SHIELD ENGINEERING, INC.

September 15, 2016

Via: E-Mail and Regular Mail

Mr. Craig Zeller, P.E.
Remedial Project Manager
Superfund Division
Environmental Protection Agency
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8909

Subject: **Monofill Cell Letter Report of Removal Assessment**
Wright Chemical Corporation, Superfund Site
Riegelwood, North Carolina
EPA ID No. NCD024766719
Shield Project No. 1100044-05

Dear Mr. Zeller:

On behalf of Oak Bark Corporation and Koch Sulfur Products LLC (Respondents), in accordance with the Administrative Settlement Agreement and Order on Consent (AOC) For Remedial Investigation/Feasibility Study (RI/FS), specifically Task 9 of the Statement of Work (SOW), the following letter report summarizes the field observations, laboratory test results, conclusions and recommendations concerning the Monofill Cell.

Purpose of Letter Report

The purpose of this Monofill Cell Letter Report is to assess the possible need for Removal Action at the North Carolina Department of Environmental Quality (NCDEQ) permitted area known as the "Monofill Cell" located at the Wright Chemical Site (see Figure 1). On behalf of the Respondents, Shield Engineering, Inc (Shield) performed the tasks as presented in the Monofill Assessment Work Plan (MAWP) dated September 24, 2014 and approved by an e-mail from U.S. Environmental Protection Agency (EPA) on December 11, 2015. These tasks are presented below in the same manner as they were labeled within the MAWP.

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EXECUTIVE SUMMARY

An evaluation of the Monofill Cell was conducted as follows:

- **The contents and volume of the monofill were determined.** The contents are a very soft sludge composed of material representative of the residuals from the ponds which were approved for placement in Monofill per the permit from the North Carolina Department of Environment and Natural Resources, now the NCDEQ. The estimated volume of sludge within the Monofill Cell is 13,340 cubic yards. The details are presented in this report.

- **The top liner was assessed.** It was found that this liner is damaged and deteriorated and needs to be replaced or covered, either of which would involve the installation of an appropriate cap. Procedures for the installation of a new cap are addressed in this report.

- **A limited evaluation of the leachate collection system was performed.** The leachate collection system appears to be capable of allowing retrieval of leachate from the Monofill Cell.

- **The Hypalon bottom liner was assessed.** Based on the samples tested, the Hypalon liner meets the original specifications. Based on water levels, as well as groundwater and leachate chemistry, the bottom liner appears to be functioning as intended.

- **The containment berms surrounding the Monofill Cell were evaluated.** Based on slope stability analyses, the structural integrity of the containment berms surrounding the monofill are in good condition and need only minor improvements. Some portions of the slopes will need re-grading to alleviate areas of steepness.

Based on the Monofill evaluation, we recommend that the Monofill Cell be properly closed in place. It is currently stable and does not require any immediate actions. However, additional slope stabilization is needed to provide a better long-term safety factor with respect to slope stability. A properly designed cap is also needed to complete the closure of the Monofill. Dewatering of the sludge should proceed in conjunction with fill material placement and the new cap. The final closure of the Monofill can be integrated into any other remedial actions approved for the site.

FIELD INVESTIGATIONS

The field investigations were designed to address the subparts of Task 9 of the SOW. A limited Health and Safety Plan was drafted for the Monofill Cell and included as Appendix B of the MAWP. Additionally, the Quality Assurance Project Plan (QAPP) for this work was included in Appendix H of the MAWP. At a later date, both of these two documents were superseded by the RI/FS Health and Safety Plan and the RI/FS QAPP.

The field work as presented within the MAWP and associated with addressing Subparts b) through f) of Task 9 of the SOW are described in the following paragraphs. Additionally the analyses proposed and conducted for the soil and water samples collected from the Monofill Cell and the area around this cell are shown on the attached Table 1.

Characterize the Contents of the Monofill Cell

The Monofill Cell was constructed in the early 1990s and the design drawings for the cell are included in Appendix D of the MAWP. The Monofill Cell consists of a containment berm at the western end and northeastern corner with a top width of about 12 feet at the western end, and is generally at grade along the southern to the southeast corner. Along the inside edge of the containment berm an approximately two-foot high perimeter berm was constructed around the Monofill Cell. This perimeter berm was covered with the top liner which was keyed along the outside toe of the perimeter berm.

On December 2 and 3, 2015, the ponded water lying on the top liner of the monofill cell was sampled as described within the MAWP (see Section 3.1). These samples were submitted to an analytical laboratory for analyses of the parameters shown in Table 1. The samples for formaldehyde analyses went out of hold time at the laboratory. Consequently, two additional samples were recollected from the ponded water above the top liner on December 22, 2015 and resubmitted to the analytical laboratory for analysis.

The collection of the samples from within the Monofill Cell required that samples be collected from the contents of the cell at three different locations in the cell. The approach to acquire these samples was generally followed as presented within the MAWP. The proposed three hand augered holes to be advanced within the Monofill Cell required that the top liner be cut at the approximate locations shown on Figure 2. The top liner was found to consist of a 20 mil thick high-density polyethylene (HDPE) material, rather than the Hypalon liner as indicated in the MAWP. After the sampling the cut HDPE liner material was repaired with HDPE liner material tape.

The borings (i.e., HAB-1, HAB-2 and HAB-3) were advanced within the Monofill Cell using a decontaminated hand-auger on December 2 and 3, 2015. The first and third borings (i.e., HAB-1 and HAB-3) were only able to advance to the proposed shallow depth range (i.e., 3- to 5-foot depth range below top liner). A temporary casing was used to retain an open borehole but, as this casing was advanced, the sludge would move up inside the casing, preventing the collection of any deeper samples.

The sludge in borings HAB-1 and HAB-3 was black, exhibited little to no strength and was largely liquid with little consistency. The sludge materials encountered in the middle boring (i.e., HAB-2) had greater consistency and, as a result, the boring was able to be advanced to the second proposed sample depth range below the top liner (i.e., 8- to 10-foot). The sludge at this middle location appeared to have less water and therefore a slightly greater consistency compared to the sludge encountered in the other two borings. This second boring did not fill in with sludge as rapidly as the other two borings. No stratification was identified within the

sludge encountered in borings HAB-1 and HAB-3. However, the sludge encountered in HAB-2 was initially black sandy silt, until light grey clayey silt was encountered at the 8-foot depth. Sludge samples were retrieved for analyses at both the analytical and the soil laboratories.

Monofill Volume

The Monofill volume estimate required the following three sets of data in order to determine the volume:

1. lateral dimensions for the top of the Monofill Cell,
2. inside slope ratio (i.e., Horizontal:Vertical [H:V]) for the surrounding containment berm, and
3. depth of the sludge within the Monofill Cell.

The lateral dimensions for the top of the Monofill Cell were measured in the field. Additionally, following the completion of each of the three hand augered borings within the sludge, the total depth of the sludge was probed. The third component required for the calculation of the monofill volume was the inside angle or slope of the containment berms around the Monofill Cell.

Originally the Monofill Cell was designed to have seven cleanouts at both the eastern end of the cell and the western end on both the north and south sides of the Monofill Cell (see Appendix D of the MAWP). However, upon inspection of the Monofill Cell the only access point identified in the field is a two-inch diameter polyvinyl chloride (PVC) leachate withdrawal pipe located at the eastern end of the Monofill Cell. This PVC pipe has been used in the past to withdraw leachate from the Monofill Cell using an air-diaphragm pump located adjacent to the end of the pipe. This air-diaphragm pump is reportedly broken and no longer functional.

This PVC leachate withdrawal pipe is the only accessible location into the cell, allowing for the sole measurement of the angle of the inside slope of the containment berms. The slope angle was measured in the field and used for estimating the volume of sludge within the Monofill Cell.

Assess Current Condition of the Liners, Leachate Collection System and Monofill

The top liner for the Monofill Cell is a 20-mil thick HDPE. This liner has visibly deteriorated over the past 20 years due to weathering and was showing deterioration with laminations of the HDPE. The bottom liner is a 36-mil Hypalon liner. The technical specifications for this liner were provided in Appendix G of the MAWP. The edges of both the bottom liner and a layer of filter fabric were originally designed to be placed within a key trench at the top of the Monofill Cell, located on the inside toe of the perimeter berm (see Appendix D of the MAWP). When the top liner was removed from the northeast and northwest corners of the Monofill Cell the bottom liner system (filter fabric and Hypalon liner) was found to have been draped over the perimeter berm and keyed in on the outside of this perimeter berm. This keying of the bottom liner outside the perimeter berm was a change from the original plans, but allowed us to

acquire samples of the bottom liner materials for testing purposes without jeopardizing the retention characteristics of the Hypalon liner.

In order to assess the condition of the two liners, samples of both liners were collected at different locations around the Monofill Cell on December 14, 2015 (see Figure 2 and Attachment A). Three Hypalon liner samples and two HDPE liner samples were collected (see Attachment A). Two of the Hypalon samples were seam samples. As soon as the samples of the Hypalon liner were removed, a liner repair company (RTD Enterprises) replaced the sections of Hypalon. The HDPE liner samples were cut from excess HDPE lying outside of the perimeter berm around the Monofill Cell, and didn't require replacing. A report for the collection of these liner samples and repairs made to the sample locations are detailed in Attachment A.

Three Hypalon liner samples (including the two seam samples) and two HDPE liner samples were submitted to TRI Environmental testing laboratory in Anaheim, California for the liner tests as described in Section 4.7.1 of the MAWP. The only test not actually performed was the low-temperature bend test, because that test is specifically designed for top liners in a cold climate.

According to the design document, the leachate collection system consists of a single 2-inch diameter PVC pipe located along the mid-point of the eastern end of the Monofill Cell.. As mentioned above, the filter fabric was evident above the Hypalon liner underlying the cell. The purpose of this filter fabric was to protect the sand, around the leachate collection pipe network, from becoming clogged due to the sludge. Leachate has been recovered in the past from this leachate collection pipe. The most recent record of leachate recovery was 2,687 gallons of leachate removed from the Monofill Cell in November 2013 which was disposed at the Brunswick County Regional Wastewater Treatment Plant. These limited findings indicate that the leachate collection system is functional.

Evaluate the Structural Integrity of the Monofill Basin

During the hand augering of the three boreholes into the Monofill sludge, dynamic cone penetrometer (DCP) tests were attempted each time a sludge sample was collected. In all cases the DCP dropped 6 inches with one blow, except in the deep zone at HAB-2, where the average blow count was 2 blows per 1.75-inch increment. Therefore, based on the DCP values, the material strength and relative density of the monofill sludge is considered negligible.

The small trees, brush, and other vegetative growth covering the outside of the containment berm surrounding the monofill cell was recently trimmed to grade by others. The roots were not removed since they contribute to the overall stability of the slope. A geotechnical engineer observed and inspected the slope conditions of the containment berm and did not observe any leachate seeps, outcrops, or any other potential structural issues pertaining to slope stability (i.e., erosion, subsidence, sloughing, cracking, etc.). A licensed surveyor obtained field

measurements of critical slope profiles to assist in performing an embankment/slope stability analysis.

Three (3) mechanically drilled vertical borings (MDB-1 through MDB-3: see Figure 2) were drilled to evaluate the containment berm using a 6822 Geoprobe with hollow-stem augers. A fourth mechanically drilled vertical boring (MDB-4: see Figure 2) was drilled north of the monofill cell in order to provide groundwater flow direction for the area.

Two (2) of the mechanical borings were performed on either side of the northwest corner of the Monofill Cell and one (1) at the northeast corner (see Figure 2). The mechanical borings were advanced to a depth of at least 5 feet below the groundwater table encountered at each boring location. Standard Penetration Test (SPT) data was collected at 5-foot intervals until final depth was reached to provide an index for estimating soil strength and relative density of the subsoils.

Soil samples were collected continuously and were field logged. These soil samples were also field screened using an Organic Vapor Analyzer. These soil samples were used to describe the underlying stratigraphy. Samples of the containment berm subsoils were obtained via a Split-Spoon sampler and/or Shelby Tube sampler and transported to an accredited soil laboratory for further analyses (sieve analyses, specific gravities, Atterburg Limits, consolidation test, and permeability test: see Section 4.7.2 of the MAWP).

A temporary well consisting of a two (2)-inch diameter Schedule 40 PVC threaded casing with a ten (10)-foot PVC slotted screen was installed in each of the three borings to establish stabilized depth to groundwater readings over a two (2)-week time period.

On January 13, 2016 one (1) groundwater sample was collected from each of the four (4) temporary wells by the low-flow purge method, using a peristaltic pump. The samples were transported to an accredited analytical laboratory for further analysis (see Table 1). Following the collection of these groundwater samples a series of depth-to-groundwater measurements were collected over several subsequent weeks. Following the collection of a sufficient number of depth-to-groundwater measurements, these temporary wells were properly abandoned on March 2, 2016 with a bentonite/cement grout slurry by a NC licensed well driller.

Characterization of the Monofill Leachate and Runoff

On December 22, 2015 two samples of stormwater were collected around the Monofill Cell during a rainfall event. One sample was collected at the north side of the cell and the other sample of stormwater was collected at the western end of the Monofill Cell. No sediment was available for collection at either of these two stormwater collection points. The stormwater sampling locations are shown on Figure 2. These two stormwater samples were submitted to the analytical laboratory for the analyses shown in Table 1.

A sample of the Monofill leachate was collected on January 13, 2016. A composite sample of the monofill sludge was collected for disposal parameters on February 17, 2016. The samples were submitted to the analytical laboratory for the analyses shown in Table 1.

Deviations from the Monofill Assessment Plan

The following describes modifications to certain procedures described in the MAWP that were necessary and appropriate in completing the evaluation of the Monofill Cell:

1. Deep samples of sludge from Borings HAB-1 and HAB-3 were unattainable due to watery conditions of the sludge encountered within the Monofill Cell.
2. For control and repair purposes the top liner samples were retrieved from the liner around the edges of the Monofill Cell and not from the Monofill Cell sample hole (i.e., HAB-1 through HAB-3) locations.
3. The low-temperature bend test was not performed on either the HDPE or the Hypalon liners because this test is intended for a top liner in a cold climate.

FIELD OBSERVATIONS AND TEST RESULTS

The observations and data collected in and around the Monofill Cell together form the basis of the evaluation of both the Monofill Cell and its structural integrity.

Contents of the Monofill Cell

The analytical detections for the samples of the water ponded on top of the Monofill Cell top liner are summarized in Table 2. The full set of the laboratory analytical results for these two ponded water samples are included in Attachment B. Ponded water sample PSW-1 exhibited nine (9) parameters exceeding the North Carolina 15A NCAC 2B Surface Water Standards (2B Surface Water Standards) for freshwater (cyanide, cadmium, chromium, copper, lead, nickel, selenium, mercury and zinc). In ponded water sample PSW-2 three (3) parameters exceeded the 2B Surface Water Standards for freshwater (copper, lead, and zinc). The duplicate sample for PSW-2 parameters also exceeded the 2B Surface Water Standards for copper.

The sludge samples collected from the three hand-augered borings completed within the Monofill Cell were analyzed for the same parameters as those shown in Table 1. The analytical results for these analyses are summarized in Table 3. The full set of the laboratory analytical results for these four sludge samples is included in Attachment C. As with the ponded water samples, only those constituents that exhibited one or more detection(s) for one of the parameters listed in Table 1 are included in Table 3. All of the water samples collected as part of the Monofill Cell investigation were analyzed for those constituents listed in the bottom half of Table 3 and the solid samples were analyzed for those constituents listed in the top half of Table 3.

The constituents identified within the Monofill sludge that exhibited elevated concentrations were formaldehyde, ammonia, total phosphorus, aluminum, calcium and iron (see Table 3). These data are consistent with the likely constituents to be found in the sludge and residuals

from the Resin Lagoon, the Equalization Lagoon, the Aeration Lagoon, and the Spill Lagoon which were approved in the permit for disposal in the Monofill Cell. Waste characterization was conducted on a composite of the sludge collected on February 17, 2016. The results are summarized in Table 4 and the laboratory analytical report is included in Attachment C.

Monofill Volume

Using a combination of the data sets described above, the volume of the Monofill Cell was calculated. The calculation sheets used to develop this volume estimate are included within Attachment D. The calculations were carried out using two different and independent approaches for estimating the volume of sludge within the Monofill Cell. Both of these two approaches are described in Attachment D. The estimated volume of sludge within the Monofill Cell is 13,340 cubic yards.

Using the average moisture content of 32.3% and the total weight of the sludge, the volume of water retained within the sludge was estimated at 2.28 million gallons (see Appendix D). The likely minimum attainable moisture content of the sludge is about 25%. Therefore the drainage from the sludge would not likely be any more than about 500,000 gallons of water.

Current Condition of the Liners, Leachate Collection System and Monofill

The liner samples were submitted to TRI Environmental for testing of tensile strength, tear resistance, puncture resistance, hydrostatic resistance, and bonded seam strength. The actual results from the testing laboratory are included in Attachment E. These test results from the liner samples submitted to TRI Environmental are summarized in Table 5. For the purposes of comparison the technical specifications for the Hypalon liner are also shown in the last column of Table 5. Only the Hypalon sample test results are comparable to the last column of data from the technical specifications.

The tensile strength, the puncture resistance, the hydrostatic resistance, and the bonded seam strength data for the Hypalon liner all exceeded the technical specifications (see Table 5). The test data that did not meet the initial technical specification data was tongue tear resistance. The average tongue tear resistance from the test data was 66 lbs. compared to the technical specification of 80 lbs. However, the technical specifications also quote a value for tongue tear resistance of 35 lbs from aging, which these liner samples exceeded by 89%. The Hypalon liner, which underlies the Monofill Cell, still exhibits test results for the most part exceeding the initial technical specifications.

The HDPE liner placed across the top of the Monofill Cell was tested for similar parameters, but using different test methods from those used for the Hypalon liner. Though this liner was also tested by TRI Environmental the results for this liner are, in several instances, an order of magnitude lower than those for the Hypalon liner (See Table 5 and Attachment E). Testing of the top liner as an HDPE liner and not Hypalon as indicated in the design, did not meet any of the specified design requirements for a Hypalon top liner.

