10.0	11/24/20 17:51	
O,O,O-Triethylphosphorothioate	ug/L	ND	10.0	11/24/20 17:51	
O-Toluidine	ug/L	ND	10.0	11/24/20 17:51	
P-Dimethylaminoazobenzene	ug/L	ND	5.0	11/24/20 17:51	IL
p-Phenylenediamine	ug/L	ND	10.0	11/24/20 17:51	1g,IH
Parathion (Ethyl parathion)	ug/L	ND	10.0	11/24/20 17:51	
Pentachlorobenzene	ug/L	ND	10.0	11/24/20 17:51	
Pentachloroethane	ug/L	ND	10.0	11/24/20 17:51	
Pentachloronitrobenzene	ug/L	ND	10.0	11/24/20 17:51	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

METHOD BLANK: 3078942 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Pentachlorophenol	ug/L	ND	20.0	11/24/20 17:51	
Phenacetin	ug/L	ND	10.0	11/24/20 17:51	
Phenanthrene	ug/L	ND	10.0	11/24/20 17:51	
Phenol	ug/L	ND	10.0	11/24/20 17:51	
Phorate	ug/L	ND	10.0	11/24/20 17:51	
Pronamide	ug/L	ND	10.0	11/24/20 17:51	
Pyrene	ug/L	ND	10.0	11/24/20 17:51	
Pyridine	ug/L	ND	10.0	11/24/20 17:51	
Safrole	ug/L	ND	10.0	11/24/20 17:51	
Sulfotepp (Thiodiphosphoric Ac	ug/L	ND	10.0	11/24/20 17:51	
Terpineol	ug/L	ND	10.0	11/24/20 17:51	
Thionazin	ug/L	ND	10.0	11/24/20 17:51	
2,4,6-Tribromophenol (S)	%	76	10-144	11/24/20 17:51	
2-Fluorobiphenyl (S)	%	58	10-130	11/24/20 17:51	
2-Fluorophenol (S)	%	55	10-130	11/24/20 17:51	
Nitrobenzene-d5 (S)	%	82	10-144	11/24/20 17:51	
Phenol-d6 (S)	%	41	10-130	11/24/20 17:51	
Terphenyl-d14 (S)	%	122	34-163	11/24/20 17:51	

LABORATORY CONTROL SAMPLE: 3078943

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	46.5	93	17-130	
1,2,4-Trichlorobenzene	ug/L	50	29.8	60	18-130	
1,2-Dichlorobenzene	ug/L	50	25.1	50	20-130	
1,2-Diphenylhydrazine	ug/L	50	81.9	164	13-191	
1,3,5-Trinitrobenzene	ug/L	50	58.0	116	44-200	v1
1,3-Dichlorobenzene	ug/L	50	22.1	44	18-130	
1,3-Dinitrobenzene	ug/L	50	59.0	118	39-159	
1,4-Dichlorobenzene	ug/L	50	24.1	48	18-130	
1,4-Dinitrobenzene	ug/L	50	62.0	124	70-158	
1,4-Naphthoquinone	ug/L	50	19.1	38	10-159	
1-Methylnaphthalene	ug/L	50	39.9	80	29-130	
1-Naphthalenamine	ug/L	50	52.3	105	10-130	
2,2'-Oxybis(1-chloropropane)	ug/L	50	53.0	106	28-130	v1
2,3,4,6-Tetrachlorophenol	ug/L	50	46.6	93	10-200	
2,3-Dibromo-1-propanol phosph	ug/L	200	242	121	40-130	v3
2,3-Dichloroaniline	ug/L	50	49.1	98	40-130	
2,4,5-Trichlorophenol	ug/L	50	49.0	98	35-130	
2,4,6-Trichlorophenol	ug/L	50	48.0	96	31-130	
2,4-Dichlorophenol	ug/L	50	46.8	94	35-130	
2,4-Dimethylphenol	ug/L	50	51.4	103	34-130	
2,4-Dinitrophenol	ug/L	250	218	87	10-153	
2,4-Dinitrotoluene	ug/L	50	51.3	103	37-136	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

LABORATORY CONTROL SAMPLE: 3078943

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,6-Dichlorophenol	ug/L	50	56.5	113	31-139	
2,6-Dinitrotoluene	ug/L	50	54.7	109	33-136	
2-Acetylaminofluorene	ug/L	50	57.0	114	19-181	
2-Chloronaphthalene	ug/L	50	45.9	92	26-130	
2-Chlorophenol	ug/L	50	46.6	93	37-130	
2-Methyl-5-nitroaniline	ug/L	50	55.8	112	50-200	
2-Methylnaphthalene	ug/L	50	40.4	81	29-130	
2-Methylphenol(o-Cresol)	ug/L	50	43.1	86	35-130	
2-Naphthalenamine	ug/L	50	51.7	103	10-136	
2-Nitroaniline	ug/L	100	94.8	95	37-130	
2-Nitrophenol	ug/L	50	50.5	101	32-130	
2-Picoline	ug/L	50	39.1	78	20-130	
3&4-Methylphenol(m&p Cresol)	ug/L	50	45.8	92	34-130	
3,3'-Dichlorobenzidine	ug/L	100	98.6	99	34-136	
3,3'-Dimethylbenzidine	ug/L	100	225	225	10-200	IH,L1
3-Methylcholanthrene	ug/L	50	57.7	115	39-190	
3-Nitroaniline	ug/L	100	99.4	99	37-138	
4,4'-Methylene-bis(2-chloroani	ug/L	100	121	121	50-130	
4,6-Dinitro-2-methylphenol	ug/L	100	100	100	21-157	
4-Aminobiphenyl	ug/L	50	61.4	123	17-137	
4-Bromophenylphenyl ether	ug/L	50	49.8	100	38-130	
4-Chloro-3-methylphenol	ug/L	100	93.9	94	37-130	
4-Chloroaniline	ug/L	100	94.3	94	38-130	
4-Chlorophenylphenyl ether	ug/L	50	44.4	89	33-130	
4-Nitroaniline	ug/L	100	95.2	95	42-137	
4-Nitrophenol	ug/L	250	145	58	10-130	
4-Nitroquinoline-n-oxide	ug/L	100	86.5	87	10-130	v3
5-Nitro-o-toluidine	ug/L	50	55.8	112	39-170	
7,12-Dimethylbenz(a)anthracene	ug/L	50	47.8	96	33-139	
a,a-Dimethylphenylethylamine	ug/L	50	25.6	51	10-130	
Acenaphthene	ug/L	50	46.1	92	33-130	
Acenaphthylene	ug/L	50	47.5	95	35-130	
Acetophenone	ug/L	50	46.6	93	36-130	
Aniline	ug/L	50	41.8	84	22-130	
Anthracene	ug/L	50	44.3	89	48-130	
Aramite	ug/L	100	71.5	72	10-130	
Atrazine	ug/L	50	52.3	105	30-130	
Benzal chloride	ug/L	50	29.6J	59	20-150	
Benzaldehyde	ug/L	50	52.5	105	46-147	
Benzidine	ug/L	100	56.2	56	10-130	
Benzo(a)anthracene	ug/L	50	49.6	99	48-137	
Benzo(a)pyrene	ug/L	50	51.2	102	49-138	
Benzo(b)fluoranthene	ug/L	50	55.7	111	52-138	
Benzo(g,h,i)perylene	ug/L	50	49.3	99	48-140	
Benzo(k)fluoranthene	ug/L	50	53.3	107	48-139	
Benzoic Acid	ug/L	250	62.4	25	10-130	
Benzophenone	ug/L	50	68.4	137	20-130	L1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

LABORATORY CONTROL SAMPLE: 3078943

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzyl alcohol	ug/L	100	85.1	85	35-130	
Biphenyl (Diphenyl)	ug/L	50	46.2	92	31-130	
bis(2-Chloroethoxy)methane	ug/L	50	46.8	94	34-130	
bis(2-Chloroethyl) ether	ug/L	50	48.0	96	36-130	
bis(2-Ethylhexyl)phthalate	ug/L	50	55.4	111	32-165	
Butylbenzylphthalate	ug/L	50	62.5	125	34-161	
Caprolactam	ug/L	50	29.3	59	10-130	
Carbazole	ug/L	50	47.1	94	47-130	
Chlorobenzilate	ug/L	50	62.6	125	43-176	
Chrysene	ug/L	50	49.2	98	47-131	
Di-n-butylphthalate	ug/L	50	49.3	99	39-144	
Di-n-octylphthalate	ug/L	50	54.2	108	30-170	
Diallate	ug/L	50	55.7	111	33-143	
Dibenz(a,h)anthracene	ug/L	50	49.7	99	49-138	
Dibenzo(a,e)pyrene	ug/L	50	50.8	102	40-130	v1
Dibenzofuran	ug/L	50	47.8	96	33-130	
Diethylphthalate	ug/L	50	49.3	99	38-131	
Dimethoate	ug/L	50	54.2	108	46-173	
Dimethylphthalate	ug/L	50	48.0	96	37-130	
Diphenyl ether (Phenyl ether)	ug/L	50	46.1	92	25-130	
Diphenylamine	ug/L	50	52.2	104	35-135	
Disulfoton	ug/L	50	49.5	99	34-139	
Ethyl methanesulfonate	ug/L	50	48.5	97	33-133	
Famphur	ug/L	100	62.0	62	10-130	IH
Fluoranthene	ug/L	50	45.1	90	46-137	
Fluorene	ug/L	50	46.6	93	37-130	
Hexachloro-1,3-butadiene	ug/L	50	21.8	44	11-130	
Hexachlorobenzene	ug/L	50	48.1	96	38-130	
Hexachlorocyclopentadiene	ug/L	50	33.6	67	10-130	
Hexachloroethane	ug/L	50	18.1	36	14-130	
Hexachlorophene	ug/L	500	332	66	10-143	IH,v3
Hexachloropropene	ug/L	50	25.6	51	10-130	
Indeno(1,2,3-cd)pyrene	ug/L	50	50.0	100	41-130	
Isodrin	ug/L	50	56.9	114	36-139	
Isophorone	ug/L	50	48.5	97	33-130	
Isosafrole	ug/L	50	49.9	100	22-130	
Kepone	ug/L	100	47.6	48	10-130	IL
Methapyrilene	ug/L	50	60.3	121	10-173	IH,v3
Methyl methanesulfonate	ug/L	50	38.2	76	33-130	
Methyl parathion	ug/L	50	65.1	130	39-200	
n-Decane	ug/L	50	15.0	30	17-130	
N-Nitroso-di-n-butylamine	ug/L	50	39.3	79	22-130	
N-Nitroso-di-n-propylamine	ug/L	50	52.1	104	36-130	
N-Nitrosodiethylamine	ug/L	50	50.9	102	23-136	
N-Nitrosodimethylamine	ug/L	50	38.0	76	34-130	
N-Nitrosodiphenylamine	ug/L	50	52.2	104	37-130	
N-Nitrosomethylethylamine	ug/L	50	43.7	87	18-137	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