The last component of the Monofill Cell requiring a condition evaluation is the leachate collection system. The leachate collection system is still capable of enabling the recovery of leachate from the Monofill Cell based on leachate removal activities in November 2013. Additionally, a leachate sample was readily retrieved from the leachate collection system as required in the MAWP. These factors indicate that the leachate collection system is functional.

Structural Integrity of Monofill Basin

Overview of Monofill Cell

The collective use of the field data along with the laboratory test results were used to produce a consolidation and embankment/slope stability model that was used to formulate an opinion regarding the structural integrity of the containment berm enclosing the monofill cell. As part of this evaluation, the structural integrity of the monofill cell was also evaluated for the replacement of the top liner, with a graded initial cover, capped with a new liner and then a minimum three-foot vegetative soil cover with appropriate drainage protection.

During the monofill sludge testing (hand augering at HAB-1 through HAB-3) it was discovered, after opening the top liner, that the sludge was saturated and DCP testing, though conducted, did not exhibit any significant strength within the sludge material. Based on these conditions it was assumed that the material strength of the sludge was negligible in its current condition and the relative density was assumed to be essentially the same as water.

During the drilling of the three geotechnical borings (i.e., MDB-1 through MDB-3) through the containment berm around the Monofill Cell, intact samples of the soils from a Shelby tube, although obtained, did not yield a cohesive soil sample for performing triaxial testing.

The slopes of the monofill cell were cleared of small trees and brush and inspected by a geotechnical engineer. There were no visible signs of seeps, erosion, subsidence, sloughing, cracking or failures on the slopes on the monofill. A topographic survey was performed on the critical slope areas of the monofill where the geotechnical borings were performed. This survey was used in the stability models for dikes.

Boring logs for the three (3) mechanically drilled vertical borings in the containment berm (MDB-1 through MDB-3: see Figure 2) are attached in Attachment F. Selected soil samples and Shelby tubes were submitted to a soils laboratory for performing tests as outlined in Section 4.7.3 of the MAWP. The test results for the selected soil samples collected from the three geotechnical borings drilled on the Monofill Cell containment berm are included in Attachment G. These test results were used in developing the stability models for a dike.

Periodic water level readings were performed on the temporary wells placed in the soil borings (i.e., MDB-1 through MDB-4) and these data are summarized in Table 6. These groundwater elevations for those three wells located in the containment berm (i.e., MDB-1, MDB-2, and MDB-3) are 17 to 22 feet below the water surface of the ponded water on the top liner and also within the sludge when the three hand-augered borings were made into the sludge. Based on

the permeability of the soil (i.e., $2x10^{-6}$ centimeters per second: see Attachment G) these soils are incapable of sustaining a 22-foot drop of the phreatic surface over a lateral distance of 65 feet (i.e. distance from the base of the Monofill Cell to the wells). Hence, there is no apparent phreatic surface through the containment berm that is sustained by the water from the Monofill Cell. This conclusion does indicate that the bottom liner within the Monofill Cell is performing as intended.

This information was used in the various stability analyses of the monofill slopes. The temporary wells were later properly abandoned with a bentonite/cement grout slurry by a NC licensed well driller.

Slope-Stability Analysis for Monofill Cell

The above information was used in the slope stability analyses. The slope stability modeling program GSTABL7 version 2.05 was used to model and simulate the current monofill conditions. In addition Shield performed several slope stability analyses on a conceptual monofill which had been properly closed with dewatered sludge and a sloped cover or cap providing positive drainage over the Monofill Cell.

Based on observations and the subsurface data obtained in the boring logs for the fill material placed on the subject basin during construction, Shield recommended that a slope stability analysis be performed to determine if the in-place subsurface materials have the potential for failure. Slope stability is the potential of soil constructed slopes to resist and undergo movement. Slope stability relies on the properties of soils utilized in its construction to include: unit weight, compaction, cohesion and granular friction. Common factors affecting slope stability include: compaction of soils (fill soils), surcharges (static and transient), weathering of soils, pore water pressure, seasonal water table changes and the breakdown of organic material.

In performing the analysis, Shield considered two cases at three locations based on both soil data and the topography of the existing slopes. Case #1 was analyzed in its current state with the water/sludge composition at its current level. Case #2 was analyzed with the consideration of a 5:1 (H:V) cap placed over the monofill after the sludge had been dewatered. The slope stability analyses were performed along three cross-section lines through the Monofill Cell containment berm. The locations for these three cross-section lines are shown in Figure 3. Cross-section line #2 is located at the southwestern corner of the Monofill Cell. Cross-section lines #1 and #3 are located at the northwestern corner of the Monofill Cell (see Figure 3).

Utilizing the results of the field and laboratory tests presented herein on soil samples collected from slopes of the basin (see Attachment G), Shield generated a soil profile model of the slope along each cross-section line referenced for each of the two cases considered. Shield utilized the soil profile models to perform a slope stability analysis utilizing GSTABL7 version 2.05 software and the Simplified Bishop method in accordance with generally accepted industry practice.

The slope stability analyses are included in Attachment H. A summary of the analytical results is included in Table 7. A review of these results will indicate that multiple slope failure scenarios were analyzed for each case along each of the three cross-section lines. These analyses are evaluated in terms of the Factor of Safety (FOS) for the various slope failures. The generally accepted minimum FOS for slope stability is 1.5.

The FOS results for the failure of the total slope of the containment berm are shown in Table 7. These FOS values range from 1.82 up to 2.35 for current conditions at the Monofill Cell (i.e., Case #1). The FOS declines for Case #2 (i.e., with a 5:1 (H:V) cap placed over the Monofill Cell after the sludge had been dewatered) but still remains above the generally accepted minimum of 1.5, ranging from 1.756 to 1.865.

For each of the three cross-sections analyzed there is a minimum FOS from all of the slope failure conditions analyzed. The FOS minima for Cross-section #1 are 1.529 for current conditions and 1.38 for Case #2. Both of these slope failures are limited to the upper 7 feet of the outside slope of the containment berm on Cross-section #1.

The FOS minima for Cross-section #2 are 1.253 for current conditions and 1.454 for Case #2. Both of these slope failures would potentially encompass the whole downstream slope of the containment berm on this cross-section. The implementation of the Case #2 scenario (i.e., gently graded cap placed over the monofill after the sludge had been dewatered) would improve the FOS almost up to the desired 1.5. The slope stability FOS can be improved at this cross-section with the design of further soil buttressing, which is beyond the scope of this letter report, to surpass the FOS goal of 1.5.

The FOS minima for Cross-section #3 are 1.859 for current conditions and 1.664 for Case #2. Both of these FOS values exceed the goal of 1.5. Therefore, the slope stability analyses for Cross-section #3 exhibits stable conditions.

Monofill Leachate and Runoff Characteristics

The analytical results for the leachate sample collected from the Monofill Cell and the groundwater samples collected in the near vicinity are summarized in Table 8. Only those analytes for which there were one or more detections in any one of the five samples are shown in Table 8. The full set of the laboratory analytical results for these water samples are included in Attachment I.

A comparison of the analytical results from the four temporary wells with the North Carolina NCAC 2L Groundwater Standards (2L Groundwater Standards) indicates that some constituents are above the 2L Groundwater Standards. These constituents are ammonia, nitrate, formaldehyde, various inorganic constituents (arsenic, beryllium, chromium, cobalt, iron, lead, manganese, thallium and vanadium).

A review of the groundwater data for Wells MDB-1 through MDB-4 show that for the concentrations of the first 38 analytes listed in Table 8 (i.e., excluding pH), seven of these analytes were not detected in the groundwater (antimony, cadmium, acetone, carbon disulfide,

toluene, o-cresol, and fluorene), but were detected in the leachate. Of the remaining 31 analytes the maximum concentrations for 17 of them (including formaldehyde) were identified in Well MDB-4, which is the well located furthest from the Monofill Cell (see Figure 2). Formaldehyde was also the dominant analyte identified in the sludge (see Table 3). Maximum concentrations in groundwater were identified for another 10 analytes in Well MDB-2, located adjacent to the Monofill Cell. The remaining four analytes (i.e., sulfate, calcium, potassium, and selenium) exhibited maximum concentrations in Wells MDB-1 and MDB-3, located adjacent to the Monofill Cell.

Some constituents were identified in both the leachate and the groundwater near the Monofill Cell (e.g., ammonia, arsenic, calcium, chromium, cobalt, iron, magnesium, manganese, potassium, sodium, vanadium, zinc and formaldehyde). A number of other constituents (e.g., antimony, cadmium, acetone, carbon disulfide, toluene, o-cresol, and fluorene) appear in the leachate but not in the groundwater. Therefore, based on differences in the mix of constituents identified in the leachate and in the groundwater, there is no direct indication that the integrity of the Hypalon liner containing the sludge within the Monofill Cell is impaired.

The analytical results for the two stormwater samples collected in the periphery of the Monofill Cell are summarized in Table 9. Only those analytes for which there were one or more detections in any one of the two samples are shown in Table 9. The full set of the laboratory analytical results for these water samples are included in Attachment J. The NC 2B Surface Water Standard for copper was exceeded in both stormwater samples (see Table 9). No other standard was exceeded. Two silanes were detected in one of the stormwater samples (i.e., MF-STORMWATER-N; see Figure 2) and one silane was detected in the other stormwater sample (i.e., MF-STORMWATER-W; see Figure 2). The stormwater samples did not exhibit any evidence of the presence of any of the constituents exhibited in the ponded water samples collected from the top of the Monofill Cell. Hence, there was no analytical correlation to the stormwater samples, and the Monofill Cell leachate or to the ponded water on top of the HDPE liner.

Quality Assurance/Quality Control

During the collection of the groundwater samples a duplicate sample was collected from Well MDB-4, a rinse blank and a trip blank were also submitted to the analytical laboratory for analyses. The results for QA/QC analyses are summarized in Table 10. Only those analytes for which there were one or more detections in any one of these QA/QC samples are shown in the table. The full set of the laboratory analytical results for these water samples are included in Attachment I.

In general the constituents with the larger concentrations observed in the results from Well MDB-4 and the duplicate sample were chloride, sulfate, ammonia, aluminum, calcium, iron, magnesium, manganese, sodium, vanadium, and formaldehyde. The average percentage difference between the analytical results for these two samples for these eleven analytes is 14%. The blank samples were essentially "clean" except for detections of iron and methylene chloride both flagged with lab qualifiers in the rinse blank, and four tentatively identified

compounds (TICs) found in both blanks. Three of the TICs were labeled as "unknown." None of these QA/QC results would call the resultant analytical results into question.

CONCLUSIONS

Based on the data presented herein and the analyses of these data, the following conclusions can be summarized as follows:

The HDPE top liner is damaged and deteriorated and needs to be replaced or covered with an acceptable cover material. An appropriate cap should be put on the monofill. A new cap would initially entail additional dewatering of the cell in an attempt to reduce the volume of water contained within the cell. Dewatering may likely require a period of one or two years, depending upon the rate of leachate recovery. During dewatering, some fill material should be placed in/on the Monofill to help consolidate the sludge. Once the leachate production rate has tapered off, then the top of the Monofill Cell should be further backfilled, sloped, and covered with an appropriate geomembrane placed to prevent rainwater infiltration.

The leachate collection system appears to be capable of allowing retrieval of leachate from the Monofill Cell.

Sampling shows that the Hypalon bottom liner meets the original specifications. The bottom liner appears to be functioning as intended because there is not a water table connection between the bottom of the Monofill and the groundwater. This is further substantiated based on the differences in the mix of constituents identified in the leachate and in the groundwater. Therefore there is no indication that the integrity of the Monofill Hypalon liner is impaired.

Based on the slope stability analyses the structural integrity of the containment berms surrounding the monofill are in good condition and need only minor improvements. Some portions of the slopes will need re-grading to alleviate areas of steepness.

RECOMMENDATIONS

Based on these conclusions the following recommendations and conclusions are provided:

1. It is recommended that the Monofill Cell be properly closed in place.
2. The Monofill is currently stable and does not require any immediate actions.
3. Additional slope stabilization is needed to provide a better long-term safety factor with respect to slope stability.
4. A properly designed cap is needed to complete the closure of the Monofill.
5. If the Monofill is approved for closure, dewatering of the sludge should proceed in conjunction with fill material placement and the new cap.
6. The dewatering and capping can continue while other remedial actions for the Wright Chemical site are determined.
7. Final closure of the Monofill can be integrated into any other remedial actions approved for the site.

If you should have any questions or require additional information, please contact either of the undersigned at (704) 394-6913.

Respectfully yours,
Shield Engineering, Inc.

J. David Wallace, P.E.
Sr. Project Engineer

NORTH CAROLINA PROFESSIONAL SEAL 042146 ENGINEER DAVID A. STONER

9-15-16

David A. Stoner, P.G., P.E.
Project Coordinator

Attachments: Figures 1 through 3
Tables 1 through 10
Attachments A through J

cc: Mr. David Mattison, Mr. William Oakley, Mr. James Barker, Mr. Frank Van Ryn, and Mr. Phil Conner all by e-mail only

H:\Projects\2010\1100044-05 Wright Chemical RI Phase 1\MAWP\Report\Monofill Cell Letter Report.doc

FIGURES

N

GRAPHIC SCALE
0 50 100 150 200
SCALE: 1 in. = 200 ft.

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SITE LAYOUT MAP

WRIGHT CHEMICAL

RIEGELWOOD, NORTH CAROLINA
SHIELD #1100044-04

DATE :	08/22/16	DRAWN BY :	RBS
SCALE :	AS SHOWN	FIGURE :	1

H:\PROJECTS\2010\1100044-04 WRIGHT CHEMICAL RIFS\FIGURES\SITE LAYOUT MAP 08-22-16.DWG

N

LEGEND

HAB-#	HAND AUGER BORING LOCATION IN MONOFILL
MDB-#	TEMPORARY MONITORING WELL
WCS-HDPE-#	TOP HYPALON LINER SAMPLE LOCATION
WCS-HYP-#	BOTTOM HYPALON LINER SAMPLE LOCATION
LS-#	LEACHATE SAMPLE LOCATION
PSW-#	APPROXIMATE LOCATION FOR POND SURFACE WATER SAMPLE
MF-STORMWATER-ID	APPROXIMATE LOCATION FOR STORMWATER RUNOFF SAMPLE

NOTE:

ALL SAMPLE LOCATIONS ARE APPROXIMATE.

GRAPHIC SCALE

0 10 20 30 40 50 60

SCALE: 1 in. = 60 ft.

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MONOFILL CELL - SAMPLING LOCATIONS

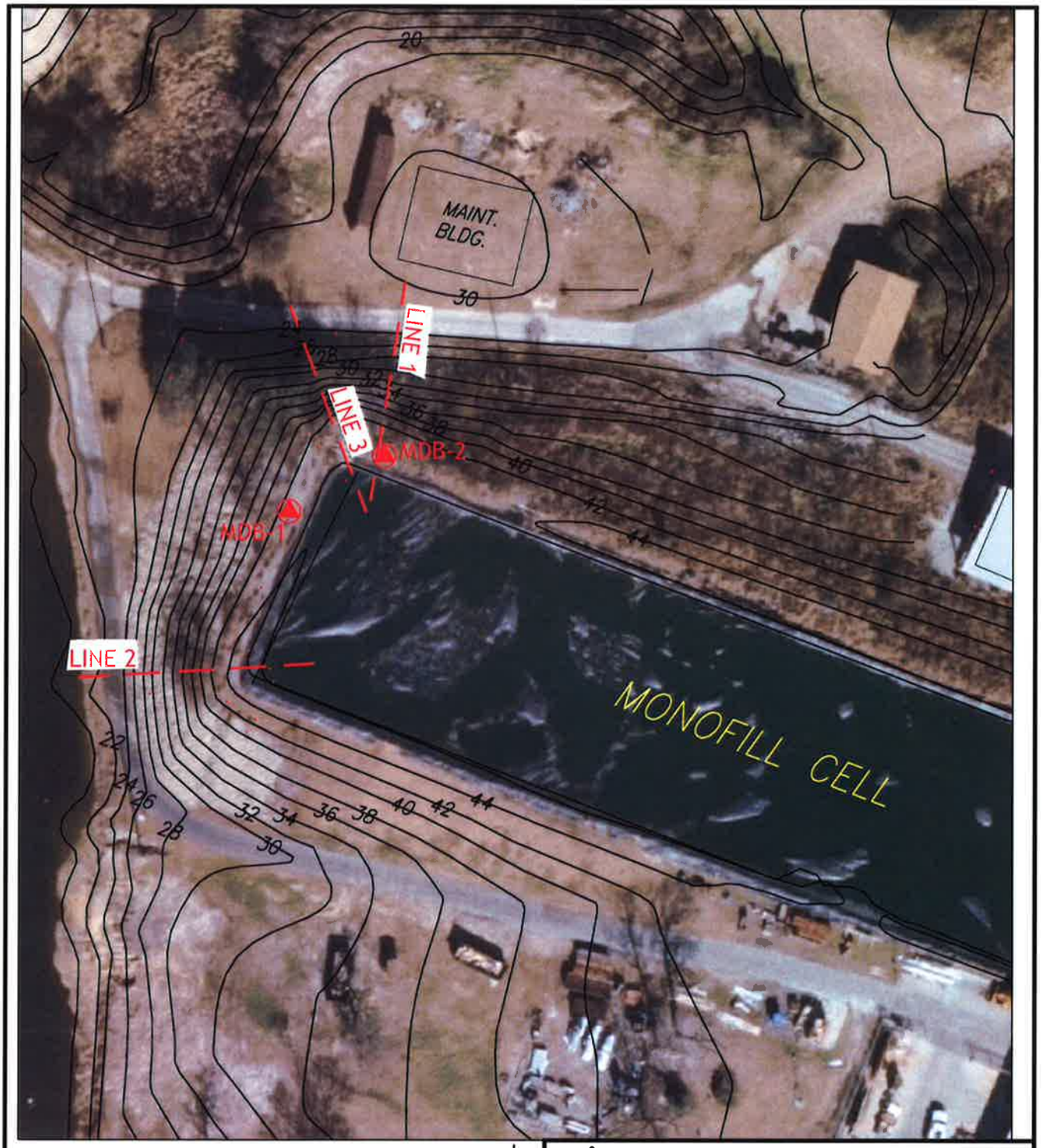
WRIGHT CHEMICAL

RIEGELWOOD, NORTH CAROLINA

SHIELD #1100044-04

DATE :	08/22/16	DRAWN BY :	RBS
SCALE :	AS SHOWN	FIGURE :	2

H:\PROJECTS\2010\1100044-04 WRIGHT CHEMICAL RIFS\FIGURES\SITE LAYOUT MAP 08-22-16.DWG



LEGEND:

LINE # — INDICATES CROSS-SECTION LINE FOR SLOPE STABILITY ANALYSIS

GRAPHIC SCALE

0 10 20 30 40 50 60

SCALE: 1 in. = 60 ft.