LABORATORY CONTROL SAMPLE: 3078943

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
N-Nitrosomorpholine	ug/L	50	60.8	122	24-156	
N-Nitrosopiperidine	ug/L	50	55.2	110	25-142	
N-Nitrosopyrrolidine	ug/L	50	53.8	108	24-146	
n-Octadecane	ug/L	50	64.6	129	30-144	v1
Naphthalene	ug/L	50	36.4	73	30-130	
Nitrobenzene	ug/L	50	47.3	95	36-130	
O,O,O-Triethylphosphorothioate	ug/L	50	52.2	104	29-130	
O-Toluidine	ug/L	50	50.7	101	27-132	
P-Dimethylaminoazobenzene	ug/L	50	27.8	56	17-130	IL
p-Phenylenediamine	ug/L		ND			1g,IH,L2
Parathion (Ethyl parathion)	ug/L	50	62.5	125	32-200	
Pentachlorobenzene	ug/L	50	52.3	105	27-130	
Pentachloroethane	ug/L	50	23.1	46	10-130	
Pentachloronitrobenzene	ug/L	50	68.7	137	47-164	
Pentachlorophenol	ug/L	100	89.4	89	23-149	
Phenacetin	ug/L	50	53.4	107	44-181	
Phenanthrene	ug/L	50	47.6	95	44-130	
Phenol	ug/L	50	30.7	61	18-130	
Phorate	ug/L	50	74.0	148	18-183	
Pronamide	ug/L	50	59.2	118	45-163	
Pyrene	ug/L	50	57.3	115	47-134	
Pyridine	ug/L	50	30.8	62	10-130	
Safrole	ug/L	50	48.2	96	27-130	
Sulfotepp (Thiodiphosphoric Ac	ug/L	50	65.4	131	41-145	
Terpineol	ug/L	50	53.3	107	23-147	
Thionazin	ug/L	50	55.2	110	36-162	
2,4,6-Tribromophenol (S)	%			104	10-144	
2-Fluorobiphenyl (S)	%			87	10-130	
2-Fluorophenol (S)	%			71	10-130	
Nitrobenzene-d5 (S)	%			101	10-144	
Phenol-d6 (S)	%			57	10-130	
Terphenyl-d14 (S)	%			140	34-163	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3078944 3078945

Parameter	Units	10539624002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4,5-Tetrachlorobenzene	ug/L	<4.6	50	50	49.5	50.5	99	101	10-130	2	30	
1,2,4-Trichlorobenzene	ug/L	<1.7	50	50	30.2	34.8	60	70	10-130	14	30	
1,2-Dichlorobenzene	ug/L	<1.8	50	50	21.2	27.3	42	55	10-130	25	30	
1,2-Diphenylhydrazine	ug/L	<1.6	50	50	85.5	82.5	171	165	10-195	4	30	
1,3,5-Trinitrobenzene	ug/L	<5.3	50	50	55.7	54.2	111	108	50-200	3	30	v1
1,3-Dichlorobenzene	ug/L	<1.6	50	50	17.7	24.5	35	49	10-130	32	30	R1
1,3-Dinitrobenzene	ug/L	<3.7	50	50	59.9	58.5	120	117	43-161	2	30	
1,4-Dichlorobenzene	ug/L	<1.7	50	50	20.1	26.4	40	53	10-130	27	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3078944 3078945

Parameter	Units	10539624002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dinitrobenzene	ug/L	<3.2	50	50	62.7	60.6	125	121	29-200	3	30	
1,4-Naphthoquinone	ug/L	<2.4	50	50	20.4	19.5	41	39	10-184	5	30	
1-Methylnaphthalene	ug/L	<2.0	50	50	41.7	41.6	83	83	10-130	0	30	
1-Naphthalenamine	ug/L	<4.6	50	50	57.8	57.2	116	114	10-130	1	30	
2,2'-Oxybis(1-chloropropane)	ug/L	<1.2	50	50	51.8	52.2	104	104	12-142	1	30	v1
2,3,4,6-Tetrachlorophenol	ug/L	<1.5	50	50	ND	ND	0	0	10-198		30	M1
2,3-Dibromo-1-propanol phosph	ug/L	<14.2	200	200	228	220	114	110	10-200	4	30	v3
2,3-Dichloroaniline	ug/L	<1.7	50	50	49.3	48.9	99	98	40-130	1	30	
2,4,5-Trichlorophenol	ug/L	<1.4	50	50	3.2J	1.7J	6	3	10-143		30	M1
2,4,6-Trichlorophenol	ug/L	<1.6	50	50	ND	ND	3	0	10-147		30	M1
2,4-Dichlorophenol	ug/L	<1.4	50	50	8.8J	3.5J	18	7	10-138		30	M1
2,4-Dimethylphenol	ug/L	<1.7	50	50	47.7	44.1	95	88	25-130	8	30	
2,4-Dinitrophenol	ug/L	<26.0	250	250	ND	ND	0	0	10-165		30	M1
2,4-Dinitrotoluene	ug/L	<1.6	50	50	50.5	49.1	101	98	29-148	3	30	
2,6-Dichlorophenol	ug/L	<2.7	50	50	ND	ND	5	0	33-139		30	M1
2,6-Dinitrotoluene	ug/L	<1.7	50	50	56.4	54.4	113	109	26-146	4	30	
2-Acetylaminofluorene	ug/L	<1.9	50	50	58.7	58.1	117	116	27-172	1	30	
2-Chloronaphthalene	ug/L	<1.7	50	50	47.7	48.4	95	97	11-130	1	30	
2-Chlorophenol	ug/L	<1.2	50	50	11.3	4.6J	23	9	10-133		30	M1
2-Methyl-5-nitroaniline	ug/L	<2.4	50	50	56.7	55.1	113	110	50-200	3	30	
2-Methylnaphthalene	ug/L	<1.9	50	50	42.7	43.6	85	87	13-130	2	30	
2-Methylphenol(o-Cresol)	ug/L	<1.9	50	50	35.6	29.5	71	59	20-130	19	30	
2-Naphthalenamine	ug/L	<6.1	50	50	56.8	55.8	114	112	10-135	2	30	
2-Nitroaniline	ug/L	<3.0	100	100	97.1	93.7	97	94	24-136	4	30	
2-Nitrophenol	ug/L	<1.4	50	50	7.6J	3.1J	15	6	10-153		30	M1
2-Picoline	ug/L	<7.4	50	50	40.0	41.0	80	82	10-134	3	30	
3&4-Methylphenol(m&p Cresol)	ug/L	<1.2	50	50	34.1	28.3	68	57	16-130	19	30	
3,3'-Dichlorobenzidine	ug/L	<8.1	100	100	104	101	104	101	10-153	3	30	
3,3'-Dimethylbenzidine	ug/L	<23.5	100	100	259	263	259	263	10-200	2	30	IH,M0
3-Methylcholanthrene	ug/L	<5.3	50	50	60.5	57.4	121	115	53-181	5	30	
3-Nitroaniline	ug/L	<3.8	100	100	102	99.1	102	99	22-151	3	30	
4,4'-Methylene-bis(2-chloroani	ug/L	<15.0	100	100	128	124	128	124	32-148	3	30	
4,6-Dinitro-2-methylphenol	ug/L	<3.4	100	100	ND	ND	0	0	10-180		30	M1
4-Aminobiphenyl	ug/L	<4.2	50	50	64.8	64.0	130	128	10-139	1	30	
4-Bromophenylphenyl ether	ug/L	<1.8	50	50	52.7	51.1	105	102	25-130	3	30	
4-Chloro-3-methylphenol	ug/L	<3.3	100	100	70.8	51.0	71	51	25-133	32	30	R1
4-Chloroaniline	ug/L	<3.6	100	100	95.5	93.3	95	93	14-132	2	30	
4-Chlorophenylphenyl ether	ug/L	<2.0	50	50	46.4	44.5	93	89	19-130	4	30	
4-Nitroaniline	ug/L	<5.1	100	100	93.0	91.6	93	92	29-150	1	30	
4-Nitrophenol	ug/L	<6.6	250	250	ND	ND	0	0	10-130		30	M1
4-Nitroquinoline-n-oxide	ug/L	<5.4	100	100	85.6	86.7	86	87	43-144	1	30	v3
5-Nitro-o-toluidine	ug/L	<2.4	50	50	56.7	55.1	113	110	48-163	3	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3078944 3078945

Parameter	Units	10539624002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
7,12-Dimethylbenz(a)anthracene	ug/L	<2.8	50	50	50.9	48.6	102	97	40-140	5	30	
a,a-Dimethylphenylethylamine	ug/L	<0.57	50	50	41.2	48.7	82	97	10-166	17	30	
Acenaphthene	ug/L	<2.0	50	50	48.0	47.9	96	96	16-130	0	30	
Acenaphthylene	ug/L	<2.0	50	50	49.9	49.1	100	98	15-137	2	30	
Acetophenone	ug/L	<1.5	50	50	45.6	45.1	91	90	28-130	1	30	
Aniline	ug/L	<1.6	50	50	40.1	41.6	80	83	10-130	4	30	
Anthracene	ug/L	<2.3	50	50	46.5	45.1	93	90	37-136	3	30	
Aramite	ug/L	<3.4	100	100	76.0	72.8	76	73	10-130	4	30	
Atrazine	ug/L	<1.9	50	50	61.9	60.4	124	121	27-141	2	30	
Benzal chloride	ug/L	<7.1	50	50	33.8J	36.4J	68	73	20-150		30	
Benzaldehyde	ug/L	<2.7	50	50	59.5	57.5	119	115	38-152	3	30	
Benzidine	ug/L	<13.4	100	100	79.0	81.4	79	81	10-130	3	30	
Benzo(a)anthracene	ug/L	<2.7	50	50	52.4	50.4	105	101	40-145	4	30	
Benzo(a)pyrene	ug/L	<2.8	50	50	52.7	51.0	105	102	41-146	3	30	
Benzo(b)fluoranthene	ug/L	<2.6	50	50	56.7	54.4	113	109	39-151	4	30	
Benzo(g,h,i)perylene	ug/L	<2.8	50	50	51.0	50.0	102	100	40-147	2	30	
Benzo(k)fluoranthene	ug/L	<2.7	50	50	53.7	50.7	107	101	40-146	6	30	
Benzoic Acid	ug/L	<3.4	250	250	ND	ND	0	0	10-130		30	M1
Benzophenone	ug/L	<2.7	50	50	71.6	68.8	143	138	20-130	4	30	M0
Benzyl alcohol	ug/L	<2.9	100	100	84.6	85.8	85	86	25-130	2	30	
Biphenyl (Diphenyl)	ug/L	<1.8	50	50	48.2	48.7	96	97	17-130	1	30	
bis(2-Chloroethoxy)methane	ug/L	<1.8	50	50	47.1	45.1	94	90	23-130	4	30	
bis(2-Chloroethyl) ether	ug/L	<1.9	50	50	47.9	48.7	96	97	25-130	2	30	
bis(2-Ethylhexyl)phthalate	ug/L	<3.7	50	50	58.1	55.3	116	111	28-166	5	30	
Butylbenzylphthalate	ug/L	<3.1	50	50	65.7	62.8	131	126	33-165	5	30	
Caprolactam	ug/L	<5.4	50	50	22.3	26.0	45	52	10-130	16	30	
Carbazole	ug/L	<2.4	50	50	49.0	47.5	98	95	40-137	3	30	
Chlorobenzilate	ug/L	<3.6	50	50	66.6	63.0	133	126	55-170	6	30	
Chrysene	ug/L	<2.8	50	50	51.2	49.6	102	99	38-141	3	30	
Di-n-butylphthalate	ug/L	<2.2	50	50	51.2	49.3	102	99	32-153	4	30	
Di-n-octylphthalate	ug/L	<3.9	50	50	56.5	55.3	113	111	30-175	2	30	
Diallate	ug/L	<2.7	50	50	57.5	55.5	115	111	39-141	4	30	
Dibenz(a,h)anthracene	ug/L	<3.0	50	50	50.2	50.0	100	100	39-148	0	30	
Dibenzo(a,e)pyrene	ug/L	<2.2	50	50	52.6	54.1	105	108	40-130	3	30	v1
Dibenzofuran	ug/L	<2.1	50	50	49.9	48.7	100	97	20-130	2	30	
Diethylphthalate	ug/L	<2.0	50	50	50.9	49.2	102	98	28-142	3	30	
Dimethoate	ug/L	<2.0	50	50	49.2	45.9	98	92	57-167	7	30	
Dimethylphthalate	ug/L	<2.1	50	50	49.7	47.9	99	96	26-136	4	30	
Diphenyl ether (Phenyl ether)	ug/L	<2.0	50	50	48.2	47.9	96	96	16-130	1	30	
Diphenylamine	ug/L	<3.0	50	50	54.3	53.1	109	106	38-132	2	30	
Disulfoton	ug/L	<6.0	50	50	51.4	50.0	103	100	40-140	3	30	
Ethyl methanesulfonate	ug/L	<2.8	50	50	48.9	47.9	98	96	38-134	2	30	
Famphur	ug/L	<5.7	100	100	52.9	49.5	53	49	10-130	7	30	IH

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3078944 3078945

Parameter	Units	10539624002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoranthene	ug/L	<2.2	50	50	46.5	44.9	93	90	39-143	4	30	
Fluorene	ug/L	<2.1	50	50	48.6	46.7	97	93	24-132	4	30	
Hexachloro-1,3-butadiene	ug/L	<1.8	50	50	21.4	28.0	43	56	10-130	27	30	
Hexachlorobenzene	ug/L	<2.2	50	50	50.4	48.5	101	97	29-130	4	30	
Hexachlorocyclopentadiene	ug/L	<1.6	50	50	35.5	40.4	71	81	10-130	13	30	
Hexachloroethane	ug/L	<1.4	50	50	14.2	22.0	28	44	10-130	43	30	R1
Hexachlorophene	ug/L	<20.4	500	500	ND	ND	0	0	14-155		30	IH,M1, v2
Hexachloropropene	ug/L	<5.5	50	50	30.4	36.3	61	73	10-130	18	30	
Indeno(1,2,3-cd)pyrene	ug/L	<2.9	50	50	52.0	50.9	104	102	39-148	2	30	
Isodrin	ug/L	<3.0	50	50	59.1	57.2	118	114	45-138	3	30	
Isophorone	ug/L	<1.7	50	50	49.4	47.6	99	95	23-130	4	30	
Isosafrole	ug/L	<3.6	50	50	52.6	52.2	105	104	25-130	1	30	
Kepone	ug/L	<8.2	100	100	ND	ND	8	5	10-130		30	IL,M1
Methapyrilene	ug/L	<27.2	50	50	64.8	76.9	130	154	10-181	17	30	IH,v3
Methyl methanesulfonate	ug/L	<3.0	50	50	37.6	38.7	75	77	31-130	3	30	
Methyl parathion	ug/L	<2.0	50	50	65.0	62.2	130	124	53-197	4	30	
n-Decane	ug/L	<2.0	50	50	9.4J	17.5	19	35	10-130		30	
N-Nitroso-di-n-butylamine	ug/L	<6.2	50	50	44.8	43.6	90	87	28-130	3	30	
N-Nitroso-di-n-propylamine	ug/L	<1.3	50	50	51.6	50.5	103	101	25-130	2	30	
N-Nitrosodiethylamine	ug/L	<2.0	50	50	50.7	50.5	101	101	29-132	0	30	
N-Nitrosodimethylamine	ug/L	<1.9	50	50	38.0	41.7	76	83	22-130	9	30	
N-Nitrosodiphenylamine	ug/L	<3.0	50	50	54.3	53.1	109	106	26-134	2	30	
N-Nitrosomethylethylamine	ug/L	<3.3	50	50	45.8	46.1	92	92	24-133	1	30	
N-Nitrosomorpholine	ug/L	<2.3	50	50	59.4	56.6	119	113	15-164	5	30	
N-Nitrosopiperidine	ug/L	<2.6	50	50	56.8	53.7	114	107	29-141	6	30	
N-Nitrosopyrrolidine	ug/L	<2.1	50	50	54.4	53.4	109	107	29-140	2	30	
n-Octadecane	ug/L	<1.3	50	50	67.9	64.7	136	129	29-147	5	30	v1
Naphthalene	ug/L	<2.1	50	50	35.9	38.4	72	77	14-130	7	30	
Nitrobenzene	ug/L	<1.9	50	50	47.1	46.5	94	93	25-130	1	30	
O,O,O-Triethylphosphorothioate	ug/L	<3.5	50	50	52.5	51.3	105	103	30-130	2	30	
O-Toluidine	ug/L	<2.8	50	50	50.2	50.1	100	100	27-130	0	30	
P-Dimethylaminoazobenzene	ug/L	<3.3	50	50	29.6	28.6	59	57	20-130	3	30	IL
p-Phenylenediamine	ug/L	<10.0			ND	ND					30	1g,IH, M0
Parathion (Ethyl parathion)	ug/L	<2.0	50	50	63.2	60.3	126	121	48-200	5	30	
Pentachlorobenzene	ug/L	<4.4	50	50	54.8	53.3	110	107	23-130	3	30	
Pentachloroethane	ug/L	<4.5	50	50	20.6	26.2	41	52	10-130	24	30	
Pentachloronitrobenzene	ug/L	<2.4	50	50	62.7	60.8	125	122	57-159	3	30	
Pentachlorophenol	ug/L	<3.8	100	100	ND	ND	0	0	10-175		30	M1
Phenacetin	ug/L	<1.9	50	50	55.3	53.2	111	106	57-179	4	30	
Phenanthrene	ug/L	<2.0	50	50	50.1	48.5	100	97	36-133	3	30	
Phenol	ug/L	<1.4	50	50	14.8	9.9J	30	20	10-130		30	
Phorate	ug/L	<3.8	50	50	75.4	73.2	151	146	21-192	3	30	
Pronamide	ug/L	<2.4	50	50	61.2	59.7	122	119	55-162	3	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3078944 3078945