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LOCATION OF STABILITY ANALYSIS CROSS-SECTIONS

WRIGHT CHEMICAL
RIEGELWOOD, NORTH CAROLINA
SHIELD # 1100044-05

DATE :	08/03/16	DRAWN BY :	KJC
SCALE :	AS SHOWN	FIGURE :	3

H:\PROJECTS\2010\1100044-04 WRIGHT CHEMICAL RIFS\FIGURES\FSAP REPORT\FIGURES\CONTOURS AROUND MONOFILL 8-03-16KJC.DWG

TABLES

TABLE 1
PROPOSED CONSTITUENTS OF INTEREST LIST AND ANALYTICAL PROCEDURES
MONOFILL CELL
WRIGHT CHEMICAL CORPORATION, RIEGELWOOD, NORTH CAROLINA

Matrix	Analysis	Analytical Method	Comments
Soil	TCL VOCs + TICs	8260 B	Includes TICs, mercaptans, silanes, and methanol
Soil	TCL SVOCs + TICs	8270 D	Includes TICs, hexamine, and 1,1 biphenyl
Soil	TAL Metals (22 elements)	6010 C	Ag, Al, As, Ba, Be, Cd, Ca, Co, Cr, Cu, Fe, Pb, Mg, Mn, Ni, K, Sb, Se, Na, Tl, V, Zn
Soil	Mercury	7470 A	Hg
Soil	TCL Pesticides	8081 B	
Soil	Chloropicrin	8011	
Soil	Formaldehyde	8315-modified	Modified per project specifics
Soil	Fluoride	300.0 Mod 2.1	Soil method is a modified water method
Soil	Ammonia	350.1 Mod 2.0	Soil method is a modified water method
Soil	Nitrate	353.2 Mod 2.0	Soil method is a modified water method
Soil	Nitrite	353.2 Mod 2.0	Soil method is a modified water method
Soil	Cyanide	9012B Mod	Soil method is a modified water method
Soil	Chloride	SM 4500 Cl E Mod 2011	Soil method is a modified water method
Soil	Sulfate	300.0 Mod 2.1	Soil method is a modified water method
Soil	Phosphorus (P)	365.1 Mod 2.0	Soil method is a modified water method
Soil	Orthophosphate as P	4500PE WO 2011	Soil method is a modified water method
Soil	pH	150.1	
Soil	**Radionuclides:**		
	Gross Alpha / Beta	900.0	
	Radium 226/228	EPA 901.1 M	
	Total Uranium	ASTM D5174	
Water	TCL VOCs + TICs	8260 B	Includes TICs, mercaptans, silanes, and methanol
Water	TCL SVOCs + TICs	8270 D	Includes TICs, hexamine, and 1,1 biphenyl
Water	TAL Metals (23 elements)	6010 C	Ag, Al, As, Ba, Be, Cd, Ca, Co, Cr, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Sb, Se, Na, Tl, V, Zn
Water	Mercury	7470 A	Hg
Water	TCL Pesticides	8081 B	
Water	Chloropicrin	8011	
Water	Formaldehyde	8315-modified	
Water	Fluoride	300.0 2.1	
Water	Ammonia	350.1 2.0	
Water	Nitrate	353.2 2.0	
Water	Nitrite	353.2 2.0	
Water	Cyanide	9012B	
Water	Chloride	SM 4500 Cl E 2011	
Water	Sulfate	300.0 2.1	
Water	Phosphorus (P)	365.1 2.0	
Water	Orthophosphate as P	4500PE WO 2011	
Water	pH	150.1	
Water	**Radionuclides:**		
	Gross Alpha / Beta	900.0	
	Radium 226	903.1	
	Radium 228	904.0	
	Total Uranium	ASTM D5174	

NOTE: TIC= Tentatively Identified Compounds
TCL = Target Contaminant List
TAL = Target Analyte List
VOC = Volatile Organic Compound
SVOC = SemiVolatile Compound

TABLE 2

PONDED WATER FROM TOP LINER ANALYTICAL RESULTS SUMMARY
MONOFILL CELL
WRIGHT CHEMICAL CORPORATION, RIEGELWOOD, NORTH CAROLINA

Analyte	CAS Number	NCAC 2B Standards	Analytical Results		
			PSW-1	PSW-2	PSW-2 (Dup)
		Sample Collection Date:	12/2/2015	12/3/2015	12/3/2015
pH (Std. Units)		6.0 - 9.0	6.9	7.4	8.5
ANALYTICAL RESULTS BELOW REPORTED IN mg/l					
Cyanide	57-12-5	0.005	**0.0079J**	ND	ND
Chloride	16887-00-6	230	11.3	11.1	10.6
Fluoride	16984-48-8	1.8	0.5	0.47J	0.45J
Sulfate	14808-79-8	250	10.9	4.9	4.4
Nitrogen, Ammonia	7664-41-7	-	31.1	29	26.5
Nitrogen, NO2 plus NO3		-	0.15	0.13	0.088
Nitrogen, Nitrate		10	0.026B	0.058	0.025
Nitrogen, Nitrite		-	0.12	0.072	0.063
Phosphorus	7723-14-0	-	5.6	7.1	3.7
Orthophosphate as P		-	0.64	2.1M6	2.1
ANALYTICAL RESULTS BELOW REPORTED IN µg/l					
Aluminum	7429-90-5	-	7400	622	147
Arsenic	7440-38-2	150	14.8	ND	ND
Barium	7440-39-3	1000	99.2	14.4	4.4J
Cadmium	7440-43-9	0.15	**0.69J**	ND	ND
Calcium	7440-70-2	-	21400	5490	3440
Chromium	7440-47-3	24	**30.2**	2.6 J	ND
Cobalt	7440-48-4	-	13.1	ND	ND
Copper	7440-50-8	2.7	**184**	**14.6**	**4.1J**
Iron	7439-89-6	-	10400	811	287
Lead	7439-92-1	0.54	**35.3**	**4.3 J**	ND
Magnesium	7439-95-4	-	4590	871	496
Manganese	7439-96-5	-	550	112	54.4
Nickel	7440-02-0	16	**42.1**	4.9J	ND
Potassium	7440-09-7	-	10100	4080J	3530J
Selenium	7782-49-2	5	**7.6J**	ND	ND
Sodium	7440-23-5	-	8710	7560	7820
Thallium	7440-28-0	-	ND	5.1J	ND
Vanadium	7440-62-2	-	92.8	12.7	6.1
Zinc	7440-66-6	36	**380**	**58.2**	15.2
Mercury	7439-97-6	0.012	**0.34**	ND	ND
2-Hexanone	591-78-6	-	ND	2.2J	ND
Di-n-octylphthalate	117-84-0	-	56.5J	ND	ND
Cyclotetrasiloxane, octa	556-67-2	-	ND	67.0N	61.1N
Hexanal	66-25-1	-	5.8N	ND	ND
Methylene Chloride	75-09-2	-	ND	ND	66.6N
Formaldehyde*	50-00-0	-	96	ND	ND
Unknown	-	-	52.1N	64.6N	62.7N

NOTES: CAS - Chemical Abstracts Service
Dup - Duplicate
J - Estimated
NCAC 2B Standards - North Carolina Administrative Code Subchapter 2B Surface Water Standards
BOLD - Exceeds the NCAC 2B Standard
\- No NCAC 2B Surface Water Standard
ND - Not Detected
N - Tentatively Identified Compound
B - Analyte was detected in Method Blank
M6 - Matrix Spike and duplicate recovery not evaluated against Control Limits due to Dilution
* Initial extractions were outside Hold Time and were resampled on 12/23/2015. Data shown are for resampling event.

TABLE 3
MONOFILL CELL SLUDGE ANALYTICAL RESULTS SUMMARY
MONOFILL CELL
WRIGHT CHEMICAL CORPORATION, RIEGELWOOD, NORTH CAROLINA

ANALYTE	CAS NUMBER	UNITS	BORING IDENTIFICATION WITH DEPTH RANGE			
			HAB-1 (3-5 Ft.)	HAB-2 (3-5Ft.)	HAB-2 (8-10Ft.)	HAB-3 (3-5Ft.)
		Sampling Date:	12/2/2015	12/3/2015	12/3/2015	12/3/2015
OVA Readings		ppm	88	0	0	5
Percent Moisture		%	46.3	27.3	25.6	29.8
pH at 25 Degrees C		Std. Units	8.4	8.8	8.8	8.3
Nitrogen, Ammonia	7664-41-7	mg/kg	9290 M1,M6	3060	4740	4280
Phosphorus, Total (as P)	7723-14-0	mg/kg	1240	736	278	505
Orthophosphate as P		mg/kg	88.6 J	ND H1,D3,M1	61.7 J,D3	ND D3
Chloride	16887-00-6	mg/kg	283 J,D3	182 J	200 J	ND
Fluoride	16984-48-8	mg/kg	35.1 J	ND	17.4 J	21.0 J
Aluminum	7429-90-5	mg/kg	14000	5660 M1	7120	9940
Antimony	7440-36-0	mg/kg	0.76 J	0.38 J	1.8	0.44 J
Arsenic	7440-38-2	mg/kg	7	2.2	3.6	1.8
Barium	7440-39-3	mg/kg	26.2	12.1	15.4	7.6
Beryllium	7440-41-7	mg/kg	0.55	0.16	0.27	0.2
Cadmium	7440-43-9	mg/kg	0.44	ND	0.16	ND
Calcium	7440-70-2	mg/kg	4120	3170 M1,R1	2600	1310
Chromium	7440-47-3	mg/kg	32.7	6.8	17.9	10.3
Cobalt	7440-48-4	mg/kg	3.4	0.57	1.7	0.87
Copper	7440-50-8	mg/kg	57.1	5.5	25.9	8.2
Iron	7439-89-6	mg/kg	11900	5010 M1	8560	7170
Lead	7439-92-1	mg/kg	177	10.9 M1,R1	83.6	13.4
Magnesium	7439-95-4	mg/kg	305	132	181	159
Manganese	7439-96-5	mg/kg	77	68.1 M1,R1	44.4	45
Nickel	7440-02-0	mg/kg	13.9	2.3	7.3	2.9
Selenium	7782-49-2	mg/kg	2.4	0.51 J	1.6	0.84 J
Sodium	7440-23-5	mg/kg	411 J	ND	279 J	ND
Vanadium	7440-62-2	mg/kg	53.8	21.9 M1	30.2	22
Zinc	7440-66-6	mg/kg	142	17.8	65.8	25.8
Mercury	7439-97-6	mg/kg	0.033	0.024	0.071	0.045
Endosulfan sulfate	1031-07-8	ug/kg	146	ND M6	ND	ND
Heptachlor	76-44-8	ug/kg	222	ND M6	ND	ND
2-Butanone (MEK)	78-93-3	ug/kg	568	ND	140	167
2-Hexanone	591-78-6	ug/kg	44.9 J	ND	ND	16.3 J
4-Methyl-2-pentanone (MIBK)	108-10-1	ug/kg	61.5 J	ND	5.9 J	11.9 J
Acetone	67-64-1	ug/kg	971 E	440 E	188	ND
Carbon disulfide	75-15-0	ug/kg	170	ND	40.7	19.9
Ethylbenzene	100-41-4	ug/kg	14.2	3.4 J	ND	ND
Methylene Chloride	75-09-2	ug/kg	15.7 J	61.1 C9	32.9 C9	ND
Toluene	108-88-3	ug/kg	34.5	4.8 J	ND	5.7 J
Biphenyl (Diphenyl)	92-52-4	ug/kg	3480 J	ND	172 J	ND
Formaldehyde	50-00-0	ug/kg	88100 N2,M6	55900 N2	83200 N2	97100 N2
Diphenyl ether	101-84-8	ug/kg	4420 N	807 N	96.5 N	72.2 N
Biphenyl	92-52-4	ug/kg	1410 N	371 N	30.1 N	
Octane, 2,6-dimethyl-	2051-30-1	ug/kg	37.2 N			
Thiophene, 2-methyl-	554-14-3	ug/kg	25.3 N			
Hexane	110-54-3	ug/kg	45.2 N		17.2 N	
2-Butanone, 3-methyl-	563-80-4	ug/kg		43.5 N		
Benzene, (2-methyl-1-but	56253-64-6	ug/kg		28.3 N		
Benzene, 1-methyl-2-(1-m	97664-19-2	ug/kg		28.4 N		
Benzene, 1-methyl-4-(1-m	99-87-6	ug/kg		39.7 N		
Cyclohexane, 1-methyl-4-	6069-98-3	ug/kg				377 N
Naphthalene, 2-ethenyl-	827-54-3	ug/kg				28.0 N
Limonene	138-86-3	ug/kg				24.6 N
Camphene	79-92-5	ug/kg				37.8 N
1R-.alpha.-Pinene	7785-70-8	ug/kg				189 N
C-10 or larger alkane		ug/kg				18.9 N
Hexadecanoic acid	57-10-3	ug/kg				359 N
1,3,5-Trithiane	291-21-4	ug/kg	2860 N	239 N		
Unknown		ug/kg	5350 N	1070 N	239 N	252 N
Unknown		ug/kg		250 N	312 N	278 N
Unknown		ug/kg		269 N	528 N	286 N
Unknown		ug/kg		319 N	633 N	420 N
Unknown		ug/kg		428 N		454 N
Unknown		ug/kg		469 N		524 N
Unknown		ug/kg		501 N		537 N
Unknown		ug/kg				544 N

NOTES: CAS - Chemical Abstracts Service
N - Tentatively Identified Compound
N2 - Laboratory does not hold TNI accreditation for this parameter
M1 - Matrix Spike recovery exceeded QC limits.
M6 - Matrix spike and matrix spike duplicate recovery not evaluated against control limits
J - Estimated
C9 - Common Laboratory contaminant
R1 - RPD values outside control limits
D3 - Sample was diluted due to presence of high levels of non-target analytes
H1 - Analysis conducted outside EPA method hold time

TABLE 4

MONOFILL CELL SLUDGE WASTE CHARACTERISTICS SUMMARY

MONOFILL CELL

WRIGHT CHEMICAL CORPORATION, RIEGELWOOD, NORTH CAROLINA

ANALYTE	CAS NUMBER	UNITS	Composite Sludge
		Sampling Date:	2/17/2016
Percent Moisture		%	25.8
pH at 25 Degrees C		Std. Units	8.9
gamma-BHC (Lindane)	58-89-9	µg/L	ND
Chlordane	57-74-9	µg/L	ND
Endrin	72-20-8	µg/L	ND
Heptachlor epoxide	1024-57-3	µg/L	ND
Methoxychlor	72-43-5	µg/L	ND
Toxaphene	8001-35-2	µg/L	ND
2,4-D	94-75-7	mg/L	ND
2,4,5-TP (Silvex)	93-72-1	mg/L	ND
Lead	7439-92-1	mg/L	10.1
Flashpoint	--	F^o	>200
Sulfide, Reactive	--	mg/kg	248

NOTES: ND - Not Detected
CAS - Chemical Abstracts Service

TABLE 5
MONOFILL CELL LINER TESTING LABORATORY DATA SUMMARY
MONOFILL CELL
WRIGHT CHEMICAL CORPORATION, RIEGELWOOD, NORTH CAROLINA

ASTM Method	Test Description	HDPE - 1		HDPE - 2		Hypalon - 1		Hypalon - 2		Hypalon - 3		Hypalon Technical Specifications	
		A	B	A	B	A	B	A	B	A	B		
D6693	Tensile Strength (yield) (lbs./inch width)	39	33	38	34								
D751	Tensile Strength (yield) (lbs.)					274	291	312	288	272	287	200	
D1004	Tear Resistance (lbs.)	13.8	15.3	15.8	14.4								
D751	Tongue Tear Resistance (lbs.)					63	77	66	61	59	69	80	35 lbs. after aging
D4833	Puncture Resistance (lbs.)	53		56									
FTMS 101C Method 2031	Puncture Resistance (lbs.)					321		279		331		180	
D751	Hydostatic Resistance (psi)	103		107		362		432		383		250	
D751	Bonded Seam Strength (lbs.)	No Seam		No Seam		231		No Seam		216		200	

NOTE: - All Results are Test Data averages from samples submitted to the Laboratory.
- Two 2' x 4' sheets of HDPE (top liner) were submitted to the testing laboratory
- Three 2' x 4' sheets of Hypalon (bottom liner) were submitted to the testing laboratory
- Test Samples labelled A and B were oriented perpendicular to each other when cut from liner material samples.
- See Appendix D of MAWP for Hypalon Technical Specifications.