Parameter	Units	10539624002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Pyrene	ug/L	<2.2	50	50	60.2	56.8	120	114	40-143	6	30	
Pyridine	ug/L	<2.6	50	50	30.4	33.5	61	67	10-130	10	30	
Safrole	ug/L	<3.2	50	50	50.7	48.7	101	97	25-130	4	30	
Sulfotepp (Thiodiphosphoric Ac	ug/L	<3.0	50	50	68.7	67.0	137	134	42-138	2	30	
Terpineol	ug/L	<1.7	50	50	54.4	52.3	109	105	10-162	4	30	
Thionazin	ug/L	<1.8	50	50	55.8	53.9	112	108	50-157	4	30	
2,4,6-Tribromophenol (S)	%						5	3	10-144			S2
2-Fluorobiphenyl (S)	%						79	82	10-130			
2-Fluorophenol (S)	%						7	2	10-130			S2
Nitrobenzene-d5 (S)	%						100	95	10-144			
Phenol-d6 (S)	%						24	13	10-130			
Terphenyl-d14 (S)	%						142	134	34-163			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

QC Batch: 208581
QC Batch Method: EPA 9034
Analysis Method: EPA 9034
Analysis Description: 9034 Sulfide Waste Water
Laboratory: Pace Analytical Services - New Orleans
Associated Lab Samples: 92507266001

METHOD BLANK: 977502 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	ND	1.0	11/24/20 15:58	

LABORATORY CONTROL SAMPLE: 977503

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	20	17.6	88	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

QC Batch: 581760
QC Batch Method: EPA 9012B
Analysis Method: EPA 9012B
Analysis Description: EPA 9012B Cyanide
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92507266001

METHOD BLANK: 3077085 Matrix: Water
Associated Lab Samples: 92507266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0080	11/22/20 14:24	

LABORATORY CONTROL SAMPLE: 3077086

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	0.1	0.11	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3077087 3077088

Parameter	Units	92506530006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	ND	0.1	0.1	0.097	0.096	96	95	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3077089 3077090

Parameter	Units	92506794007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	ND	0.1	0.1	0.095	0.085	93	83	75-125	11	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1g	p-Phenylenediamine is reporting with critically low recovery in the laboratory control sample(s). Results are estimated.
IH	This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.
IK	The recalculated concentration of the calibration standard(s) did not meet method acceptance criteria; this result should be considered an estimated value.
IL	This analyte exceeded secondary source verification criteria low for the initial calibration. The reported results should be considered an estimated value.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MH	Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
R1	RPD value was outside control limits.
RS	The RPD value in one of the constituent analytes was outside the control limits.
S1	Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

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QUALIFIERS

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

ANALYTE QUALIFIERS

S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).
v1	The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias.
v2	The continuing calibration verification was below the method acceptance limit. The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard.
v3	The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have low bias.

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Colonels Island (App. IX)
Pace Project No.: 92507266

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92507266001	**UP-1-11920**	8151A	1581459	EPA 8151	1581459
92507266001	**UP-1-11920**	EPA 8011	583199	EPA 8011	583318
92507266001	**UP-1-11920**	EPA 3510C	582215	EPA 8081B	582552
92507266001	**UP-1-11920**	EPA 3510C	581970	EPA 8082A	582220
92507266001	**UP-1-11920**	EPA 3005A	582334	EPA 6020B	582434
92507266001	**UP-1-11920**	EPA 7470A	582393	EPA 7470A	582560
92507266001	**UP-1-11920**	EPA 3510C	582162	EPA 8270E	582721
92507266001	**UP-1-11920**	EPA 8260D	582018		
92507266002	**Trip Blank**	EPA 8260D	581992		
92507266001	**UP-1-11920**	EPA 9034	208581		
92507266001	**UP-1-11920**	EPA 9012B	581760	EPA 9012B	582092

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A	Section B	Section C
Required Client Information:	Required Project Information:	Invoice Information:
Company: Newfields	Report To: Nick DiLuzio	Attention:
Address: 1349 West Peachtree Street	Copy To:	Company Name:
Atlanta, GA 30309		Address:
Email: ndiluzio@newfields.com	Purchase Order #:	Pace Quote:
Phone: (404)969-0731 Fax:	Project Name: Colonels Island (App. IX)	Pace Project Manager: maiya.parks@pacelabs.com,
Requested Due Date:	Project #:	Pace Profile #: 11955.1

Regulatory Agency:

State / Location: GA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample IDs must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	App IX VOC 8260	App IX SVOC 8270	App IX Cyanide	App IX EDB/DBCP 8011	App IX Herbicides 8151	App IX Pest/PCB 8081/8082	App IX Sulfide	App IX Dioxin/Furans 8290	App IX Metals + Hg	Residual Chlorine (Y/N)
1	UP-1-111920	SL	C	11/19	0830				19	X		X	X	X					X	X	X	X	X	X	X	X	X	
2	Trip Blank	SL	C	11/19	—				2										X									
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

MATRIX CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS

WO#: 92507266

92507266

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		11/19	15:40	Pace	11/19/20	1540	2.5	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick DiLuzio

SIGNATURE of SAMPLER: [signature]

DATE Signed: 11/19/20

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☑ Kernersville ☐

Sample Condition Upon Receipt

Client Name: Newfields

Project #:

WO#: 92507266

PM: MP **Due Date: 12/02/20**

CLIENT: GA-Neufields

Courier: ☐ Commercial ☐ Fed Ex ☐ Pace ☐ UPS ☐ USPS ☐ Other:____ ☐ Client

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: CO 11/19/20

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☑ No ☐ N/A

Thermometer: ☐ IR Gun ID: 230

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 2.5 **Correction Factor:** Add/Subtract (°C) +0

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.5

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

					Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.	
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.	
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.	
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.	
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.	
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.	
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A		
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.	
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.	
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: WT					
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.	
Trip Blank Present?	☑ Yes	☐ No	☑ N/A	11.	
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** _____

Project Manager SRF Review: _____ **Date:** _____

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Client - Charlotte
PACE Charlotte
9800 Kincey Ave.
Suite 100
Huntersville NC 28078

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

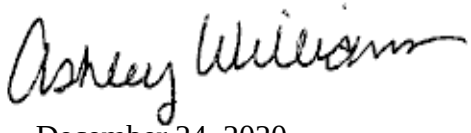
Pace Project #: 10540130
Sample Receipt Date: 11/21/2020
Client Project #: 92507266
Client Sub PO #: N/A
State Cert #: N/A

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 3 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Ashley Williams, your Pace Project Manager.

This report has been reviewed by:



December 24, 2020

Ashley Williams, Project Manager
(612) 346-8158
(612) 607-6444 (fax)
ashley.williams@pacelabs.com

Report Prepared Date:
December 23, 2020

Report of Laboratory Analysis

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
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DISCUSSION

This report presents the results from the analysis performed on one sample submitted by a representative of Pace Analytical Services, LLC. The sample was analyzed for the presence or absence of Appendix IX List polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The estimated detection limits (EDLs) were based on signal-to-noise measurements.

The isotopically-labeled PCDD/PCDF internal standards in the sample extract were recovered at 48-67%. All of the labeled internal standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show that the target PCDDs and PCDFs were not detected.

Laboratory spike samples were also prepared using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 85-126% with relative percent differences of 1.0-17.2%. These results were within the target ranges for the method. Matrix spikes were not prepared with the sample batch.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Mississippi	MN00064
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio - VAP	CL101
Georgia	959	Ohio-DW	41244
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon- rimary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Massachusetts-	via MN 027-053	West Virginia-D	382
Michigan	9909	West Virginia-D	9952C
Minnesota	027-053-137	Wisconsin	999407970
Minnesota-Ag	via MN 027-053	Wyoming-UST	via A2LA 2926.
Minnesota-Petr	1240		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Reporting Flags

A = Reporting Limit based on signal to noise (EDL)

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interferencepresent

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDEInterference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = SeeDiscussion

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Sample ID Cross Reference

Client Sample ID	Pace Sample ID	Date Received	Sample Type
UP-1-11920	92507266001	11/21/2020	Water

REPORT OF LABORATORY ANALYSIS

Internal Transfer Chain of Custody

☐ Samples Pre-Logged into eCOC.

Workorder: 92507266 **Workorder Name:** Colonels Island (App IX)

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 11/19/2020 **Results Requested By:** 12/2/202

Pace An
www.pa

Report To

Maiya Parks
Pace Analytical Atlanta
110 Technology Parkway
Peachtree Corners, GA 30092
Phone (770)734-4200

Subcontract To

Pace Analytical Minnesota
1700 Elm Street SE
Suite 200
Minneapolis, MN 55414
Phone (612)607-1700

Requested Analysis

WO# : 10540130

10540130

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	8290 Dioxins/Furans	LAB USE ONLY
1	UP-1-11920	PS	11/19/2020 08:30	92507266001	Water	1	X	001
2								
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	ME / PACE	11/20/20 1635	TJ - Pace	1000
2				
3				

Comments

Cooler Temperature on Receipt 2.3 °C | **Custody Seal** Y or (N) | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) - MN**	Document Revised: 12Aug2020 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0150 Rev.01**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: Pace Analytical Atlanta

Project #: **WO#: 10540130**

PM: AW1 Due Date: 12/09/20

CLIENT: PASI-CHRLT

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: 1657 9511 4616 See Exceptions ☐ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☒ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other:_____ **Temp Blank?** ☐ Yes ☒ No

Thermometer: ☐ T1(0461) ☐ T2(1336) ☒ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No **Were All Container Temps Taken?** ☒ Yes ☐ No ☐ N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:**_____ °C **Average Corrected Temp (no temp blank only):** 3.7 °C ☒ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

Correction Factor: True **Cooler Temp Corrected w/temp blank:**_____ °C

USDA Regulated Soil: (☒ N/A, water sample/Other:_____) **Date/Initials of Person Examining Contents:** TJ 11-21-20

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☐ No	☒ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other_____
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☒ Yes ☒ Yes	☐ No ☐ No		8.
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other_____	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐ ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☒ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐ ENV-FRM-MIN4-0142
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☒ N/A	13. **See Exception** ☐ ENV-FRM-MIN4-0140
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased):_____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted:_____ Date/Time:_____

Comments/Resolution:_____

Project Manager Review: Ashley Williams **Date:** 11/23/2020

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: TJ

SCUR Exceptions:

Workorder #:

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank		
Read Temp	Corrected Temp	Average Temp
3.8	True	3.3
2.8	True	

Tracking Number/Temperature	

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Comments:

Appendix B

Sample Analysis Summary

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - PACE Charlotte

Client's Sample ID	UP-1-11920		
Lab Sample ID	92507266001		
Filename	U201220B_10		
Injected By	BAL		
Total Amount Extracted	1030 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	11/19/2020 08:30
ICAL ID	U201013	Received	11/21/2020 10:00
CCal Filename(s)	U201220A_18 & U201220B_18	Extracted	12/16/2020 12:59
Method Blank ID	BLANK-85018	Analyzed	12/20/2020 19:18

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.2	2,3,7,8-TCDF-13C	2.00	56
Total TCDF	ND	-----	1.2	2,3,7,8-TCDD-13C	2.00	57
				1,2,3,7,8-PeCDF-13C	2.00	62
2,3,7,8-TCDD	ND	-----	2.2	2,3,4,7,8-PeCDF-13C	2.00	61
Total TCDD	ND	-----	2.2	1,2,3,7,8-PeCDD-13C	2.00	67
				1,2,3,4,7,8-HxCDF-13C	2.00	48
1,2,3,7,8-PeCDF	ND	-----	1.9	1,2,3,6,7,8-HxCDF-13C	2.00	60
2,3,4,7,8-PeCDF	ND	-----	1.6	2,3,4,6,7,8-HxCDF-13C	2.00	53
Total PeCDF	ND	-----	1.6	1,2,3,7,8,9-HxCDF-13C	2.00	55
				1,2,3,4,7,8-HxCDD-13C	2.00	51
1,2,3,7,8-PeCDD	ND	-----	2.9	1,2,3,6,7,8-HxCDD-13C	2.00	57
Total PeCDD	ND	-----	2.9			
				1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	0.66	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	0.71			
2,3,4,6,7,8-HxCDF	ND	-----	1.2	2,3,7,8-TCDD-37Cl4	0.20	82
1,2,3,7,8,9-HxCDF	ND	-----	1.3			
Total HxCDF	ND	-----	0.66			
1,2,3,4,7,8-HxCDD	ND	-----	0.52			
1,2,3,6,7,8-HxCDD	ND	-----	0.89			
1,2,3,7,8,9-HxCDD	ND	-----	1.0			
Total HxCDD	ND	-----	0.52			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value

REPORT OF LABORATORY ANALYSIS

Appendix C

QC and Calibration Results Summary

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample Name	DFBLKVY		
Lab Sample ID	BLANK-85018	Matrix	Water
Filename	U201219A_14	Dilution	NA
Total Amount Extracted	1020 mL	Extracted	12/16/2020 12:59
ICAL ID	U201013	Analyzed	12/19/2020 21:06
CCal Filename(s)	U201219A_01 & U201219A_19	Injected By	JRH

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.5	2,3,7,8-TCDF-13C	2.00	57
Total TCDF	ND	-----	1.5	2,3,7,8-TCDD-13C	2.00	61
				1,2,3,7,8-PeCDF-13C	2.00	66
2,3,7,8-TCDD	ND	-----	4.0	2,3,4,7,8-PeCDF-13C	2.00	67
Total TCDD	ND	-----	4.0	1,2,3,7,8-PeCDD-13C	2.00	74
				1,2,3,4,7,8-HxCDF-13C	2.00	50
1,2,3,7,8-PeCDF	ND	-----	2.2	1,2,3,6,7,8-HxCDF-13C	2.00	64
2,3,4,7,8-PeCDF	ND	-----	1.9	2,3,4,6,7,8-HxCDF-13C	2.00	56
Total PeCDF	ND	-----	1.9	1,2,3,7,8,9-HxCDF-13C	2.00	63
				1,2,3,4,7,8-HxCDD-13C	2.00	56
1,2,3,7,8-PeCDD	ND	-----	3.9	1,2,3,6,7,8-HxCDD-13C	2.00	61
Total PeCDD	ND	-----	3.9			
				1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	1.8	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	1.4			
2,3,4,6,7,8-HxCDF	ND	-----	1.4	2,3,7,8-TCDD-37Cl4	0.20	71
1,2,3,7,8,9-HxCDF	ND	-----	1.8			
Total HxCDF	ND	-----	1.4			
1,2,3,4,7,8-HxCDD	ND	-----	1.5			
1,2,3,6,7,8-HxCDD	ND	-----	1.7			
1,2,3,7,8,9-HxCDD	ND	-----	1.8			
Total HxCDD	ND	-----	1.5			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-85019		
Filename	U201220B_03	Matrix	Water
Total Amount Extracted	1020 mL	Dilution	NA
ICAL ID	U201013	Extracted	12/16/2020 12:59
CCal Filename(s)	U201220A_18 & U201220B_18	Analyzed	12/20/2020 14:38
Method Blank ID	BLANK-85018	Injected By	JRH

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.20	102	2,3,7,8-TCDF-13C	2.0	53
Total TCDF				2,3,7,8-TCDD-13C	2.0	58
				1,2,3,7,8-PeCDF-13C	2.0	70
2,3,7,8-TCDD	0.20	0.20	98	2,3,4,7,8-PeCDF-13C	2.0	68
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	78
				1,2,3,4,7,8-HxCDF-13C	2.0	59
1,2,3,7,8-PeCDF	1.0	0.99	99	1,2,3,6,7,8-HxCDF-13C	2.0	67
2,3,4,7,8-PeCDF	1.0	0.96	96	2,3,4,6,7,8-HxCDF-13C	2.0	61
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	63
				1,2,3,4,7,8-HxCDD-13C	2.0	63
1,2,3,7,8-PeCDD	1.0	0.85	85	1,2,3,6,7,8-HxCDD-13C	2.0	66
Total PeCDD						
				1,2,3,4-TCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDF	1.0	1.1	108	1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,6,7,8-HxCDF	1.0	1.0	104			
2,3,4,6,7,8-HxCDF	1.0	1.1	105	2,3,7,8-TCDD-37Cl4	0.20	76
1,2,3,7,8,9-HxCDF	1.0	1.0	100			
Total HxCDF						
1,2,3,4,7,8-HxCDD	1.0	1.1	110			
1,2,3,6,7,8-HxCDD	1.0	1.1	110			
1,2,3,7,8,9-HxCDD	1.0	1.1	108			
Total HxCDD						

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-85020		
Filename	U201219A_07	Matrix	Water
Total Amount Extracted	1020 mL	Dilution	NA
ICAL ID	U201013	Extracted	12/16/2020 12:59
CCal Filename(s)	U201219A_01 & U201219A_19	Analyzed	12/19/2020 16:26
Method Blank ID	BLANK-85018	Injected By	JRH

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.21	107	2,3,7,8-TCDF-13C	2.0	56
Total TCDF				2,3,7,8-TCDD-13C	2.0	59
				1,2,3,7,8-PeCDF-13C	2.0	65
2,3,7,8-TCDD	0.20	0.23	115	2,3,4,7,8-PeCDF-13C	2.0	65
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	74
				1,2,3,4,7,8-HxCDF-13C	2.0	54
1,2,3,7,8-PeCDF	1.0	1.1	108	1,2,3,6,7,8-HxCDF-13C	2.0	60
2,3,4,7,8-PeCDF	1.0	1.1	106	2,3,4,6,7,8-HxCDF-13C	2.0	55
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	60
				1,2,3,4,7,8-HxCDD-13C	2.0	56
1,2,3,7,8-PeCDD	1.0	1.0	101	1,2,3,6,7,8-HxCDD-13C	2.0	56
Total PeCDD						
				1,2,3,4-TCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDF	1.0	1.2	115	1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,6,7,8-HxCDF	1.0	1.1	105			
2,3,4,6,7,8-HxCDF	1.0	1.1	111	2,3,7,8-TCDD-37Cl4	0.20	73
1,2,3,7,8,9-HxCDF	1.0	1.0	104			
Total HxCDF						
1,2,3,4,7,8-HxCDD	1.0	1.0	103			
1,2,3,6,7,8-HxCDD	1.0	1.3	126			
1,2,3,7,8,9-HxCDD	1.0	1.2	120			
Total HxCDD						

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client	PACE Charlotte		
Spike 1 ID	LCS-85019	Spike 2 ID	LCSD-85020
Spike 1 Filename	U201220B_03	Spike 2 Filename	U201219A_07