TABLE 6
GROUNDWATER ELEVATION DATA SUMMARY
MONOFILL CELL
WRIGHT CHEMICAL CORPORATION, RIEGELWOOD, NORTH CAROLINA

Well ID	**MDB-1**			**MDB-2**			**MDB-3**			**MDB-4**		
Stick-up	2.19			2.25			2.82			1.36		
Elevation (TOC)	45.92			45.66			44.83			29.92		
Elevation (GS)	43.73			43.41			42.01			28.56		
DATE	GW Depth (GS) ft.	GW Depth (TOC) ft.	GW Elev. (NAVD) ft.	GW Depth (GS) ft.	GW Depth (TOC) ft.	GW Elev. (NAVD) ft.	GW Depth (GS) ft.	GW Depth (TOC) ft.	GW Elev. (NAVD) ft.	GW Depth (GS) ft.	GW Depth (TOC) ft.	GW Elev. (NAVD) ft.
1/8/16 (After Drilling)	22.30		23.62									
1/11/16 (After Drilling)				21.65	23.86	24.01						
01/11/16	21.65	23.72	24.27									
1/12/16 (After Drilling)							15.72		29.11	9.32	10.64	20.60
01/12/16				21.65		24.01						
01/13/16	21.60		24.32	21.59		24.07	15.59		29.24	9.33		20.59
01/28/16	21.53	23.77	22.15	21.46	23.70	21.96	15.46	18.21	26.62	9.22	10.66	19.26
02/02/16		23.85	22.07		23.80	21.86		18.35	26.48		10.87	19.05
02/11/16		23.42	22.50		23.44	22.22		17.97	26.86		9.72	20.20
02/12/16		23.47	22.45		23.45	22.21		17.98	26.85		9.77	20.15
02/16/16		23.84	22.08		23.32	22.34		17.82	27.01		9.94	19.98
02/19/16		23.52	22.40		23.51	22.15		17.81	27.02		10.09	19.83
02/29/16		23.50	22.42		23.48	22.18		17.62	27.21		10.35	19.57
03/02/16		23.50	22.42		23.48	22.18		17.62	27.21		10.42	19.50

Notes:

1) GW = Groundwater
2) TOC = Top of Casing
3) NM = Not Measured
4) GS = Ground Surface
5) NAVD = North American Vertical Datum
6) Elevations from survey by W.W. Landsurveying June 16, 1998

TABLE 7
MONOFILL CELL SLOPE STABILITY ANALYSIS RESULT SUMMARY
MONOFILL CELL
WRIGHT CHEMICAL CORPORATION, RIEGELWOOD, NORTH CAROLINA

CROSS-SECTION LINE # (See Figure 3)	**FACTOR OF SAFETY (FOS)**			
	FOS at Total Slope Failure	Minimum FOS	FOS at Total Slope Failure	Minimum FOS
SCENARIO IDENTIFICATION	**CASE #1**		**CASE #2**	
1	2.055	1.529	1.802	1.380
2	1.822	1.253	1.756	1.454
3	2.345	1.859	1.865	1.664

NOTES: FOS - Factor of Safety

TABLE 8
LEACHATE AND GROUNDWATER ANALYTICAL RESULTS SUMMARY
MONOFILL CELL
WRIGHT CHEMICAL CORPORATION, RIEGELWOOD, NORTH CAROLINA

Analyte	CAS Number	UNITS	NCAC 2L GW Stds.	SAMPLE IDENTIFICATION				
				Groundwater				Leachate
				MDB-1	MDB-2	MDB-3	MDB-4	LS-1
			Sampling Date:	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
Cyanide	57-12-5	mg/L	0.07	ND	0.0054 J	ND	ND	0.011
Chloride	16887-00-6	mg/L	250	28.8 M1	94.2	14.6	37.5	141
Fluoride	16984-48-8	mg/L	2	ND	ND	ND	1.1	3.9 J,D3
Sulfate	14808-79-8	mg/L	250	110	45.9	31.0	61.4	19.8 J,D3
Nitrogen, Ammonia	7664-41-7	mg/L	1.5	**84.7 M6**	**3.1**	**131**	**281**	2510
Nitrogen, NO2 plus NO3		mg/L	-	11.0	20.3	0.011 J	0.14	0.010 J
Nitrogen, Nitrate		mg/L	10	**11.0**	**19.5**	ND	0.14	ND
Nitrogen, Nitrite		mg/L	1	ND	0.84	0.031	0.012 J	0.093
Phosphorus	7723-14-0	mg/L	-	0.45	ND	2.3	5.6	88.3 M6
Orthophosphate as P		mg/L	-	ND	0.060	ND D3	1.3	102
pH		Std. Units	6.5-8.5	6.4 H6	**5.6 H6**	**7.1 H6**	**7.8 H6**	8.0 H6
Aluminum	7429-90-5	ug/L	-	18600 M1	1500	30300	39300	372
Antimony	7440-36-0	ug/L	1	ND M1	ND	ND	ND	11.7
Arsenic	7440-38-2	ug/L	10	**10.4**	ND	**22.7**	**48.8 J**	379
Barium	7440-39-3	ug/L	700	116	131	74.0	140	7.9
Beryllium	7440-41-7	ug/L	4	0.89 J	ND	2.4	**11.3**	ND
Cadmium	7440-43-9	ug/L	2	ND	ND	ND	ND	2.7
Calcium	7440-70-2	ug/L	-	7940	23600	30800	16100	13700
Chromium	7440-47-3	ug/L	10	**27.2**	6.3	**22.4**	**86.2**	25.1
Cobalt	7440-48-4	ug/L	1	**19.0**	**178**	**14.2**	**38.1**	45.2
Copper	7440-50-8	ug/L	1000	12.2	ND	14.7	27.4	ND
Iron	7439-89-6	ug/L	300	**13400 M1**	**9060**	**100000**	**365000**	452
Lead	7439-92-1	ug/L	15	13.8	ND	**32.7**	**56.8**	ND
Magnesium	7439-95-4	ug/L	-	1450	5300	4890	4720	2280
Manganese	7439-96-5	ug/L	50	**589**	**6680**	**241**	**822**	88.1
Nickel	7440-02-0	ug/L	100	4.4 J	4.5 J	7.5	17.9 J	39.4
Potassium	7440-09-7	ug/L	-	6940	6080	4950 J	ND	36700
Selenium	7782-49-2	ug/L	20	ND	ND	6.3 J	ND	ND
Sodium	7440-23-5	ug/L	-	13500	53500	11600	33900	142000
Thallium	7440-28-0	ug/L	0.2	**8.5 J**	**10.8**	ND	ND	ND
Vanadium	7440-62-2	ug/L	0.3	**55.6**	**2.9 J**	**101**	**275**	40.6
Zinc	7440-66-6	ug/L	1000	18.5	13.7	38.6	79.4	5.6 J
Mercury	7439-97-6	ug/L	1	0.12 J	ND	0.11 J	0.42	ND
Acetone	67-64-1	ug/L	6000	ND	ND	ND	ND	10.1 J
Carbon disulfide	75-15-0	ug/L	700	ND	ND	ND	ND	1.5 J
Toluene	108-88-3	ug/L	600	ND	ND	ND	ND	1.6
2-Methylphenol(o-Cresol)	95-48-7	ug/L	400	ND	ND	ND	ND	18.4
Fluorene	86-73-7	ug/L	300	ND	ND	ND	ND	1.0 J
Formaldehyde	50-00-0	ug/L	600	93.5 N2	63.6 N2	66.6 N2	628 N2	39.7 J,N2
Sulfur dioxide	7446-09-5	ug/L	-				7.2 N	
3-Pentanone, 2-methyl-	565-69-5	ug/L	-	ND	ND	ND	ND	5.6 N
1,3,5-Trithiane	291-21-4	ug/L	-	11.3 N	ND	ND	ND	691 N
Cyclotetrasiloxane, octa	556-67-2	ug/L	-	226 N	144 N	234 N	152 N	198 N
1,4-Benzenediamine, N,N-	93-05-0	ug/L	-				6.3 N	
n-Hexadecanoic acid	57-10-3	ug/L	-				10.9 N	
Unknown Alcohol		ug/L	-	80.9	94.3	82.9	93.7	9.5 N
Unknown Aldol Condensate		ug/L	-					136 N
Unknown		ug/L	-	133 N	16.1 N	139 N	11.8 N	11.2 N
Unknown		ug/L	-	15.4 N	37.9 N	150 N	258 N	4200 N
Unknown		ug/L	-	53.5 N	48.1 N	16.5 N	80.6 N	93.9 N
Unknown		ug/L	-				44.0 N	101 N
Unknown		ug/L	-				7.2 N	166 N
Unknown		ug/L	-					206 N
Unknown		ug/L	-					242 N
Unknown		ug/L	-					455 N
Unknown		ug/L	-					502 N
Unknown		ug/L	-					51.0 N
Unknown		ug/L	-					78.4 N
Unknown		ug/L	-					91.8 N

NOTES: CAS - Chemical Abstracts Service
NCAC GW 2L Stds. - North Carolina Groundwater Standards (15A NCAC 2L)
BOLD - Groundwater results exceed the NCAC GW 2L Stds
M0 - Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
N2 - Laboratory does not hold TNI accreditation for this parameter
L2 - Analyte recovery in the laboratory control sample was outside QC Limits.
M6 - Matrix spike and matrix spike duplicate recovery not evaluated against control limits
M1 - Matrix Spike recovery exceeded QC limits.
D3 - Sample was diluted due to presence of high levels of non-target analytes
\- No NCAC 2L GW Standards
C9 - Common Laboratory contaminant
R1 - RPD values outside control limits
H1 - Analysis conducted outside EPA method hold time
N - Tentatively Identified Compound
J - Estimated
ND - Not Detected
H6 - Analysis initiated outside 15-minute holding time.

TABLE 9

STORMWATER SAMPLES ANALYTICAL RESULTS SUMMARY
MONOFILL CELL
WRIGHT CHEMICAL CORPORATION, RIEGELWOOD, NORTH CAROLINA

Analyte	CAS Number	NCAC 2B Standards	Analytical Results	
			MF-STORMWATER-N	MF-STORMWATER-W
		Sample Collection Date:	12/22/2015	12/22/2015
pH (Std. Units)		6.0 - 9.0*	6.4	6.6
ANALYTICAL RESULTS BELOW REPORTED IN mg/l				
Chloride	16887-00-6	230	3.3	1.9
Sulfate	14808-79-8	250	1.6 J	1.9 J
Nitrogen, Ammonia	7664-41-7	-	0.2	0.51
Nitrogen, NO2 plus NO3	-	-	0.037	1.5
Nitrogen, Nitrate	-	10	0.01 J	1.5
Nitrogen, Nitrite	-	-	0.026	0.02
Phosphorus	7723-14-0	-	0.11	0.15
Orthophosphate as P	-	-	0.059	0.065
ANALYTICAL RESULTS BELOW REPORTED IN µg/l				
Aluminum	7429-90-5	-	1260	913
Barium	7440-39-3	1000	4.9 J	5.4
Calcium	7440-70-2	-	3750	8850
Chromium	7440-47-3	24	ND	3.1 J
Copper	7440-50-8	2.7	**5.1**	**9**
Iron	7439-89-6	-	870	643
Magnesium	7439-95-4	-	335	475
Manganese	7439-96-5	-	9.5	18.4
Vanadium	7440-62-2	-	5.4	7.9
Zinc	7440-66-6	36	11.8	21.1
3&4 methylphenol	-	300 (Phenolics)	ND	3.8 J
phenol	108-95-2	300 (Phenolics)	ND	2.8 J
8260 TENTATIVELY IDENTIFIED CONSTITUENTS				
Silanol, trimethyl-	1066-40-6	-	5.4 N	ND
Cyclotrisiloxane, hexame	541-05-9	-	19.9 N	25.6 N
Methylene Chloride	75-09-2	-	10.8 N	11.8 N
Unknown	-	-	141 N	145 N
Unknown	-	-	142 N	144 N
Unknown	-	-	6.4 N	7.4 N
Unknown	-	-	5.1 N	-
8270 TENTATIVELY IDENTIFIED CONSTITUENTS				
Unknown	-	-	11.1 N	6.5 N
Unknown	-	-	-	5.2 N
Unknown	-	-	-	8.2 N

NOTES: CAS - Chemical Abstracts Service
J - Estimated
NCAC 2B Standards - North Carolina Administrative Code Subchapter 2B Surface Water Standards
- No Standard
BOLD - Exceeds the NCAC 2B Standard
ND - Not Detected
N - Tentatively Identified Compound
Dup - Duplicate
* Freshwater

TABLE 10
QA/QC FOR LEACHATE AND GROUNDWATER ANALYTICAL RESULTS SUMMARY
MONOFILL CELL
WRIGHT CHEMICAL CORPORATION, RIEGELWOOD, NORTH CAROLINA

Analyte	CAS Number	UNITS	SAMPLE IDENTIFICATION			
			MDB-4	MDB-4 Dup	MDB Rinse Blank	Trip Blank
Cyanide	57-12-5	mg/L	ND	0.012	ND	NA
Chloride	16887-00-6	mg/L	37.5	34.9	ND	NA
Fluoride	16984-48-8	mg/L	1.1	1.0	ND	NA
Sulfate	14808-79-8	mg/L	61.4	61.3	ND	NA
Nitrogen, Ammonia	7664-41-7	mg/L	281	296		NA
Nitrogen, NO2 plus NO3		mg/L	0.14	0.021	0.045	NA
Nitrogen, Nitrate		mg/L	0.14	0.021	0.045	NA
Nitrogen, Nitrite		mg/L	0.012 J	ND	ND	NA
Phosphorus	7723-14-0	mg/L	5.6	15.6	ND	NA
Orthophosphate as P		mg/L	1.3	4.5	ND	NA
pH		Std. Units	7.8 H6	7.8 H6	6.3 H6	NA
Aluminum	7429-90-5	µg/L	39300	74000	ND	NA
Antimony	7440-36-0	µg/L	ND	ND	ND	NA
Arsenic	7440-38-2	µg/L	48.8 J	104	ND	NA
Barium	7440-39-3	µg/L	140	207	ND	NA
Beryllium	7440-41-7	µg/L	11.3	19.6	ND	NA
Calcium	7440-70-2	µg/L	16100	19400	ND	NA
Chromium	7440-47-3	µg/L	86.2	160	ND	NA
Cobalt	7440-48-4	µg/L	38.1	63.8	ND	NA
Copper	7440-50-8	µg/L	27.4	76.6	ND	NA
Iron	7439-89-6	µg/L	365000	480000	34.6 J	NA
Lead	7439-92-1	µg/L	56.8	118	ND	NA
Magnesium	7439-95-4	µg/L	4720	5410	ND	NA
Manganese	7439-96-5	µg/L	822	870	ND	NA
Nickel	7440-02-0	µg/L	17.9 J	34.3	ND	NA
Sodium	7440-23-5	µg/L	33900	33000	ND	NA
Vanadium	7440-62-2	µg/L	275	478	ND	NA
Zinc	7440-66-6	µg/L	79.4	132	ND	NA
Mercury	7439-97-6	µg/L	0.42	0.72	ND	NA
Methylene Chloride	75-09-2	µg/L	ND	ND	1.5 J,C9	ND
Benzaldehyde	100-52-7	µg/L	ND L2	ND L2	ND L2	NA
Formaldehyde	50-00-0	µg/L	628 N2	692 N2	ND N2	NA
Sulfur dioxide	7446-09-5	µg/L	7.2			
1,3,5-Trithiane	291-21-4	µg/L		11.5		
Cyclotetrasiloxane, octa	556-67-2	µg/L	152	44.0	222	237
1,4-Benzenediamine, N,N-	93-05-0	µg/L	6.3	27.7		
n-Hexadecanoic acid	57-10-3	µg/L	10.9			
Unknown		µg/L	11.8	181	11.0	12.4
Unknown		µg/L	258	23.4	140	145
Unknown		µg/L	80.6	76.6	25.5	26.5
Unknown		µg/L	44.0	16.1		
Unknown		µg/L	7.2	8.8		
Unknown		µg/L	93.7	99.3		

NOTES: CAS - Chemical Abstracts Service
NA - Not Analyzed
ND - Not Detected
L2 - Analyte recovery in the laboratory control sample was outside QC Limits.
H6-Analysis initiated outside 15 minute holding time.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
C9 - Common Laboratory contaminant
N2 - Laboratory does not hold TNI accreditation for this parameter

ATTACHMENT A

LINER SAMPLE COLLECTION

AND

LINER REPAIR FIELD REPORT

Shield Engineering, Inc.
4301 Taggart Creek Rd, Charlotte NC 28208
Telephone 704-394-6913 Fax 704-394-6968

DAILY RECORD
12-14-15 Mon

Project Name: Wright Chemical- Monofill Liner Sampling **Client's Name:** Oak-Bark Corporation **Location:** Wright Chemical/Hexion 333 Neils Eddy Rd, Riegelwood NC	**Contractor:** RTD Enterprises **Shield Project No:** 1100044-05 **Task No.:** 0009 **Rev:**

Disclaimer: This report and the attached data sheet(s) constitute a summary of observations and tests performed by Shield's engineering representatives. The statements made herein do not constitute a certificate. Approval of data for final report can only be made by Shield's engineers and cannot be conveyed on this form unless the signature of the certifying engineer is attached below. Interpretations based on this data are the responsibility of others.

Onsite: 07:30 **Off Site**: 12:45
Weather: overcast, low 70's, rain began at 11:00

Personnel on site:

Shield Engineering, Inc: Richard A. Meerholz (Sr. Field Technician), David Wallace, P.E.
Scale Office: Alan Morris
RTD Enterprises (Liner Installation Contractor): Lance and Chandler (Chuck)
NCDENR: Dave Mattison
Maintenance Building: Larry Dale

Construction Activities:

Summary of today's Progress:

- RTD removed a 2 ft x 4 ft liner sample from 3 locations at the top edge of the Monofill Cell and installed a repair patch of new Hypalon liner at each sample location. See attached map sketch.
- Two samples of the top cover were also obtained.
- The geo fabric and top cover were put back over the repair patches and secured with either sand bags or soil.
- The three liner and top cover samples were collected and secured in a Shield truck to be taken back to the Shield Engineering, Inc. office for mailing to testing firm.

Equipment in use on Site:
RTD Enterprises used standard liner repair tools and equipment. Liner cutting knife, wire brush, electric drill with wire brush attachment, heat gun, glue and brush applicator and a gasoline powered generator to power the electrical tools.

- Richard Meerholz arrived on site, Hexion, at 07:30 and waited in the parking lot for Dave Wallace who arrived at 07:45. Richard observed that Lance and Chandler with RTD arrived shortly after Richard arrived.
- Dave Wallace, Richard, Lance and Chandler were brought to the meeting room at the scale office for a site orientation safety meeting facilitated by Alan Morris.
- Alan Morris was asked if we needed a Hexion Work Permit to work on the Monofill Cell. He said, "yes" and we asked from whom do we get a Work Permit from. He said Larry Dale in the Maintenance Building.
- Dave, Richard, Lance and Chandler were given site visitor badges and entered the site through the scale gate in two vehicles and directly drove to the south side of the Monofill Cell.

Reviewed by: Dave Wallace, P.E. Attachments: map sketch
Reported by: Richard A. Meerholz, Sr. Field Technician

- David Wallace described our proposed work on the Monofill Cell with Larry Dale and asked for a Work Permit from him for our proposed work on the Monofill Cell. He said that we did not need a Hexion Work Permit. David Wallace mentioned that Alan Morris had indicated that we did need a Work Permit but Larry Dale again said no.
- All four walked to all three locations along the edge of the Monofill Cell to observe where the liner samples were to be taken. The top cover and geo fabric was lifted to expose the Hypalon liner.
- Lance looked at the cover liner and said that it is not a Hypalon material but a multiple of thin layers of HDPE plastic and that RTD could not install a repair patch on it. He could not determine if the HDPE was a low or high density material. He made a confirmation call to the company regarding the repair of the top cover. He said he would obtain samples of the cover and take them back with him.
- David Wallace asked Lance if he thought that the HDPE cover liner is leaking and he answered yes. He asked how sure he was of that and Lance answered that he had been in this business for 20 years and he was confident based on the visible weathered condition of the liner that it would be leaking.
- Shield provided a shovel and broom and RTD cleaned off the exposed Hypalon liner in preparation to cut out a sample. A 2 ft by 4 ft sample of the Hypalon liner was cut out at each of the 3 locations (WCS-HYP-1, WCS-HYP-2 and WCS-HYP-3).
- RTD also cut out a 2 ft by 4 ft sample of the HDPE cover liner at repair locations 1 and 2 (WCS-HDPE-1 and WCS-HDPE-2).
- RTD moved their truck as close as possible to each of the sample locations and setup their equipment. The generator remained on their truck and used long extension cords to reach each location.
- Shield observed the sample cut out and installation of each Hypalon patch. The procedure for the installation of each patch was as follows:
    1. A 2 x 4 ft piece of the Hypalon liner was cut out.
    2. A wire hand brush and a drill with a wire brush attachment was used to clean off a 6" wide strip around the edge of the cutout liner.
    3. A new piece of Hypalon liner was cut off from a new roll and sized to cover the cutout with a 6" overlap.
    4. The brushed off surface and the edge of the new patch piece was cleaned with a special liner cleaner.
    5. The new patch was placed over the cutout and positioned with the 6" overlap.
    6. The edges of both the patch piece and the cutout were heated with the electric heat gun.
    7. Glue was applied with a brush on the edge of the patch piece and the edge of the cutout.
    8. The joint was heated while being pressed with a wooden roller until no gaps were visible.
    9. The geo fabric and top cover were put back over the newly patched liner and secured.
- Rain began to fall at 11:00 during the repair at the third location. RTD provided a rain cover over the repair work until it was finished.
- The first repair was completed at 10:15, the second at 10:45 and the third at 11:35.
- David Mattison (NCDENR) arrived at the site and came over to the location of the second liner sample. We outlined what we had done and still left to do. In general conversation he did indicate that this Monofill Cell needed to be removed from here. Shield made no response to that comment.
- Since RTD could not repair the HDPE sampling locations, they cleaned up and left the site at about 11:50.
- Shield cleaned up and remained on site to check the progress of the on site Shield sampling with Matt and Ayla. They were in the progress of bottling up their samples in the rain. At about 12:35 Dave Wallace discontinued the sampling for the rest of the day due to rain.
- Dave and Richard left the site at 12:50 and Matt and Ayla left the site after their equipment was decontaminated.

First Hypalon liner sample location on SE corner of the Monofill Cell

2'x4' Hypalon liner sample piece cut out (WCS-HYP-1)
Note the HDPE cover liner pulled back on top. A sample was also cut out (WCS-HDPE-1)

Cleaning the edges of a new Hypalon liner repair piece

Cleaning the edges of the existing Hypalon liner cutout
Note the geo fabric and top HDPE cover rolled back

Application of glue between the edges of the cutout and new Hypalon liner patch

Heating the edge surfaces of the new Hypalon patch piece and cutout

Rolling the Hypalon liner joint together with a wooded roller

Completed first Hypalon liner sample repair patch

Second HDPE liner sample location on north side of Monofill pond

Application of glue between Hypalon liner patch joint after heating of surfaces

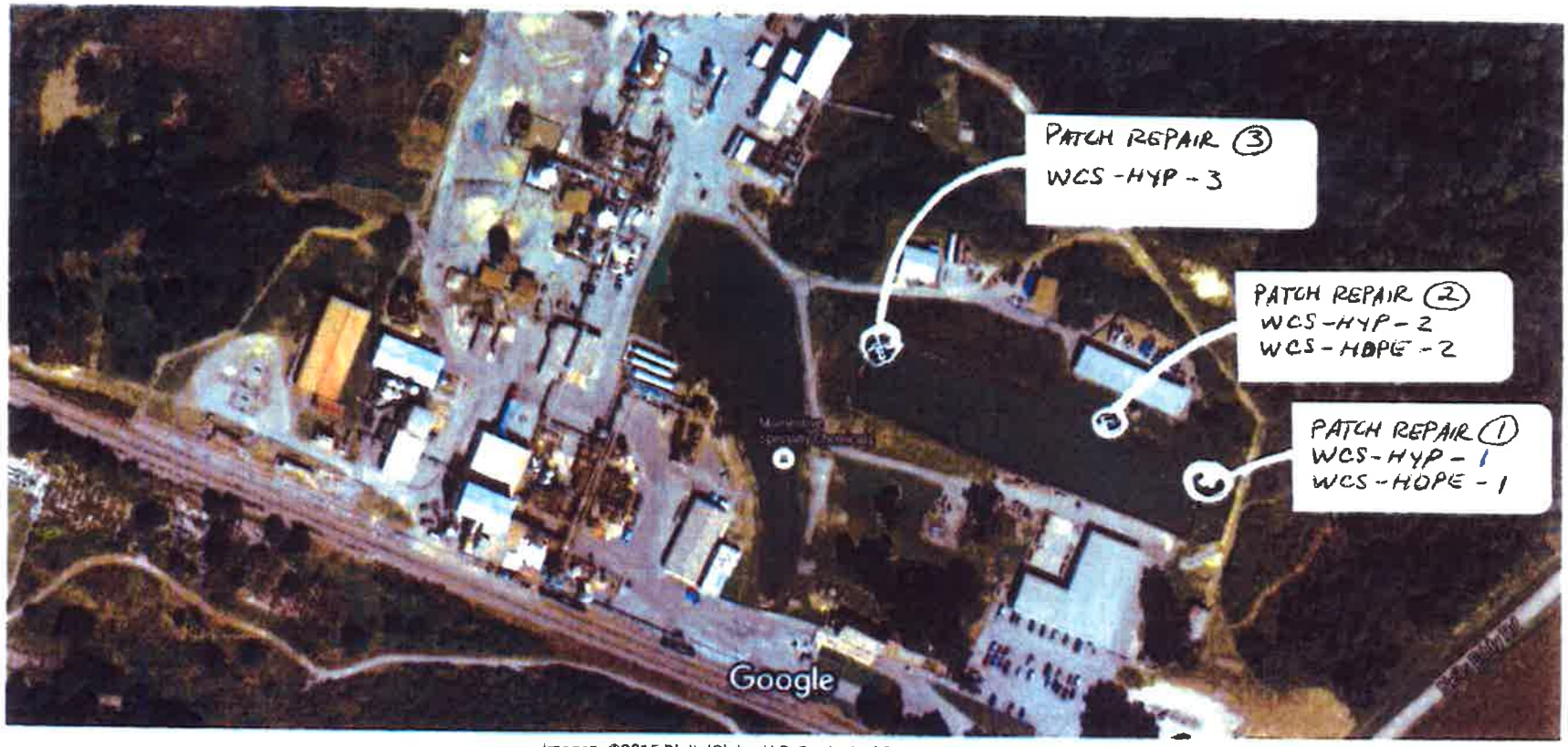
Third Hypalon liner sample location on NW corner of the Monofill Cell.

Completed third Hypalon liner sample repair patch.

HDPE top liner on Monofill Cell

The HDPE cover over the Monofill Cell

Google Maps



Imagery ©2015 DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2015 Google 100 ft

SAMPLES COLLECTED

WCS-HYP-1
WCS-HYP-2
WCS-HYP-3
WCS-HDPE-1
WCS-HDPE-2

WRIGHT CHEMICAL/HEXION
1100044-05/0009

12/14/15 MDW
RICHARD A. MEERHOLZ

https://www.google.com/maps/@34.3278607,-78.2017087,306m/data=!3m1!1e3

ATTACHMENT B

PONDED WATER ABOVE

MONOFILL CELL TOP LINER

LABORATORY RESULTS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 04, 2016

Mr. Mike Armour
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

RE: Project: Wright Chemical Site
Pace Project No.: 92278269

Dear Mr. Armour:
Enclosed are the analytical results for sample(s) received by the laboratory on December 02, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Nicole Gasiorowski

Nicole Gasiorowski
nicole.gasiorowski@pacelabs.com
Project Manager

Enclosures

cc: Dave Stoner
Dave Wallace

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: Wright Chemical Site
Pace Project No.: 92278269

Pennsylvania Certification IDs

Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Tampa Certification IDs

5460 Beaumont Center Blvd, Ste 520, Tampa, FL 33634
Florida Certification #: E84809

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
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
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

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
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: Wright Chemical Site
Pace Project No.: 92278269

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92278269001	**PSW-1**	Water	12/02/15 11:15	12/02/15 17:33

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Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Wright Chemical Site
Pace Project No.: 92278269

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92278269001	**PSW-1**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8270	BPJ	74	PASI-C
		EPA 8260	NB	56	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA
		EPA 8315	JH1	1	
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	DMN	1	PASI-A

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 8081**
Description: 8081 Organochlorine Pesticides
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 8081. 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 3510 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.

QC Batch: OEXT/39578

S4: Surrogate recovery not evaluated against control limits due to sample dilution.
- PSW-1 (Lab ID: 92278269001)
  - Tetrachloro-m-xylene (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.

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: OEXT/39578

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- PSW-1 (Lab ID: 92278269001)
  - Tetrachloro-m-xylene (S)

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 6010. 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 3010A 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.

QC Batch: MPRP/20176

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92277685002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1620438)
  - Aluminum
  - Iron
- MSD (Lab ID: 1620439)
  - Aluminum
  - Iron

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 7470**
Description: 7470 Mercury
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 7470. 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 7470 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: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 8270. 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 3510 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: OEXT/39479

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- PSW-1 (Lab ID: 92278269001)
  - 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.

QC Batch: OEXT/39479

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1620610)
  - Benzaldehyde

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Shield
Date: January 04, 2016

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

QC Batch: OEXT/39479

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278147002

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1620611)
  - Benzaldehyde

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1620611)
  - 1,2,4,5-Tetrachlorobenzene
  - 2,2'-Oxybis(1-chloropropane)
  - 2,3,4,6-Tetrachlorophenol
  - Acetophenone
  - Benzo(b)fluoranthene
  - Benzo(k)fluoranthene
  - Biphenyl (Diphenyl)
  - Butylbenzylphthalate
  - Caprolactam
  - Di-n-butylphthalate
  - Isophorone
  - bis(2-Ethylhexyl)phthalate

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

Additional Comments:

Analyte Comments:

QC Batch: OEXT/39479

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- PSW-1 (Lab ID: 92278269001)
  - Nitrobenzene-d5 (S)

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 8260. 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.

QC Batch: MSV/34538

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278363002,92278363003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1620089)
  - Dichlorodifluoromethane
  - Trichlorofluoromethane
  - Vinyl chloride
- MS (Lab ID: 1620090)
  - Bromochloromethane
  - Dichlorodifluoromethane
  - Trichlorofluoromethane
  - Vinyl chloride
  - cis-1,2-Dichloroethene
  - trans-1,2-Dichloroethene

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: Shield
Date: January 04, 2016

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: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 900.0**
Description: 900.0 Gross Alpha/Beta
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 900.0. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 903.1. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 904.0. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **ASTM D5174-97**
Description: D517497 Total Uranium KPA
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for ASTM D5174-97. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 8315**
Description: 8315 WTP HPLC
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 8315. 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.

H2: Extraction or preparation conducted outside EPA method holding time.
- PSW-1 (Lab ID: 92278269001)

Sample Preparation:
The samples were prepared in accordance with EPA 8315 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.

QC Batch: TAMP/7938

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278269001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MSD (Lab ID: 1413236)
  - Formaldehyde

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 9040**
Description: 9040 pH
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 9040. 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.

H6: Analysis initiated outside of the 15 minute EPA recommended holding time.
- PSW-1 (Lab ID: 92278269001)

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: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 300.0. 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.

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: WETA/25650

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92277996001,92278389001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1621362)
  - Fluoride
- MS (Lab ID: 1621526)
  - Sulfate
- MSD (Lab ID: 1621363)
  - Fluoride
- MSD (Lab ID: 1621527)
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 350.1**
Description: 350.1 Ammonia
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 350.1. 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.

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: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 353.2. 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.

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

QC Batch: WETA/25630

B: Analyte was detected in the associated method blank.

- BLANK for HBN 292119 [WETA/256 (Lab ID: 1619707)
  - Nitrogen, Nitrate

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: Wright Chemical Site
Pace Project No.: 92278269

Method: **EPA 365.1**
Description: 365.1 Phosphorus, Total
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 365.1. 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.

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: Wright Chemical Site
Pace Project No.: 92278269

Method: **SM 4500-Cl-E**
Description: 4500 Chloride
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for SM 4500-Cl-E. 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.

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: Wright Chemical Site
Pace Project No.: 92278269

Method: **SM 4500-CN-E**
Description: 4500CNE Cyanide, Total
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for SM 4500-CN-E. 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.

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: WETA/25636

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92277799001,92278269001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1620031)
  - Cyanide
- MSD (Lab ID: 1620032)
  - Cyanide

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278269

Method: **SM 4500-P E**
Description: SM4500P-E, Phosphate, Ortho
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for SM 4500-P E. 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.

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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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278269

Sample: PSW-1 **Lab ID: 92278269001** Collected: 12/02/15 11:15 Received: 12/02/15 17:33 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	309-00-2	
alpha-BHC	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	319-84-6	
beta-BHC	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	319-85-7	
delta-BHC	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	58-89-9	
Chlordane (Technical)	ND	ug/L	2.0	2.0	10	12/08/15 12:15	12/11/15 04:22	57-74-9	
4,4'-DDD	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	72-54-8	
4,4'-DDE	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	72-55-9	
4,4'-DDT	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	50-29-3	
Dieldrin	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	60-57-1	
Endosulfan I	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	959-98-8	
Endosulfan II	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	1031-07-8	
Endrin	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	72-20-8	
Endrin aldehyde	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	7421-93-4	
Endrin ketone	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	53494-70-5	
Heptachlor	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	76-44-8	
Heptachlor epoxide	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 04:22	1024-57-3	
Methoxychlor	ND	ug/L	1.5	1.5	10	12/08/15 12:15	12/11/15 04:22	72-43-5	
Toxaphene	ND	ug/L	2.0	2.0	10	12/08/15 12:15	12/11/15 04:22	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	0	%	20-130		10	12/08/15 12:15	12/11/15 04:22	877-09-8	D3,S4
Decachlorobiphenyl (S)	0	%	20-130		10	12/08/15 12:15	12/11/15 04:22	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**7400**	ug/L	100	50.0	1	12/04/15 19:30	12/08/15 01:46	7429-90-5	
Antimony	ND	ug/L	5.0	3.9	1	12/04/15 19:30	12/08/15 01:46	7440-36-0	
Arsenic	**14.8**	ug/L	10.0	5.0	1	12/04/15 19:30	12/08/15 01:46	7440-38-2	
Barium	**99.2**	ug/L	5.0	2.5	1	12/04/15 19:30	12/08/15 01:46	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/04/15 19:30	12/08/15 01:46	7440-41-7	
Cadmium	**0.69J**	ug/L	1.0	0.50	1	12/04/15 19:30	12/08/15 01:46	7440-43-9	
Calcium	**21400**	ug/L	100	50.0	1	12/04/15 19:30	12/08/15 01:46	7440-70-2	
Chromium	**30.2**	ug/L	5.0	2.5	1	12/04/15 19:30	12/08/15 01:46	7440-47-3	
Cobalt	**13.1**	ug/L	5.0	2.5	1	12/04/15 19:30	12/08/15 01:46	7440-48-4	
Copper	**184**	ug/L	5.0	2.5	1	12/04/15 19:30	12/08/15 01:46	7440-50-8	
Iron	**10400**	ug/L	50.0	25.0	1	12/04/15 19:30	12/08/15 01:46	7439-89-6	
Lead	**35.3**	ug/L	5.0	2.5	1	12/04/15 19:30	12/08/15 01:46	7439-92-1	
Magnesium	**4590**	ug/L	100	50.0	1	12/04/15 19:30	12/08/15 01:46	7439-95-4	
Manganese	**550**	ug/L	5.0	2.5	1	12/04/15 19:30	12/08/15 01:46	7439-96-5	
Nickel	**42.1**	ug/L	5.0	2.5	1	12/04/15 19:30	12/08/15 01:46	7440-02-0	
Potassium	**10100**	ug/L	5000	2500	1	12/04/15 19:30	12/08/15 01:46	7440-09-7	
Selenium	**7.6J**	ug/L	10.0	5.0	1	12/04/15 19:30	12/08/15 01:46	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	12/04/15 19:30	12/08/15 01:46	7440-22-4	
Sodium	**8710**	ug/L	5000	2500	1	12/04/15 19:30	12/08/15 01:46	7440-23-5	
Thallium	ND	ug/L	10.0	5.0	1	12/04/15 19:30	12/08/15 01:46	7440-28-0	
Vanadium	**92.8**	ug/L	5.0	2.5	1	12/04/15 19:30	12/08/15 01:46	7440-62-2	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278269