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	102	107	4.8
2,3,7,8-TCDD	98	115	16.0
1,2,3,7,8-PeCDF	99	108	8.7
2,3,4,7,8-PeCDF	96	106	9.9
1,2,3,7,8-PeCDD	85	101	17.2
1,2,3,4,7,8-HxCDF	108	115	6.3
1,2,3,6,7,8-HxCDF	104	105	1.0
2,3,4,6,7,8-HxCDF	105	111	5.6
1,2,3,7,8,9-HxCDF	100	104	3.9
1,2,3,4,7,8-HxCDD	110	103	6.6
1,2,3,6,7,8-HxCDD	110	126	13.6
1,2,3,7,8,9-HxCDD	108	120	10.5

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

Method 1613B
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	**U201013**	Data Files:		Time	Injected
Calibration Date	10/13/2020	CS-1	U201013A_06	08:49	SMT
Instrument	10MSHR06 (U)	CS-2	U201013A_05	08:09	SMT
Column Phase	DB-5MS 0.25mm	CS-3	U201013A_04	07:12	SMT
Column ID No.	US0177521H	CS-4	U201013A_08	10:27	SMT
		CS-5	U201013A_07	09:48	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	0.9206	0.9348	0.9031	0.9065	0.9127	0.9155	1.38
2,3,7,8-TCDD	1.1383	1.0774	1.1560	1.0653	1.0811	1.1036	3.68
1,2,3,7,8-PeCDF	0.8077	0.8539	0.8128	0.8417	0.8550	0.8342	2.71
2,3,4,7,8-PeCDF	0.8736	0.8992	0.9194	0.9378	0.9520	0.9164	3.39
1,2,3,7,8-PeCDD	0.9816	0.9431	0.9364	0.9465	0.9696	0.9555	2.01
1,2,3,4,7,8-HxCDF	0.9791	0.9882	0.9902	1.0395	1.0497	1.0093	3.24
1,2,3,6,7,8-HxCDF	1.0139	1.0084	0.9847	0.9900	0.9866	0.9967	1.35
2,3,4,6,7,8-HxCDF	1.0025	1.0421	1.0537	1.0544	1.0519	1.0409	2.12
1,2,3,7,8,9-HxCDF	0.9618	0.9820	0.9405	0.9944	0.9635	0.9684	2.14
1,2,3,4,7,8-HxCDD	0.8972	1.0335	1.0031	0.9277	1.0112	0.9745	6.03
1,2,3,6,7,8-HxCDD	1.0307	0.9495	0.9485	1.0340	0.9630	0.9851	4.42
1,2,3,7,8,9-HxCDD	0.9547	1.0004	0.9964	0.9818	0.9806	0.9828	1.83
Total TCDF	0.9206	0.9348	0.9031	0.9065	0.9127	0.9155	1.38
Total TCDD	1.1383	1.0774	1.1560	1.0653	1.0811	1.1036	3.68
Total PeCDF	0.8406	0.8765	0.8661	0.8897	0.9035	0.8753	2.74
Total PeCDD	0.9816	0.9431	0.9364	0.9465	0.9696	0.9555	2.01
Total HxCDF	0.9893	1.0052	0.9923	1.0196	1.0129	1.0038	1.30
Total HxCDD	0.9609	0.9945	0.9827	0.9812	0.9849	0.9808	1.25
2,3,7,8-TCDF-13C	1.4330	1.4216	1.4351	1.4268	1.4776	1.4388	1.55
2,3,7,8-TCDD-13C	1.0320	1.0278	1.0146	1.0360	1.1006	1.0422	3.23
2,3,7,8-TCDD-37Cl4	0.9244	1.1001	0.9811	1.0543	1.1621	1.0444	9.02
1,2,3,7,8-PeCDF-13C	0.9384	0.9068	1.0274	0.9583	1.0799	0.9821	7.16
2,3,4,7,8-PeCDF-13C	0.9286	0.9055	0.9427	0.9719	1.1143	0.9726	8.51
1,2,3,7,8-PeCDD-13C	0.6483	0.6279	0.6784	0.6785	0.7939	0.6854	9.38
1,2,3,4,7,8-HxCDF-13C	1.0362	0.9809	0.9994	0.9960	0.9784	0.9982	2.32
1,2,3,6,7,8-HxCDF-13C	1.2087	1.1715	1.1718	1.2308	1.2391	1.2044	2.65
2,3,4,6,7,8-HxCDF-13C	1.1125	1.0489	1.0107	1.0716	1.0601	1.0608	3.48
1,2,3,7,8,9-HxCDF-13C	0.8786	0.8972	0.8664	0.8820	0.9121	0.8873	2.00
1,2,3,4,7,8-HxCDD-13C	0.8889	0.8373	0.8615	0.8604	0.8489	0.8594	2.24
1,2,3,6,7,8-HxCDD-13C	1.0533	0.9977	1.0073	1.0172	1.0729	1.0297	3.11

REPORT OF LABORATORY ANALYSIS

Method 1613B
Initial Calibration (ICAL) - Isotope Ratio Summary

ICAL ID	**U201013**	Data Files:		Time	Injected
Calibration Date	10/13/2020	CS-1	U201013A_06	08:49	SMT
Instrument	10MSHR06 (U)	CS-2	U201013A_05	08:09	SMT
Column Phase	DB-5MS 0.25mm	CS-3	U201013A_04	07:12	SMT
Column ID No.	US0177521H	CS-4	U201013A_08	10:27	SMT
		CS-5	U201013A_07	09:48	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.77	0.82	0.74	0.75	0.77	0.65 - 0.89
2,3,7,8-TCDD	0.89	0.77	0.81	0.76	0.78	0.65 - 0.89
1,2,3,7,8-PeCDF	1.56	1.53	1.52	1.51	1.51	1.32 - 1.78
2,3,4,7,8-PeCDF	1.46	1.46	1.51	1.52	1.49	1.32 - 1.78
1,2,3,7,8-PeCDD	0.66	0.63	0.63	0.60	0.61	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.17	1.19	1.19	1.24	1.23	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.23	1.24	1.22	1.25	1.21	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.22	1.19	1.22	1.23	1.20	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.14	1.24	1.28	1.20	1.20	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.25	1.23	1.24	1.22	1.23	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.26	1.19	1.24	1.23	1.22	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.15	1.24	1.24	1.24	1.26	1.05 - 1.43
1,2,3,4-TCDD-13C	0.81	0.78	0.78	0.80	0.79	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.30	1.29	1.26	1.27	1.23	1.05 - 1.43
2,3,7,8-TCDF-13C	0.79	0.79	0.81	0.76	0.77	0.65 - 0.89
2,3,7,8-TCDD-13C	0.79	0.80	0.82	0.78	0.80	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.60	1.55	1.58	1.57	1.54	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.52	1.55	1.60	1.54	1.56	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.61	1.58	1.59	1.59	1.59	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.51	0.51	0.51	0.52	0.51	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.51	0.51	0.51	0.53	0.52	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.52	0.51	0.54	0.51	0.51	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.52	0.50	0.51	0.52	0.53	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.25	1.25	1.29	1.25	1.23	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.27	1.27	1.24	1.25	1.24	1.05 - 1.43

REPORT OF LABORATORY ANALYSIS

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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U201219A_01	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-20-123-028	GC Column ID	US0177521H
Analyzed	12/19/2020 12:20	ICAL ID	U201013

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	8.5	0.78	0.9155	0.7767	-15.2
2,3,7,8-TCDD	10	10.3	0.78	1.1036	1.1351	2.9
1,2,3,7,8-PeCDF	50	46.3	1.48	0.8342	0.7726	-7.4
2,3,4,7,8-PeCDF	50	48.6	1.49	0.9164	0.8905	-2.8
1,2,3,7,8-PeCDD	50	44.9	0.59	0.9555	0.8576	-10.2
1,2,3,4,7,8-HxCDF	50	49.1	1.19	1.0093	0.9917	-1.7
1,2,3,6,7,8-HxCDF	50	49.8	1.18	0.9967	0.9929	-0.4
2,3,4,6,7,8-HxCDF	50	48.8	1.19	1.0409	1.0150	-2.5
1,2,3,7,8,9-HxCDF	50	46.8	1.17	0.9684	0.9056	-6.5
1,2,3,4,7,8-HxCDD	50	47.1	1.25	0.9745	0.9185	-5.8
1,2,3,6,7,8-HxCDD	50	46.2	1.22	0.9851	0.9112	-7.5
1,2,3,7,8,9-HxCDD	50	50.4	1.23	0.9828	0.9900	0.7
2,3,7,8-TCDF-13C	100	92.8	0.78	1.4388	1.3350	-7.2
2,3,7,8-TCDD-13C	100	102.5	0.77	1.0422	1.0678	2.5
2,3,7,8-TCDD-37Cl4	10	9.1	0.00	1.0444	0.9501	-9.0
1,2,3,7,8-PeCDF-13C	100	101.6	1.54	0.9821	0.9982	1.6
2,3,4,7,8-PeCDF-13C	100	97.0	1.55	0.9726	0.9431	-3.0
1,2,3,7,8-PeCDD-13C	100	106.3	1.55	0.6854	0.7285	6.3
1,2,3,4,7,8-HxCDF-13C	100	81.9	0.51	0.9982	0.8178	-18.1
1,2,3,6,7,8-HxCDF-13C	100	94.9	0.52	1.2044	1.0302	-14.5
2,3,4,6,7,8-HxCDF-13C	200	194.4	0.51	1.0608	0.8841	-16.7
1,2,3,7,8,9-HxCDF-13C	150	143.7	0.50	0.8873	0.8258	-6.9
1,2,3,4,7,8-HxCDD-13C	100	91.6	1.28	0.8594	0.7425	-13.6
1,2,3,6,7,8-HxCDD-13C	100	95.3	1.24	1.0297	0.9817	-4.7
1,2,3,4-TCDD-13C	100	NA	0.77	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.28	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U201219A_19	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-20-123-028	GC Column ID	US0177521H
Analyzed	12/20/2020 00:26	ICAL ID	U201013