Sample: PSW-1 **Lab ID: 92278269001** Collected: 12/02/15 11:15 Received: 12/02/15 17:33 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	**380**	ug/L	10.0	5.0	1	12/04/15 19:30	12/08/15 01:46	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	**0.34**	ug/L	0.20	0.10	1	12/08/15 10:00	12/09/15 11:26	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	100	2.5	10	12/04/15 15:53	12/08/15 17:41	83-32-9	
Acenaphthylene	ND	ug/L	100	2.1	10	12/04/15 15:53	12/08/15 17:41	208-96-8	
Acetophenone	ND	ug/L	100	19.5	10	12/04/15 15:53	12/08/15 17:41	98-86-2	
Anthracene	ND	ug/L	100	1.4	10	12/04/15 15:53	12/08/15 17:41	120-12-7	
Atrazine	ND	ug/L	200	16.5	10	12/04/15 15:53	12/08/15 17:41	1912-24-9	
Benzaldehyde	ND	ug/L	200	47.0	10	12/04/15 15:53	12/08/15 17:41	100-52-7	L2
Benzo(a)anthracene	ND	ug/L	100	3.3	10	12/04/15 15:53	12/08/15 17:41	56-55-3	
Benzo(a)pyrene	ND	ug/L	100	3.0	10	12/04/15 15:53	12/08/15 17:41	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	100	2.8	10	12/04/15 15:53	12/08/15 17:41	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	100	3.8	10	12/04/15 15:53	12/08/15 17:41	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	100	4.3	10	12/04/15 15:53	12/08/15 17:41	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	100	18.7	10	12/04/15 15:53	12/08/15 17:41	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	100	13.2	10	12/04/15 15:53	12/08/15 17:41	101-55-3	
Butylbenzylphthalate	ND	ug/L	100	7.5	10	12/04/15 15:53	12/08/15 17:41	85-68-7	
Caprolactam	ND	ug/L	100	17.7	10	12/04/15 15:53	12/08/15 17:41	105-60-2	
Carbazole	ND	ug/L	100	7.3	10	12/04/15 15:53	12/08/15 17:41	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	200	41.7	10	12/04/15 15:53	12/08/15 17:41	59-50-7	
4-Chloroaniline	ND	ug/L	200	33.9	10	12/04/15 15:53	12/08/15 17:41	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	100	16.8	10	12/04/15 15:53	12/08/15 17:41	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	100	14.7	10	12/04/15 15:53	12/08/15 17:41	111-44-4	
2-Chloronaphthalene	ND	ug/L	100	22.1	10	12/04/15 15:53	12/08/15 17:41	91-58-7	
2-Chlorophenol	ND	ug/L	100	14.6	10	12/04/15 15:53	12/08/15 17:41	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	100	20.9	10	12/04/15 15:53	12/08/15 17:41	7005-72-3	
Chrysene	ND	ug/L	100	2.1	10	12/04/15 15:53	12/08/15 17:41	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	100	5.5	10	12/04/15 15:53	12/08/15 17:41	53-70-3	
Dibenzofuran	ND	ug/L	100	17.7	10	12/04/15 15:53	12/08/15 17:41	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	200	14.2	10	12/04/15 15:53	12/08/15 17:41	91-94-1	
2,4-Dichlorophenol	ND	ug/L	100	16.6	10	12/04/15 15:53	12/08/15 17:41	120-83-2	
Diethylphthalate	ND	ug/L	100	13.3	10	12/04/15 15:53	12/08/15 17:41	84-66-2	
2,4-Dimethylphenol	ND	ug/L	100	21.9	10	12/04/15 15:53	12/08/15 17:41	105-67-9	
Dimethylphthalate	ND	ug/L	100	14.8	10	12/04/15 15:53	12/08/15 17:41	131-11-3	
Di-n-butylphthalate	ND	ug/L	100	10.6	10	12/04/15 15:53	12/08/15 17:41	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	200	16.6	10	12/04/15 15:53	12/08/15 17:41	534-52-1	
2,4-Dinitrophenol	ND	ug/L	500	65.3	10	12/04/15 15:53	12/08/15 17:41	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	100	11.9	10	12/04/15 15:53	12/08/15 17:41	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	100	16.8	10	12/04/15 15:53	12/08/15 17:41	606-20-2	
Di-n-octylphthalate	**56.5J**	ug/L	100	8.6	10	12/04/15 15:53	12/08/15 17:41	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	60.0	8.5	10	12/04/15 15:53	12/08/15 17:41	117-81-7	
Fluoranthene	ND	ug/L	100	2.1	10	12/04/15 15:53	12/08/15 17:41	206-44-0	
Fluorene	ND	ug/L	100	2.1	10	12/04/15 15:53	12/08/15 17:41	86-73-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278269

Sample: PSW-1 **Lab ID: 92278269001** Collected: 12/02/15 11:15 Received: 12/02/15 17:33 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	100	18.4	10	12/04/15 15:53	12/08/15 17:41	87-68-3	
Hexachlorobenzene	ND	ug/L	100	11.4	10	12/04/15 15:53	12/08/15 17:41	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	100	17.5	10	12/04/15 15:53	12/08/15 17:41	77-47-4	
Hexachloroethane	ND	ug/L	100	14.6	10	12/04/15 15:53	12/08/15 17:41	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	100	2.9	10	12/04/15 15:53	12/08/15 17:41	193-39-5	
Isophorone	ND	ug/L	100	17.7	10	12/04/15 15:53	12/08/15 17:41	78-59-1	
2-Methylnaphthalene	ND	ug/L	100	2.8	10	12/04/15 15:53	12/08/15 17:41	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	100	17.4	10	12/04/15 15:53	12/08/15 17:41	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	100	17.2	10	12/04/15 15:53	12/08/15 17:41		
Naphthalene	ND	ug/L	100	3.4	10	12/04/15 15:53	12/08/15 17:41	91-20-3	
2-Nitroaniline	ND	ug/L	500	28.2	10	12/04/15 15:53	12/08/15 17:41	88-74-4	
3-Nitroaniline	ND	ug/L	500	24.2	10	12/04/15 15:53	12/08/15 17:41	99-09-2	
4-Nitroaniline	ND	ug/L	200	25.4	10	12/04/15 15:53	12/08/15 17:41	100-01-6	
Nitrobenzene	ND	ug/L	100	16.6	10	12/04/15 15:53	12/08/15 17:41	98-95-3	
2-Nitrophenol	ND	ug/L	100	16.5	10	12/04/15 15:53	12/08/15 17:41	88-75-5	
4-Nitrophenol	ND	ug/L	500	57.9	10	12/04/15 15:53	12/08/15 17:41	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	100	20.7	10	12/04/15 15:53	12/08/15 17:41	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	100	13.2	10	12/04/15 15:53	12/08/15 17:41	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	100	16.2	10	12/04/15 15:53	12/08/15 17:41	108-60-1	
Pentachlorophenol	ND	ug/L	250	23.2	10	12/04/15 15:53	12/08/15 17:41	87-86-5	
Phenanthrene	ND	ug/L	100	2.2	10	12/04/15 15:53	12/08/15 17:41	85-01-8	
Phenol	ND	ug/L	100	16.8	10	12/04/15 15:53	12/08/15 17:41	108-95-2	
Pyrene	ND	ug/L	100	1.9	10	12/04/15 15:53	12/08/15 17:41	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	100	16.7	10	12/04/15 15:53	12/08/15 17:41	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	100	22.6	10	12/04/15 15:53	12/08/15 17:41	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	100	22.5	10	12/04/15 15:53	12/08/15 17:41	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100	18.9	10	12/04/15 15:53	12/08/15 17:41	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	0	%	21-110		10	12/04/15 15:53	12/08/15 17:41	4165-60-0	D3,S4
2-Fluorobiphenyl (S)	0	%	27-110		10	12/04/15 15:53	12/08/15 17:41	321-60-8	S4
Terphenyl-d14 (S)	0	%	31-107		10	12/04/15 15:53	12/08/15 17:41	1718-51-0	S4
Phenol-d6 (S)	0	%	10-110		10	12/04/15 15:53	12/08/15 17:41	13127-88-3	S4
2-Fluorophenol (S)	0	%	12-110		10	12/04/15 15:53	12/08/15 17:41	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	27-110		10	12/04/15 15:53	12/08/15 17:41	118-79-6	S4
Tentatively Identified Compounds									
Unknown	**52.1**	ug/L			10	12/04/15 15:53	12/08/15 17:41		N
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		12/04/15 16:57	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		12/04/15 16:57	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		12/04/15 16:57	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/04/15 16:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		12/04/15 16:57	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		12/04/15 16:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		12/04/15 16:57	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		12/04/15 16:57	75-15-0	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278269

Sample: PSW-1 **Lab ID: 92278269001** Collected: 12/02/15 11:15 Received: 12/02/15 17:33 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/04/15 16:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		12/04/15 16:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		12/04/15 16:57	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		12/04/15 16:57	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/04/15 16:57	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		12/04/15 16:57	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		12/04/15 16:57	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		12/04/15 16:57	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/04/15 16:57	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		12/04/15 16:57	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		12/04/15 16:57	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/04/15 16:57	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		12/04/15 16:57	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		12/04/15 16:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		12/04/15 16:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		12/04/15 16:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		12/04/15 16:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		12/04/15 16:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/04/15 16:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/04/15 16:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/04/15 16:57	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		12/04/15 16:57	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/04/15 16:57	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		12/04/15 16:57	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		12/04/15 16:57	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		12/04/15 16:57	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		12/04/15 16:57	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		12/04/15 16:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		12/04/15 16:57	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		12/04/15 16:57	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		12/04/15 16:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		12/04/15 16:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/04/15 16:57	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/04/15 16:57	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		12/04/15 16:57	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		12/04/15 16:57	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/04/15 16:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/04/15 16:57	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/04/15 16:57	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/04/15 16:57	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		12/04/15 16:57	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/04/15 16:57	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		12/04/15 16:57	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		12/04/15 16:57	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		12/04/15 16:57	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278269

Sample: PSW-1 **Lab ID: 92278269001** Collected: 12/02/15 11:15 Received: 12/02/15 17:33 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		12/04/15 16:57	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		12/04/15 16:57	2037-26-5	
Tentatively Identified Compounds									
Hexanal	**5.8**	ug/L			1		12/04/15 16:57	66-25-1	N
8315 WTP HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	**180J**	ug/L	250	125	1	12/08/15 11:00	12/08/15 20:05	50-00-0	H2,M1, N2
9040 pH	Analytical Method: EPA 9040								
pH	**6.9**	Std. Units	0.10	0.10	1		12/08/15 12:55		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.50**	mg/L	0.50	0.25	1		12/07/15 19:54	16984-48-8	
Sulfate	**10.9**	mg/L	2.0	1.0	1		12/07/15 19:54	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**31.1**	mg/L	0.50	0.25	5		12/04/15 09:26	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.026**	mg/L	0.020	0.010	1		12/03/15 23:29		B
Nitrogen, Nitrite	**0.12**	mg/L	0.020	0.010	1		12/03/15 23:29		
Nitrogen, NO2 plus NO3	**0.15**	mg/L	0.020	0.010	1		12/03/15 23:29		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**5.6**	mg/L	0.10	0.050	2		12/10/15 10:22	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**11.3**	mg/L	1.0	0.50	1		12/10/15 17:46	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	**0.0079J**	mg/L	0.0080	0.0040	1		12/04/15 16:07	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.64**	mg/L	0.25	0.12	5		12/04/15 09:30		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: MERP/8735
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92278269001

METHOD BLANK: 1621535
Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.10	12/09/15 11:14	

LABORATORY CONTROL SAMPLE: 1621536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.6	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621537 1621538

Parameter	Units	92278176004 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	2.6	2.7	104	105	75-125	1	25	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: MPRP/20176
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 92278269001

METHOD BLANK: 1620436
Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	50.0	12/08/15 01:31	
Antimony	ug/L	ND	5.0	3.9	12/08/15 01:31	
Arsenic	ug/L	ND	10.0	5.0	12/08/15 01:31	
Barium	ug/L	ND	5.0	2.5	12/08/15 01:31	
Beryllium	ug/L	ND	1.0	0.50	12/08/15 01:31	
Cadmium	ug/L	ND	1.0	0.50	12/08/15 01:31	
Calcium	ug/L	ND	100	50.0	12/08/15 01:31	
Chromium	ug/L	ND	5.0	2.5	12/08/15 01:31	
Cobalt	ug/L	ND	5.0	2.5	12/08/15 01:31	
Copper	ug/L	ND	5.0	2.5	12/08/15 01:31	
Iron	ug/L	ND	50.0	25.0	12/08/15 01:31	
Lead	ug/L	ND	5.0	2.5	12/08/15 01:31	
Magnesium	ug/L	ND	100	50.0	12/08/15 01:31	
Manganese	ug/L	ND	5.0	2.5	12/08/15 01:31	
Nickel	ug/L	ND	5.0	2.5	12/08/15 01:31	
Potassium	ug/L	ND	5000	2500	12/08/15 01:31	
Selenium	ug/L	ND	10.0	5.0	12/08/15 01:31	
Silver	ug/L	ND	5.0	2.5	12/08/15 01:31	
Sodium	ug/L	ND	5000	2500	12/08/15 01:31	
Thallium	ug/L	ND	10.0	5.0	12/08/15 01:31	
Vanadium	ug/L	ND	5.0	2.5	12/08/15 01:31	
Zinc	ug/L	ND	10.0	5.0	12/08/15 01:31	

LABORATORY CONTROL SAMPLE: 1620437

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	4720	94	80-120	
Antimony	ug/L	500	475	95	80-120	
Arsenic	ug/L	500	452	90	80-120	
Barium	ug/L	500	496	99	80-120	
Beryllium	ug/L	500	493	99	80-120	
Cadmium	ug/L	500	477	95	80-120	
Calcium	ug/L	5000	4670	93	80-120	
Chromium	ug/L	500	479	96	80-120	
Cobalt	ug/L	500	474	95	80-120	
Copper	ug/L	500	493	99	80-120	
Iron	ug/L	5000	4780	96	80-120	
Lead	ug/L	500	469	94	80-120	
Magnesium	ug/L	5000	4650	93	80-120	
Manganese	ug/L	500	468	94	80-120	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

LABORATORY CONTROL SAMPLE: 1620437

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel	ug/L	500	479	96	80-120	
Potassium	ug/L	5000	4820J	96	80-120	
Selenium	ug/L	500	464	93	80-120	
Silver	ug/L	250	235	94	80-120	
Sodium	ug/L	5000	4880J	98	80-120	
Thallium	ug/L	500	472	94	80-120	
Vanadium	ug/L	500	480	96	80-120	
Zinc	ug/L	500	462	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620438 1620439

Parameter	Units	92277685002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	6540	5000	5000	25400	27700	378	424	75-125	9	20	M1
Antimony	ug/L	<3.9	500	500	429	448	86	89	75-125	4	20	
Arsenic	ug/L	5.4J	500	500	442	468	87	92	75-125	6	20	
Barium	ug/L	340	500	500	840	872	100	106	75-125	4	20	
Beryllium	ug/L	2.0	500	500	485	514	97	102	75-125	6	20	
Cadmium	ug/L	<0.50	500	500	465	496	93	99	75-125	6	20	
Calcium	ug/L	4860	5000	5000	9540	9620	94	95	75-125	1	20	
Chromium	ug/L	5.1	500	500	477	513	94	102	75-125	7	20	
Cobalt	ug/L	<2.5	500	500	458	487	91	97	75-125	6	20	
Copper	ug/L	14.3	500	500	508	537	99	105	75-125	6	20	
Iron	ug/L	5480	5000	5000	13100	14500	153	180	75-125	10	20	M1
Lead	ug/L	<2.5	500	500	448	477	89	95	75-125	6	20	
Magnesium	ug/L	1650	5000	5000	6350	6720	94	102	75-125	6	20	
Manganese	ug/L	255	500	500	781	855	105	120	75-125	9	20	
Nickel	ug/L	<2.5	500	500	464	493	93	98	75-125	6	20	
Potassium	ug/L	5990	5000	5000	11200	11500	104	110	75-125	3	20	
Selenium	ug/L	<5.0	500	500	447	474	89	94	75-125	6	20	
Silver	ug/L	<2.5	250	250	227	243	91	97	75-125	7	20	
Sodium	ug/L	14800	5000	5000	19300	19600	90	95	75-125	1	20	
Thallium	ug/L	<5.0	500	500	453	490	90	97	75-125	8	20	
Vanadium	ug/L	10.3	500	500	485	521	95	102	75-125	7	20	
Zinc	ug/L	7.9J	500	500	462	490	91	96	75-125	6	20	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: MSV/34538
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92278269001