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	9.2	0.76	0.9155	0.8422	-8.0
2,3,7,8-TCDD	10	11.6	0.85	1.1036	1.2794	15.9
1,2,3,7,8-PeCDF	50	48.2	1.45	0.8342	0.8047	-3.5
2,3,4,7,8-PeCDF	50	46.7	1.53	0.9164	0.8550	-6.7
1,2,3,7,8-PeCDD	50	45.6	0.62	0.9555	0.8712	-8.8
1,2,3,4,7,8-HxCDF	50	48.7	1.25	1.0093	0.9823	-2.7
1,2,3,6,7,8-HxCDF	50	46.1	1.25	0.9967	0.9187	-7.8
2,3,4,6,7,8-HxCDF	50	47.5	1.21	1.0409	0.9882	-5.1
1,2,3,7,8,9-HxCDF	50	47.8	1.16	0.9684	0.9258	-4.4
1,2,3,4,7,8-HxCDD	50	43.8	1.19	0.9745	0.8537	-12.4
1,2,3,6,7,8-HxCDD	50	49.5	1.22	0.9851	0.9760	-0.9
1,2,3,7,8,9-HxCDD	50	48.3	1.19	0.9828	0.9498	-3.4
2,3,7,8-TCDF-13C	100	84.1	0.76	1.4388	1.2107	-15.9
2,3,7,8-TCDD-13C	100	95.6	0.80	1.0422	0.9963	-4.4
2,3,7,8-TCDD-37Cl4	10	8.8	0.00	1.0444	0.9175	-12.2
1,2,3,7,8-PeCDF-13C	100	91.9	1.56	0.9821	0.9022	-8.1
2,3,4,7,8-PeCDF-13C	100	91.3	1.55	0.9726	0.8878	-8.7
1,2,3,7,8-PeCDD-13C	100	98.9	1.52	0.6854	0.6781	-1.1
1,2,3,4,7,8-HxCDF-13C	100	90.5	0.52	0.9982	0.9031	-9.5
1,2,3,6,7,8-HxCDF-13C	100	94.9	0.52	1.2044	1.1765	-2.3
2,3,4,6,7,8-HxCDF-13C	200	190.0	0.48	1.0608	0.9761	-8.0
1,2,3,7,8,9-HxCDF-13C	150	141.7	0.50	0.8873	0.8343	-6.0
1,2,3,4,7,8-HxCDD-13C	100	92.4	1.34	0.8594	0.8232	-4.2
1,2,3,6,7,8-HxCDD-13C	100	100.7	1.13	1.0297	1.0373	0.7
1,2,3,4-TCDD-13C	100	NA	0.79	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.21	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U201220A_18	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-20-123-028	GC Column ID	US0177521H
Analyzed	12/20/2020 12:28	ICAL ID	U201013

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	8.9	0.70	0.9155	0.8149	-11.0
2,3,7,8-TCDD	10	10.5	0.79	1.1036	1.1635	5.4
1,2,3,7,8-PeCDF	50	46.6	1.55	0.8342	0.7771	-6.8
2,3,4,7,8-PeCDF	50	47.2	1.53	0.9164	0.8649	-5.6
1,2,3,7,8-PeCDD	50	45.0	0.62	0.9555	0.8593	-10.1
1,2,3,4,7,8-HxCDF	50	50.2	1.20	1.0093	1.0135	0.4
1,2,3,6,7,8-HxCDF	50	47.5	1.23	0.9967	0.9471	-5.0
2,3,4,6,7,8-HxCDF	50	48.0	1.22	1.0409	0.9991	-4.0
1,2,3,7,8,9-HxCDF	50	46.9	1.24	0.9684	0.9077	-6.3
1,2,3,4,7,8-HxCDD	50	47.6	1.25	0.9745	0.9273	-4.8
1,2,3,6,7,8-HxCDD	50	48.2	1.27	0.9851	0.9490	-3.7
1,2,3,7,8,9-HxCDD	50	49.5	1.30	0.9828	0.9721	-1.1
2,3,7,8-TCDF-13C	100	88.4	0.81	1.4388	1.2720	-11.6
2,3,7,8-TCDD-13C	100	101.2	0.76	1.0422	1.0545	1.2
2,3,7,8-TCDD-37Cl4	10	9.0	0.00	1.0444	0.9390	-10.1
1,2,3,7,8-PeCDF-13C	100	97.7	1.51	0.9821	0.9592	-2.3
2,3,4,7,8-PeCDF-13C	100	94.3	1.55	0.9726	0.9174	-5.7
1,2,3,7,8-PeCDD-13C	100	103.2	1.51	0.6854	0.7071	3.2
1,2,3,4,7,8-HxCDF-13C	100	94.2	0.52	0.9982	0.9406	-5.8
1,2,3,6,7,8-HxCDF-13C	100	93.8	0.47	1.2044	1.2030	-0.1
2,3,4,6,7,8-HxCDF-13C	200	192.6	0.50	1.0608	0.9831	-7.3
1,2,3,7,8,9-HxCDF-13C	150	145.2	0.51	0.8873	0.8284	-6.6
1,2,3,4,7,8-HxCDD-13C	100	92.2	1.27	0.8594	0.7925	-7.8
1,2,3,6,7,8-HxCDD-13C	100	104.1	1.22	1.0297	1.0720	4.1
1,2,3,4-TCDD-13C	100	NA	0.75	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.18	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U201220B_18	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-20-123-028	GC Column ID	US0177521H
Analyzed	12/21/2020 00:39	ICAL ID	U201013

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	9.2	0.74	0.9155	0.8428	-7.9
2,3,7,8-TCDD	10	9.9	0.82	1.1036	1.0899	-1.2
1,2,3,7,8-PeCDF	50	47.8	1.54	0.8342	0.7980	-4.3
2,3,4,7,8-PeCDF	50	45.3	1.45	0.9164	0.8301	-9.4
1,2,3,7,8-PeCDD	50	44.1	0.62	0.9555	0.8425	-11.8
1,2,3,4,7,8-HxCDF	50	48.0	1.23	1.0093	0.9680	-4.1
1,2,3,6,7,8-HxCDF	50	46.5	1.23	0.9967	0.9264	-7.0
2,3,4,6,7,8-HxCDF	50	50.1	1.17	1.0409	1.0434	0.2
1,2,3,7,8,9-HxCDF	50	46.5	1.21	0.9684	0.9005	-7.0
1,2,3,4,7,8-HxCDD	50	50.1	1.16	0.9745	0.9772	0.3
1,2,3,6,7,8-HxCDD	50	45.5	1.22	0.9851	0.8968	-9.0
1,2,3,7,8,9-HxCDD	50	48.8	1.19	0.9828	0.9591	-2.4
2,3,7,8-TCDF-13C	100	89.6	0.80	1.4388	1.2885	-10.4
2,3,7,8-TCDD-13C	100	100.4	0.77	1.0422	1.0463	0.4
2,3,7,8-TCDD-37Cl4	10	9.3	0.00	1.0444	0.9763	-6.5
1,2,3,7,8-PeCDF-13C	100	95.6	1.52	0.9821	0.9390	-4.4
2,3,4,7,8-PeCDF-13C	100	93.8	1.53	0.9726	0.9125	-6.2
1,2,3,7,8-PeCDD-13C	100	99.1	1.58	0.6854	0.6795	-0.9
1,2,3,4,7,8-HxCDF-13C	100	99.1	0.51	0.9982	0.9889	-0.9
1,2,3,6,7,8-HxCDF-13C	100	93.1	0.48	1.2044	1.2095	0.4
2,3,4,6,7,8-HxCDF-13C	200	191.0	0.54	1.0608	1.0013	-5.6
1,2,3,7,8,9-HxCDF-13C	150	144.4	0.52	0.8873	0.8253	-7.0
1,2,3,4,7,8-HxCDD-13C	100	91.8	1.26	0.8594	0.8605	0.1
1,2,3,6,7,8-HxCDD-13C	100	101.1	1.23	1.0297	1.0405	1.1
1,2,3,4-TCDD-13C	100	NA	0.76	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.21	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

Attachment I

Financial Assurance Documentation

BMO Harris Bank

BMO Harris Bank N.A.

STANDBY/LETTERS OF CREDIT
C/O Bank of Montreal
234 Simcoe Street, 3rd Floor
Toronto, Ontario M5T 1T4
Tel: 1-877-801-0414
Fax: 1-877-801-7787
SWIFT: HATRUS44

DOCUMENTARY COLLECTIONS
C/O Bank of Montreal
800 DE LA GAUCHETIERE OUEST SUITE 5600
MONTREAL, QUEBEC H5A 1K8
Tel: 1-888-258-6378
Fax 1-888-258-6380
SWIFT: HATRUS44

Irrevocable
Standby Letter of Credit No.: HACH535541OS

DATE ISSUED: AUGUST 16, 2017

BENEFICIARY:
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
LAND PROTECTION BRANCH
2 MARTIN LUTHER KING JR. DRIVE, SUITE 1456 EAST
ATLANTA, GA 30334, USA
ATTN: RICHARD E. DUNN

APPLICANT:
BLUE JAY ENVIRONMENTAL, INC.
161 BAY STREET, SUITE 4240
TORONTO, ONTARIO, CANADA M5J 2S1

AMOUNT: THREE HUNDRED FIFTY NINE THOUSAND AND 00/100'S UNITED STATES DOLLARS (USD359,000.00)

EXPIRY DATE: AUGUST 16, 2018

WE HEREBY ESTABLISH OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO. HACH535541OS IN YOUR FAVOR, AT THE REQUEST AND FOR THE ACCOUNT OF BLUE JAY ENVIRONMENTAL INC., 161 BAY STREET, SUITE 4240, TORONTO, ONTARIO CANADA M5J 2S1, UP TO THE AGGREGATE AMOUNT OF THREE HUNDRED FIFTY NINE THOUSAND AND 00/100 UNITED STATES DOLLARS (USD359,000.00), AVAILABLE UPON PRESENTATION OF:

(1) YOUR SIGHT DRAFT, BEARING REFERENCE TO THIS LETTER OF CREDIT NO. HACH535541OS, AND

(2) YOUR SIGNED STATEMENT READING AS FOLLOWS: "I CERTIFY THAT THE AMOUNT OF THE DRAFT IS PAYABLE PURSUANT TO AUTHORITY OF THE GEORGIA HAZARDOUS WASTE MANAGEMENT ACT, O.C.G.A. 12-8-60, ET SEQ."