METHOD BLANK: 1620087
Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	12/04/15 13:49	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	12/04/15 13:49	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	12/04/15 13:49	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	12/04/15 13:49	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	12/04/15 13:49	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	12/04/15 13:49	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	12/04/15 13:49	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	12/04/15 13:49	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	12/04/15 13:49	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	12/04/15 13:49	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	12/04/15 13:49	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	12/04/15 13:49	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	12/04/15 13:49	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	12/04/15 13:49	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	12/04/15 13:49	
2-Hexanone	ug/L	ND	5.0	0.46	12/04/15 13:49	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	12/04/15 13:49	
Acetone	ug/L	ND	25.0	10.0	12/04/15 13:49	
Benzene	ug/L	ND	1.0	0.25	12/04/15 13:49	
Bromochloromethane	ug/L	ND	1.0	0.17	12/04/15 13:49	
Bromodichloromethane	ug/L	ND	1.0	0.18	12/04/15 13:49	
Bromoform	ug/L	ND	1.0	0.26	12/04/15 13:49	
Bromomethane	ug/L	ND	2.0	0.29	12/04/15 13:49	
Carbon tetrachloride	ug/L	ND	1.0	0.25	12/04/15 13:49	
Chlorobenzene	ug/L	ND	1.0	0.23	12/04/15 13:49	
Chloroethane	ug/L	ND	1.0	0.54	12/04/15 13:49	
Chloroform	ug/L	ND	1.0	0.14	12/04/15 13:49	
Chloromethane	ug/L	ND	1.0	0.11	12/04/15 13:49	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	12/04/15 13:49	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	12/04/15 13:49	
Dibromochloromethane	ug/L	ND	1.0	0.21	12/04/15 13:49	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	12/04/15 13:49	
Ethylbenzene	ug/L	ND	1.0	0.30	12/04/15 13:49	
m&p-Xylene	ug/L	ND	2.0	0.66	12/04/15 13:49	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	12/04/15 13:49	
Methylene Chloride	ug/L	ND	2.0	0.97	12/04/15 13:49	
o-Xylene	ug/L	ND	1.0	0.23	12/04/15 13:49	
Styrene	ug/L	ND	1.0	0.26	12/04/15 13:49	
Tetrachloroethene	ug/L	ND	1.0	0.46	12/04/15 13:49	
Toluene	ug/L	ND	1.0	0.26	12/04/15 13:49	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	12/04/15 13:49	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

METHOD BLANK: 1620087 Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	12/04/15 13:49	
Trichloroethene	ug/L	ND	1.0	0.47	12/04/15 13:49	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	12/04/15 13:49	
Vinyl chloride	ug/L	ND	1.0	0.62	12/04/15 13:49	
1,2-Dichloroethane-d4 (S)	%	102	70-130		12/04/15 13:49	
4-Bromofluorobenzene (S)	%	106	70-130		12/04/15 13:49	
Toluene-d8 (S)	%	102	70-130		12/04/15 13:49	

LABORATORY CONTROL SAMPLE: 1620088

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.6	101	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	43.4	87	70-130	
1,1,2-Trichloroethane	ug/L	50	45.8	92	70-130	
1,1-Dichloroethane	ug/L	50	53.2	106	70-130	
1,1-Dichloroethene	ug/L	50	53.7	107	70-132	
1,2,3-Trichlorobenzene	ug/L	50	44.3	89	70-135	
1,2,4-Trichlorobenzene	ug/L	50	44.9	90	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	39.3	79	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	46.4	93	70-130	
1,2-Dichlorobenzene	ug/L	50	48.3	97	70-130	
1,2-Dichloroethane	ug/L	50	50.8	102	70-130	
1,2-Dichloropropane	ug/L	50	49.1	98	70-130	
1,3-Dichlorobenzene	ug/L	50	47.8	96	70-130	
1,4-Dichlorobenzene	ug/L	50	46.9	94	70-130	
2-Butanone (MEK)	ug/L	100	104	104	70-145	
2-Hexanone	ug/L	100	83.8	84	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	100	100	70-140	
Acetone	ug/L	100	99.2	99	50-175	
Benzene	ug/L	50	52.1	104	70-130	
Bromochloromethane	ug/L	50	58.3	117	70-130	
Bromodichloromethane	ug/L	50	45.8	92	70-130	
Bromoform	ug/L	50	38.3	77	70-130	
Bromomethane	ug/L	50	34.1	68	54-130	
Carbon tetrachloride	ug/L	50	48.5	97	70-132	
Chlorobenzene	ug/L	50	45.1	90	70-130	
Chloroethane	ug/L	50	47.7	95	64-134	
Chloroform	ug/L	50	53.7	107	70-130	
Chloromethane	ug/L	50	41.5	83	64-130	
cis-1,2-Dichloroethene	ug/L	50	55.6	111	70-131	
cis-1,3-Dichloropropene	ug/L	50	49.0	98	70-130	
Dibromochloromethane	ug/L	50	41.6	83	70-130	
Dichlorodifluoromethane	ug/L	50	56.8	114	56-130	
Ethylbenzene	ug/L	50	43.9	88	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

LABORATORY CONTROL SAMPLE: 1620088

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
m&p-Xylene	ug/L	100	88.8	89	70-130	
Methyl-tert-butyl ether	ug/L	50	53.7	107	70-130	
Methylene Chloride	ug/L	50	49.7	99	63-130	
o-Xylene	ug/L	50	44.3	89	70-130	
Styrene	ug/L	50	45.9	92	70-130	
Tetrachloroethene	ug/L	50	46.8	94	70-130	
Toluene	ug/L	50	50.1	100	70-130	
trans-1,2-Dichloroethene	ug/L	50	56.2	112	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.5	97	70-132	
Trichloroethene	ug/L	50	49.6	99	70-130	
Trichlorofluoromethane	ug/L	50	55.4	111	62-133	
Vinyl chloride	ug/L	50	56.5	113	50-150	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			107	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE: 1620089

Parameter	Units	92278363002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	20	24.4	122	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	17.9	89	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	19.7	98	70-130	
1,1-Dichloroethane	ug/L	ND	20	24.5	123	70-130	
1,1-Dichloroethene	ug/L	ND	20	25.9	129	70-166	
1,2,3-Trichlorobenzene	ug/L	ND	20	17.1	85	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	17.0	85	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	15.2	76	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.4	97	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	19.5	98	70-130	
1,2-Dichloroethane	ug/L	ND	20	22.5	112	70-130	
1,2-Dichloropropane	ug/L	ND	20	21.7	108	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	19.9	99	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	19.0	95	70-130	
2-Butanone (MEK)	ug/L	ND	40	46.7	117	70-130	
2-Hexanone	ug/L	ND	40	37.2	93	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	44.6	111	70-130	
Acetone	ug/L	ND	40	46.3	116	70-130	
Benzene	ug/L	ND	20	23.6	118	70-148	
Bromochloromethane	ug/L	ND	20	25.4	127	70-130	
Bromodichloromethane	ug/L	ND	20	19.5	97	70-130	
Bromoform	ug/L	ND	20	14.9	74	70-130	
Bromomethane	ug/L	ND	20	16.4	82	70-130	
Carbon tetrachloride	ug/L	ND	20	22.8	114	70-130	
Chlorobenzene	ug/L	ND	20	19.7	99	70-146	
Chloroethane	ug/L	ND	20	22.3	112	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

MATRIX SPIKE SAMPLE: 1620089

Parameter	Units	92278363002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloroform	ug/L	ND	20	24.8	124	70-130	
Chloromethane	ug/L	ND	20	19.3	97	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	25.4	127	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	20.1	101	70-130	
Dibromochloromethane	ug/L	ND	20	16.5	82	70-130	
Dichlorodifluoromethane	ug/L	ND	20	28.5	142	70-130	M1
Ethylbenzene	ug/L	ND	20	20.0	100	70-130	
m&p-Xylene	ug/L	ND	40	39.5	99	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	23.7	118	70-130	
Methylene Chloride	ug/L	ND	20	22.2	111	70-130	
o-Xylene	ug/L	ND	20	19.6	98	70-130	
Styrene	ug/L	ND	20	19.7	98	70-130	
Tetrachloroethene	ug/L	ND	20	21.3	106	70-130	
Toluene	ug/L	ND	20	22.2	111	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	26.0	130	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	20.0	100	70-130	
Trichloroethene	ug/L	ND	20	21.8	109	69-151	
Trichlorofluoromethane	ug/L	ND	20	27.3	137	70-130	M1
Vinyl chloride	ug/L	ND	20	27.3	137	70-130	M1
1,2-Dichloroethane-d4 (S)	%				104	70-130	
4-Bromofluorobenzene (S)	%				107	70-130	
Toluene-d8 (S)	%				100	70-130	

MATRIX SPIKE SAMPLE: 1620090

Parameter	Units	92278363003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	9.7	20	35.3	128	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.3	91	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	20.0	100	70-130	
1,1-Dichloroethane	ug/L	3.9	20	29.7	129	70-130	
1,1-Dichloroethene	ug/L	18.1	20	45.7	138	70-166	
1,2,3-Trichlorobenzene	ug/L	ND	20	18.1	90	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	18.0	90	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	17.1	86	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.9	99	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	20.9	105	70-130	
1,2-Dichloroethane	ug/L	ND	20	23.3	116	70-130	
1,2-Dichloropropane	ug/L	ND	20	22.4	112	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	21.1	106	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	20.5	103	70-130	
2-Butanone (MEK)	ug/L	ND	40	50.4	126	70-130	
2-Hexanone	ug/L	ND	40	37.6	94	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	45.0	112	70-130	
Acetone	ug/L	ND	40	49.0	122	70-130	
Benzene	ug/L	ND	20	24.3	121	70-148	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

MATRIX SPIKE SAMPLE: 1620090

Parameter	Units	92278363003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromochloromethane	ug/L	ND	20	26.9	135	70-130	M1
Bromodichloromethane	ug/L	ND	20	20.6	103	70-130	
Bromoform	ug/L	ND	20	14.9	75	70-130	
Bromomethane	ug/L	ND	20	15.5	77	70-130	
Carbon tetrachloride	ug/L	ND	20	23.6	118	70-130	
Chlorobenzene	ug/L	ND	20	20.1	100	70-146	
Chloroethane	ug/L	ND	20	24.5	122	70-130	
Chloroform	ug/L	ND	20	25.5	128	70-130	
Chloromethane	ug/L	ND	20	20.6	103	70-130	
cis-1,2-Dichloroethene	ug/L	4.2	20	30.6	132	70-130	M1
cis-1,3-Dichloropropene	ug/L	ND	20	21.0	105	70-130	
Dibromochloromethane	ug/L	ND	20	17.4	87	70-130	
Dichlorodifluoromethane	ug/L	ND	20	29.9	150	70-130	M1
Ethylbenzene	ug/L	ND	20	20.7	103	70-130	
m&p-Xylene	ug/L	ND	40	40.4	100	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	24.7	123	70-130	
Methylene Chloride	ug/L	ND	20	23.3	116	70-130	
o-Xylene	ug/L	ND	20	19.9	99	70-130	
Styrene	ug/L	ND	20	20.0	100	70-130	
Tetrachloroethene	ug/L	ND	20	21.5	107	70-130	
Toluene	ug/L	ND	20	23.1	115	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	28.0	140	70-130	M1
trans-1,3-Dichloropropene	ug/L	ND	20	20.4	102	70-130	
Trichloroethene	ug/L	145	20	165	99	69-151	
Trichlorofluoromethane	ug/L	ND	20	28.9	145	70-130	M1
Vinyl chloride	ug/L	ND	20	28.5	142	70-130	M1
1,2-Dichloroethane-d4 (S)	%				104	70-130	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				99	70-130	

SAMPLE DUPLICATE: 1620091

Parameter	Units	92278373001 Result	Dup Result	RPD	Max RPD	Qualifiers
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-Trichlorobenzene	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	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

SAMPLE DUPLICATE: 1620091

Parameter	Units	92278373001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dichlorobenzene	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	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	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	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	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	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	102	102	0		
4-Bromofluorobenzene (S)	%	106	105	1		
Toluene-d8 (S)	%	102	103	1		

SAMPLE DUPLICATE: 1620092

Parameter	Units	92278375001 Result	Dup Result	RPD	Max RPD	Qualifiers
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	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

SAMPLE DUPLICATE: 1620092

Parameter	Units	92278375001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2,3-Trichlorobenzene	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	
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	
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	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	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	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	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	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	105	103	2		
4-Bromofluorobenzene (S)	%	108	106	2		
Toluene-d8 (S)	%	100	101	0		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: OEXT/39578
QC Batch Method: EPA 3510
Analysis Method: EPA 8081
Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 92278269001

METHOD BLANK: 1623835
Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	0.050	12/11/15 05:32	
4,4'-DDE	ug/L	ND	0.050	0.050	12/11/15 05:32	
4,4'-DDT	ug/L	ND	0.050	0.050	12/11/15 05:32	
Aldrin	ug/L	ND	0.050	0.050	12/11/15 05:32	
alpha-BHC	ug/L	ND	0.050	0.050	12/11/15 05:32	
beta-BHC	ug/L	ND	0.050	0.050	12/11/15 05:32	
Chlordane (Technical)	ug/L	ND	0.20	0.20	12/11/15 05:32	
delta-BHC	ug/L	ND	0.050	0.050	12/11/15 05:32	
Dieldrin	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endosulfan I	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endosulfan II	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endosulfan sulfate	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endrin	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endrin aldehyde	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endrin ketone	ug/L	ND	0.050	0.050	12/11/15 05:32	
gamma-BHC (Lindane)	ug/L	ND	0.050	0.050	12/11/15 05:32	
Heptachlor	ug/L	ND	0.050	0.050	12/11/15 05:32	
Heptachlor epoxide	ug/L	ND	0.050	0.050	12/11/15 05:32	
Methoxychlor	ug/L	ND	0.15	0.15	12/11/15 05:32	
Toxaphene	ug/L	ND	0.20	0.20	12/11/15 05:32	
Decachlorobiphenyl (S)	%	74	20-130		12/11/15 05:32	
Tetrachloro-m-xylene (S)	%	74	20-130		12/11/15 05:32	

LABORATORY CONTROL SAMPLE: 1623836

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	.25	0.23	95	20-150	
4,4'-DDE	ug/L	.25	0.22	90	20-150	
4,4'-DDT	ug/L	.25	0.22	91	20-150	
Aldrin	ug/L	.25	0.20	80	20-150	
alpha-BHC	ug/L	.25	0.21	87	20-150	
beta-BHC	ug/L	.25	0.23	92	20-150	
delta-BHC	ug/L	.25	0.23	91	20-150	
Dieldrin	ug/L	.25	0.22	89	20-150	
Endosulfan I	ug/L	.25	0.22	90	20-150	
Endosulfan II	ug/L	.25	0.24	95	20-150	
Endosulfan sulfate	ug/L	.25	0.24	95	20-150	
Endrin	ug/L	.25	0.23	95	20-150	
Endrin aldehyde	ug/L	.25	0.22	88	20-150	
Endrin ketone	ug/L	.25	0.21	86	20-150	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

LABORATORY CONTROL SAMPLE: 1623836

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
gamma-BHC (Lindane)	ug/L	.25	0.22	88	20-150	
Heptachlor	ug/L	.25	0.20	79	20-150	
Heptachlor epoxide	ug/L	.25	0.21	85	20-150	
Methoxychlor	ug/L	.74	0.70	95	20-150	
Decachlorobiphenyl (S)	%			63	20-130	
Tetrachloro-m-xylene (S)	%			85	20-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623837 1623838

Parameter	Units	92278506003 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	.5	.5	0.40	0.38	80	76	20-150	5	30	
4,4'-DDE	ug/L	ND	.5	.5	0.36	0.35	74	71	20-150	4	30	
4,4'-DDT	ug/L	ND	.5	.5	0.37	0.38	76	77	20-150	1	30	
Aldrin	ug/L	ND	.5	.5	0.28	0.25	57	50	20-150	13	30	
alpha-BHC	ug/L	ND	.5	.5	0.35	0.35	70	71	20-150	1	30	
beta-BHC	ug/L	ND	.5	.5	0.35	0.36	70	73	20-150	4	30	
delta-BHC	ug/L	ND	.5	.5	0.40	0.41	80	83	20-150	3	30	
Dieldrin	ug/L	ND	.5	.5	0.37	0.34	76	68	20-150	11	30	
Endosulfan I	ug/L	ND	.5	.5	0.36	0.34	74	68	20-150	7	30	
Endosulfan II	ug/L	ND	.5	.5	0.40	0.37	80	74	20-150	8	30	
Endosulfan sulfate	ug/L	ND	.5	.5	0.42	0.41	86	84	20-150	2	30	
Endrin	ug/L	ND	.5	.5	0.41	0.39	82	79	20-150	4	30	
Endrin aldehyde	ug/L	ND	.5	.5	0.34	0.37	70	74	20-150	7	30	
Endrin ketone	ug/L	ND	.5	.5	0.38	0.37	77	74	20-150	3	30	
gamma-BHC (Lindane)	ug/L	ND	.5	.5	0.35	0.36	71	73	20-150	2	30	
Heptachlor	ug/L	ND	.5	.5	0.29	0.24	59	49	20-150	18	30	
Heptachlor epoxide	ug/L	ND	.5	.5	0.35	0.31	71	63	20-150	12	30	
Methoxychlor	ug/L	ND	1.5	1.5	1.2	1.1	80	76	20-150	5	30	
Decachlorobiphenyl (S)	%						62	66	20-130			
Tetrachloro-m-xylene (S)	%						67	58	20-130			

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: OEXT/39479
QC Batch Method: EPA 3510
Analysis Method: EPA 8270
Analysis Description: 8270 Water MSSV
Associated Lab Samples: 92278269001