THIS LETTER OF CREDIT IS EFFECTIVE AS OF AUGUST 16, 2017 AND SHALL EXPIRE ON AUGUST 16, 2018, BUT SUCH EXPIRATION DATE SHALL BE AUTOMATICALLY EXTENDED FOR A PERIOD OF ONE YEAR ON AUGUST 16, 2018, AND ON EACH SUCCESSIVE EXPIRATION DATE UNLESS, AT LEAST 120 DAYS BEFORE THE CURRENT EXPIRATION DATE, WE NOTIFY BOTH YOU AND THE APPLICANT BY CERTIFIED MAIL THAT WE HAVE DECIDED NOT TO EXTEND THIS LETTER OF CREDIT BEYOND THE CURRENT EXPIRATION DATE. IN THE EVENT YOU ARE SO NOTIFIED, ANY UNUSED PORTION OF THE CREDIT SHALL BE AVAILABLE UPON PRESENTATION OF YOUR SIGHT DRAFT FOR 120 DAYS AFTER THE

DATE OF RECEIPT OF SUCH NOTICE BY BOTH YOU AND THE APPLICANT, AS SHOWN ON THE SIGNED RETURN RECEIPT.

WHENEVER THIS LETTER OF CREDIT IS DRAWN ON UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS CREDIT, WE SHALL DULY HONOR SUCH DRAFT UPON PRESENTATION TO US, AND WE SHALL PAY THE AMOUNT OF THE DRAFT DIRECTLY INTO THE TRUST FUND OF THE APPLICANT IN ACCORDANCE WITH YOUR INSTRUCTIONS.

WE CERTIFY THAT THE WORDING OF THIS LETTER OF CREDIT SATISFIES THE REQUIREMENTS OF PARAGRAPH 391-3-11-.05 OF THE RULES OF THE GEORGIA DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL PROTECTION DIVISION AS SUCH REGULATIONS WERE CONSTITUTED ON THE DATE SHOWN IMMEDIATELY BELOW.

EXCEPT AS OTHERWISE EXPRESSLY STATED HEREIN, THIS LETTER OF CREDIT IS SUBJECT TO THE UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS, (2007 REVISION) THE INTERNATIONAL CHAMBER OF COMMERCE PUBLICATION NO. 600

SIGNING OFFICER

AUTHORIZED SIGNING OFFICER

BMO Harris Bank

June 18, 2021

Blue Jay Environmental, Inc.
161 Bay Street, Suite 4240
Toronto, Ontario, Canada M5J 2S1
Attn: Matt Chapman

Dear Matt,

REF: LETTER OF CREDIT NUMBER HACH535541OS

This letter is to confirm that the Letter of Credit issued for the account of BLUE JAY ENVIRONMENTAL, INC., in favor of GEORGIA DEPARTMENT OF NATURAL RESOURCES ENVIRONMENTAL PROTECTION DIVISION LAND PROTECTION BRANCH issued on August 16, 2017 was extended for a period of one year on August 16, 2018, August 16, 2019, August 16, 2020. The current expiry date is August 16, 2021.

Sincerely,

George Kappas
Director
Sponsor Fund Lending
BMO Harris Bank N.A. | BMO Financial Group

AGREEMENT TO AMEND STANDBY TRUST AGREEMENT
AND SUBSTITUTE
BLUE JAY ENVIRONMENTAL INC.,
AS GRANTOR

Agreement, the "Agreement," entered into as of July ___, 2017 by and between Blue Jay Environmental Inc., a Delaware Corporation, U.S. Bank National Association, a national banking association, the "Trustee", and Renessenz LLC, now known as Symrise Inc. to amend and modify the Trust Agreement between Renessenz LLC and Trustee;

Whereas, on September 16, 2014, Renessenz LLC, a Delaware Limited Liability Company entered into a Consent Decree with the United States of America on behalf of the United States Environmental Protection Agency ("EPA") and the State of Georgia on behalf of the Georgia Department of Natural Resources, Environmental Protection Division, ("EPD");

Whereas the Consent Decree was entered by the United States District Court for the Southern District of Georgia, Civil Action No. 2:14-cv-185, on March 9, 2015;

Whereas, under Paragraph 31 of the Consent Decree, Renessenz LLC was required to establish Financial Assurance in an amount sufficient to cover the costs of assessment, closure activities, and post-closure care as contemplated by the Consent Decree in a form consistent with Ga. Comp. R & Regs. R. 391—3-11-05;

Whereas, Renessenz LLC elected to establish a standby trust into which the proceeds from a letter of credit may be deposited to assure all or part of such financial responsibility for the facilities identified herein;

Whereas, on April 23, 2015, Renessenz LLC, entered into a Standby Trust Agreement with the Trustee to implement the requirements of Paragraph 31 of the Consent Decree (the "Trust Agreement");

Whereas, under the Trust Agreement, the term "Grantor" includes any successors or assigns of the Grantor;

Whereas, in September 2015, Renessenz LLC, assigned to its then Affiliate, Blue Jay Environmental Inc., and Blue Jay agreed to assume, the rights and obligations under the Consent Decree;

Whereas, the Parties agree that Blue Jay Environmental Inc., shall be considered hereafter as the "Grantor" for the purposes of the Trust Agreement, and the Parties agree that Blue Jay Environmental Inc. shall be substituted for and replace Renessenz LLC, for the purposes of the Trust Agreement and;

Whereas, Blue Jay has provided a Standby Letter of Credit, issued by BMO Harris Bank, #HACH535541OS, to be available to fund the Trust Agreement and replace the Letter of Credit, provided by Renessenz LLC, issued Wells Fargo Bank N.A., #IS0280244U.

NOW THEREFORE, the Parties agree that Blue Jay Environmental Inc., a Delaware Corporation, shall be substituted as the "Grantor," under the Trust Agreement with U.S. Bank National Association, a national banking association, (the "Trustee"), and Renessenz LLC, now known as Symrise Inc., will no longer have any of the benefits or obligations under the Trust Agreement.

Blue Jay Environmental Inc.

By:_____

Matthew Chapman
Chief Executive Officer

Address: 161 Bay Street, Suite 4240
Toronto, Ontario, Canada M5J 2S1

Renessenz LLC now known as Symrise, Inc.

By: _____

Address: 601 Crestwood Street
Jacksonville, FL 32208

Trustee: US Bank N.A.

By:

_____

Paul Henderson
Assistant Vice President
Global Corporate Trust Services

Address: 1349 W. Peachtree Street, NW
Suite 1050
Two Midtown Plaza
Atlanta, Georgia 30309

NOW THEREFORE, the Parties agree that Blue Jay Environmental Inc., a Delaware Corporation, shall be substituted as the "Grantor," under the Trust Agreement with U.S. Bank National Association, a national banking association, (the "Trustee"), and Renessenz LLC, now known as Symrise Inc., will no longer have any of the benefits or obligations under the Trust Agreement.

Blue Jay Environmental Inc.

By:_____

Matthew Chapman
Chief Executive Officer

Address: 161 Bay Street, Suite 4240
Toronto, Ontario, Canada M5J 2S1

Renessenz LLC now known as Symrise, Inc.

By: _____
PETER STEINHOFF, VP Finance

Address: 601 Crestwood Street
Jacksonville, FL 32208

Trustee: US Bank N.A.

By:

_____

Paul Henderson
Assistant Vice President
Global Corporate Trust Services

Address: 1349 W. Peachtree Street, NW
Suite 1050
Two Midtown Plaza
Atlanta, Georgia 30309

Trustee: U.S. Bank National Association
By: 

Paul Henderson
Assistant Vice President
Global Corporate Trust Services

Address: 1349 W. Peachtree Street, NW
Suite 1050
Two Midtown Plaza
Atlanta, Georgia 30309

Account Information:
Account Number assigned to this Trust Agreement: 258399000
Amount of Deposit into this standby Trust Agreement $ N/A
Type of mechanism(s) that will be deposited into this account if applicable:

Letter of Credit # HACH535541OS
Issue Date: July __, 2017
BMO Harris Bank N.A.
Bank/Branch location of the Trustee for this Trust Agreement.

Bank/Branch Name:	U.S. Bank National Association
Location Address:	1349 W. Peachtree Street, NW Suite 1050 Two Midtown Plaza
City and State:	Atlanta, Georgia 30309

Contact Person at Bank who will be responsible for information/questions regarding this standby trust agreement:

Name:	Paul L. Henderson
Title:	Assistant Vice President Global Corporate Trust Services
Phone Number:	404-965-7218 direct 404-365-7946 fax
Email:	Paul.Henderson1@usbank.com