METHOD BLANK: 1620609
Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	1.7	12/07/15 16:44	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	1.6	12/08/15 13:35	
2,3,4,6-Tetrachlorophenol	ug/L	ND	10.0	2.3	12/08/15 13:35	
2,4,5-Trichlorophenol	ug/L	ND	10.0	2.2	12/08/15 13:35	
2,4,6-Trichlorophenol	ug/L	ND	10.0	1.9	12/08/15 13:35	
2,4-Dichlorophenol	ug/L	ND	10.0	1.7	12/08/15 13:35	
2,4-Dimethylphenol	ug/L	ND	10.0	2.2	12/08/15 13:35	
2,4-Dinitrophenol	ug/L	ND	50.0	6.5	12/08/15 13:35	
2,4-Dinitrotoluene	ug/L	ND	10.0	1.2	12/08/15 13:35	
2,6-Dinitrotoluene	ug/L	ND	10.0	1.7	12/08/15 13:35	
2-Chloronaphthalene	ug/L	ND	10.0	2.2	12/08/15 13:35	
2-Chlorophenol	ug/L	ND	10.0	1.5	12/08/15 13:35	
2-Methylnaphthalene	ug/L	ND	10.0	0.28	12/08/15 13:35	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	1.7	12/08/15 13:35	
2-Nitroaniline	ug/L	ND	50.0	2.8	12/08/15 13:35	
2-Nitrophenol	ug/L	ND	10.0	1.7	12/08/15 13:35	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	1.7	12/08/15 13:35	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	1.4	12/08/15 13:35	
3-Nitroaniline	ug/L	ND	50.0	2.4	12/08/15 13:35	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	1.7	12/08/15 13:35	
4-Bromophenylphenyl ether	ug/L	ND	10.0	1.3	12/08/15 13:35	
4-Chloro-3-methylphenol	ug/L	ND	20.0	4.2	12/08/15 13:35	
4-Chloroaniline	ug/L	ND	20.0	3.4	12/08/15 13:35	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	2.1	12/08/15 13:35	
4-Nitroaniline	ug/L	ND	20.0	2.5	12/08/15 13:35	
4-Nitrophenol	ug/L	ND	50.0	5.8	12/08/15 13:35	
Acenaphthene	ug/L	ND	10.0	0.25	12/08/15 13:35	
Acenaphthylene	ug/L	ND	10.0	0.21	12/08/15 13:35	
Acetophenone	ug/L	ND	10.0	2.0	12/08/15 13:35	
Anthracene	ug/L	ND	10.0	0.14	12/08/15 13:35	
Atrazine	ug/L	ND	20.0	1.7	12/07/15 16:44	
Benzaldehyde	ug/L	ND	20.0	4.7	12/07/15 16:44	
Benzo(a)anthracene	ug/L	ND	10.0	0.33	12/08/15 13:35	
Benzo(a)pyrene	ug/L	ND	10.0	0.30	12/08/15 13:35	
Benzo(b)fluoranthene	ug/L	ND	10.0	0.28	12/08/15 13:35	
Benzo(g,h,i)perylene	ug/L	ND	10.0	0.38	12/08/15 13:35	
Benzo(k)fluoranthene	ug/L	ND	10.0	0.43	12/08/15 13:35	
Biphenyl (Diphenyl)	ug/L	ND	10.0	1.9	12/08/15 13:35	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	1.7	12/08/15 13:35	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	1.5	12/08/15 13:35	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	0.85	12/08/15 13:35	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

METHOD BLANK: 1620609 Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Butylbenzylphthalate	ug/L	ND	10.0	0.75	12/08/15 13:35	
Caprolactam	ug/L	ND	10.0	1.8	12/07/15 16:44	
Carbazole	ug/L	ND	10.0	0.73	12/08/15 13:35	
Chrysene	ug/L	ND	10.0	0.21	12/08/15 13:35	
Di-n-butylphthalate	ug/L	ND	10.0	1.1	12/08/15 13:35	
Di-n-octylphthalate	ug/L	ND	10.0	0.86	12/08/15 13:35	
Dibenz(a,h)anthracene	ug/L	ND	10.0	0.55	12/08/15 13:35	
Dibenzofuran	ug/L	ND	10.0	1.8	12/08/15 13:35	
Diethylphthalate	ug/L	ND	10.0	1.3	12/08/15 13:35	
Dimethylphthalate	ug/L	ND	10.0	1.5	12/08/15 13:35	
Fluoranthene	ug/L	ND	10.0	0.21	12/08/15 13:35	
Fluorene	ug/L	ND	10.0	0.21	12/08/15 13:35	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	1.8	12/08/15 13:35	
Hexachlorobenzene	ug/L	ND	10.0	1.1	12/08/15 13:35	
Hexachlorocyclopentadiene	ug/L	ND	10.0	1.8	12/08/15 13:35	
Hexachloroethane	ug/L	ND	10.0	1.5	12/08/15 13:35	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	0.29	12/08/15 13:35	
Isophorone	ug/L	ND	10.0	1.8	12/08/15 13:35	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	2.1	12/08/15 13:35	
N-Nitrosodiphenylamine	ug/L	ND	10.0	1.3	12/08/15 13:35	
Naphthalene	ug/L	ND	10.0	0.34	12/08/15 13:35	
Nitrobenzene	ug/L	ND	10.0	1.7	12/08/15 13:35	
Pentachlorophenol	ug/L	ND	25.0	2.3	12/08/15 13:35	
Phenanthrene	ug/L	ND	10.0	0.22	12/08/15 13:35	
Phenol	ug/L	ND	10.0	1.7	12/08/15 13:35	
Pyrene	ug/L	ND	10.0	0.19	12/08/15 13:35	
2,4,6-Tribromophenol (S)	%	76	27-110		12/08/15 13:35	
2-Fluorobiphenyl (S)	%	68	27-110		12/08/15 13:35	
2-Fluorophenol (S)	%	33	12-110		12/08/15 13:35	
Nitrobenzene-d5 (S)	%	71	21-110		12/08/15 13:35	
Phenol-d6 (S)	%	21	10-110		12/08/15 13:35	
Terphenyl-d14 (S)	%	94	31-107		12/08/15 13:35	

LABORATORY CONTROL SAMPLE: 1620610

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	32.5	65	16-129	
2,2'-Oxybis(1-chloropropane)	ug/L	50	21.3	43	18-120	
2,3,4,6-Tetrachlorophenol	ug/L	50	92.4	185	54-276	
2,4,5-Trichlorophenol	ug/L	50	45.7	91	43-113	
2,4,6-Trichlorophenol	ug/L	50	40.8	82	42-120	
2,4-Dichlorophenol	ug/L	50	34.7	69	30-120	
2,4-Dimethylphenol	ug/L	50	31.4	63	29-111	
2,4-Dinitrophenol	ug/L	250	235	94	19-132	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

LABORATORY CONTROL SAMPLE: 1620610

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/L	50	51.9	104	58-128	
2,6-Dinitrotoluene	ug/L	50	50.3	101	54-129	
2-Chloronaphthalene	ug/L	50	46.8	94	43-117	
2-Chlorophenol	ug/L	50	27.5	55	37-120	
2-Methylnaphthalene	ug/L	50	32.4	65	33-120	
2-Methylphenol(o-Cresol)	ug/L	50	27.4	55	31-120	
2-Nitroaniline	ug/L	100	77.6	78	48-121	
2-Nitrophenol	ug/L	50	34.5	69	25-116	
3&4-Methylphenol(m&p Cresol)	ug/L	50	20.1	40	23-120	
3,3'-Dichlorobenzidine	ug/L	250	91.3	37	10-154	
3-Nitroaniline	ug/L	100	85.6	86	43-115	
4,6-Dinitro-2-methylphenol	ug/L	100	94.3	94	44-124	
4-Bromophenylphenyl ether	ug/L	50	43.7	87	34-113	
4-Chloro-3-methylphenol	ug/L	100	78.2	78	31-110	
4-Chloroaniline	ug/L	100	57.9	58	20-120	
4-Chlorophenylphenyl ether	ug/L	50	39.5	79	34-116	
4-Nitroaniline	ug/L	100	101	101	46-128	
4-Nitrophenol	ug/L	250	102	41	11-120	
Acenaphthene	ug/L	50	42.8	86	48-114	
Acenaphthylene	ug/L	50	45.0	90	48-112	
Acetophenone	ug/L	50	30.1	60	24-120	
Anthracene	ug/L	50	50.9	102	57-118	
Atrazine	ug/L	50	60.7	121	33-160	
Benzaldehyde	ug/L	50	ND	8	10-120	L0
Benzo(a)anthracene	ug/L	50	49.8	100	56-121	
Benzo(a)pyrene	ug/L	50	50.6	101	55-127	
Benzo(b)fluoranthene	ug/L	50	52.7	105	53-128	
Benzo(g,h,i)perylene	ug/L	50	45.5	91	54-125	
Benzo(k)fluoranthene	ug/L	50	58.8	118	51-123	
Biphenyl (Diphenyl)	ug/L	50	36.2	72	38-120	
bis(2-Chloroethoxy)methane	ug/L	50	29.6	59	32-120	
bis(2-Chloroethyl) ether	ug/L	50	26.7	53	33-111	
bis(2-Ethylhexyl)phthalate	ug/L	50	58.2	116	50-145	
Butylbenzylphthalate	ug/L	50	59.2	118	54-138	
Caprolactam	ug/L	50	12.3	25	10-115	
Carbazole	ug/L	50	50.2	100	59-119	
Chrysene	ug/L	50	48.6	97	58-127	
Di-n-butylphthalate	ug/L	50	60.3	121	56-125	
Di-n-octylphthalate	ug/L	50	52.0	104	50-134	
Dibenz(a,h)anthracene	ug/L	50	46.6	93	53-129	
Dibenzofuran	ug/L	50	42.6	85	45-120	
Diethylphthalate	ug/L	50	49.4	99	53-120	
Dimethylphthalate	ug/L	50	46.5	93	55-116	
Fluoranthene	ug/L	50	53.8	108	57-125	
Fluorene	ug/L	50	47.9	96	53-118	
Hexachloro-1,3-butadiene	ug/L	50	26.7	53	23-120	
Hexachlorobenzene	ug/L	50	47.9	96	49-116	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

LABORATORY CONTROL SAMPLE: 1620610

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachlorocyclopentadiene	ug/L	50	25.8	52	26-158	
Hexachloroethane	ug/L	50	25.7	51	30-114	
Indeno(1,2,3-cd)pyrene	ug/L	50	46.7	93	55-128	
Isophorone	ug/L	50	32.1	64	31-118	
N-Nitroso-di-n-propylamine	ug/L	50	30.1	60	32-119	
N-Nitrosodiphenylamine	ug/L	50	45.5	91	43-120	
Naphthalene	ug/L	50	31.3	63	32-120	
Nitrobenzene	ug/L	50	29.6	59	33-110	
Pentachlorophenol	ug/L	250	80.9	32	10-137	
Phenanthrene	ug/L	50	46.3	93	57-117	
Phenol	ug/L	50	12.6	25	10-120	
Pyrene	ug/L	50	52.5	105	55-122	
2,4,6-Tribromophenol (S)	%			94	27-110	
2-Fluorobiphenyl (S)	%			72	27-110	
2-Fluorophenol (S)	%			34	12-110	
Nitrobenzene-d5 (S)	%			64	21-110	
Phenol-d6 (S)	%			23	10-110	
Terphenyl-d14 (S)	%			95	31-107	

MATRIX SPIKE SAMPLE: 1620611

Parameter	Units	92278147002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	50	16.2	32	50-150	M1
2,2'-Oxybis(1-chloropropane)	ug/L	ND	50	10.3	21	50-150	M1
2,3,4,6-Tetrachlorophenol	ug/L	ND	50	85.7	171	50-150	M1
2,4,5-Trichlorophenol	ug/L	ND	50	32.3	65	19-105	
2,4,6-Trichlorophenol	ug/L	ND	50	23.9	48	13-108	
2,4-Dichlorophenol	ug/L	ND	50	17.5	35	29-111	
2,4-Dimethylphenol	ug/L	ND	50	16.3	33	21-103	
2,4-Dinitrophenol	ug/L	ND	250	84.9	34	10-109	
2,4-Dinitrotoluene	ug/L	ND	50	50.4	101	27-104	
2,6-Dinitrotoluene	ug/L	ND	50	44.3	89	28-101	
2-Chloronaphthalene	ug/L	ND	50	24.0	48	14-102	
2-Chlorophenol	ug/L	ND	50	13.3	27	16-110	
2-Methylnaphthalene	ug/L	ND	50	17.4	35	13-110	
2-Methylphenol(o-Cresol)	ug/L	ND	50	12.9	26	19-110	
2-Nitroaniline	ug/L	ND	100	63.0	63	26-103	
2-Nitrophenol	ug/L	ND	50	18.5	37	20-110	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	26.4	53	20-110	
3,3'-Dichlorobenzidine	ug/L	ND	250	94.1	38	25-112	
3-Nitroaniline	ug/L	ND	100	82.2	82	29-110	
4,6-Dinitro-2-methylphenol	ug/L	ND	100	85.1	85	10-117	
4-Bromophenylphenyl ether	ug/L	ND	50	36.5	73	20-105	
4-Chloro-3-methylphenol	ug/L	ND	100	53.6	54	22-110	
4-Chloroaniline	ug/L	ND	100	32.2	32	20-100	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

MATRIX SPIKE SAMPLE: 1620611

Parameter	Units	92278147002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
4-Chlorophenylphenyl ether	ug/L	ND	50	28.9	58	19-102	
4-Nitroaniline	ug/L	ND	100	102	102	29-110	
4-Nitrophenol	ug/L	ND	250	90.2	36	10-110	
Acenaphthene	ug/L	ND	50	24.2	48	17-100	
Acenaphthylene	ug/L	ND	50	25.3	51	21-100	
Acetophenone	ug/L	ND	50	14.9	30	50-150	M1
Anthracene	ug/L	ND	50	49.0	98	24-109	
Atrazine	ug/L	ND	50	60.8	122	50-150	
Benzaldehyde	ug/L	ND	50	ND	3	50-150	M0
Benzo(a)anthracene	ug/L	ND	50	50.6	101	22-117	
Benzo(a)pyrene	ug/L	ND	50	51.1	102	23-104	
Benzo(b)fluoranthene	ug/L	ND	50	53.5	107	23-103	M1
Benzo(g,h,i)perylene	ug/L	ND	50	45.3	91	18-111	
Benzo(k)fluoranthene	ug/L	ND	50	59.4	119	22-113	M1
Biphenyl (Diphenyl)	ug/L	ND	50	18.2	36	50-150	M1
bis(2-Chloroethoxy)methane	ug/L	ND	50	14.7	29	22-110	
bis(2-Chloroethyl) ether	ug/L	ND	50	13.7	27	16-110	
bis(2-Ethylhexyl)phthalate	ug/L	2.0J	50	59.7	115	23-102	M1
Butylbenzylphthalate	ug/L	ND	50	60.6	121	25-110	M1
Caprolactam	ug/L	ND	50	11.2	22	50-150	M1
Carbazole	ug/L	ND	50	49.9	100	50-150	
Chrysene	ug/L	ND	50	49.1	98	23-115	
Di-n-butylphthalate	ug/L	ND	50	60.0	120	26-110	M1
Di-n-octylphthalate	ug/L	ND	50	53.0	106	22-110	
Dibenz(a,h)anthracene	ug/L	ND	50	46.5	93	21-112	
Dibenzofuran	ug/L	ND	50	27.0	54	19-102	
Diethylphthalate	ug/L	ND	50	48.5	97	29-110	
Dimethylphthalate	ug/L	ND	50	40.6	81	27-110	
Fluoranthene	ug/L	ND	50	53.5	107	23-112	
Fluorene	ug/L	ND	50	36.5	73	22-104	
Hexachloro-1,3-butadiene	ug/L	ND	50	15.2	30	10-110	
Hexachlorobenzene	ug/L	ND	50	44.1	88	21-116	
Hexachlorocyclopentadiene	ug/L	ND	50	9.8J	20	10-110	
Hexachloroethane	ug/L	ND	50	14.4	29	10-110	
Indeno(1,2,3-cd)pyrene	ug/L	ND	50	46.7	93	20-113	
Isophorone	ug/L	ND	50	16.3	33	50-150	M1
N-Nitroso-di-n-propylamine	ug/L	ND	50	14.6	29	21-105	
N-Nitrosodiphenylamine	ug/L	ND	50	40.5	81	23-107	
Naphthalene	ug/L	ND	50	17.4	35	10-110	
Nitrobenzene	ug/L	ND	50	15.8	32	20-110	
Pentachlorophenol	ug/L	ND	250	62.5	25	10-118	
Phenanthrene	ug/L	ND	50	44.0	88	24-106	
Phenol	ug/L	ND	50	6.0J	12	12-110	
Pyrene	ug/L	ND	50	52.6	105	24-114	
2,4,6-Tribromophenol (S)	%				84	27-110	
2-Fluorobiphenyl (S)	%				34	27-110	
2-Fluorophenol (S)	%				15	12-110	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

MATRIX SPIKE SAMPLE: 1620611

Parameter	Units	92278147002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrobenzene-d5 (S)	%				32	21-110	
Phenol-d6 (S)	%				10	10-110	
Terphenyl-d14 (S)	%				84	31-107	

SAMPLE DUPLICATE: 1620612

Parameter	Units	92278147003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	ND		30	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	ND		30	
2,3,4,6-Tetrachlorophenol	ug/L	ND	ND		30	
2,4,5-Trichlorophenol	ug/L	ND	ND		30	
2,4,6-Trichlorophenol	ug/L	ND	ND		30	
2,4-Dichlorophenol	ug/L	ND	ND		30	
2,4-Dimethylphenol	ug/L	ND	ND		30	
2,4-Dinitrophenol	ug/L	ND	ND		30	
2,4-Dinitrotoluene	ug/L	ND	ND		30	
2,6-Dinitrotoluene	ug/L	ND	ND		30	
2-Chloronaphthalene	ug/L	ND	ND		30	
2-Chlorophenol	ug/L	ND	ND		30	
2-Methylnaphthalene	ug/L	ND	ND		30	
2-Methylphenol(o-Cresol)	ug/L	ND	ND		30	
2-Nitroaniline	ug/L	ND	ND		30	
2-Nitrophenol	ug/L	ND	ND		30	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	ND		30	
3,3'-Dichlorobenzidine	ug/L	ND	ND		30	
3-Nitroaniline	ug/L	ND	ND		30	
4,6-Dinitro-2-methylphenol	ug/L	ND	ND		30	
4-Bromophenylphenyl ether	ug/L	ND	ND		30	
4-Chloro-3-methylphenol	ug/L	ND	ND		30	
4-Chloroaniline	ug/L	ND	ND		30	
4-Chlorophenylphenyl ether	ug/L	ND	ND		30	
4-Nitroaniline	ug/L	ND	ND		30	
4-Nitrophenol	ug/L	ND	ND		30	
Acenaphthene	ug/L	ND	ND		30	
Acenaphthylene	ug/L	ND	ND		30	
Acetophenone	ug/L	ND	ND		30	
Anthracene	ug/L	ND	ND		30	
Atrazine	ug/L	ND	ND		30	
Benzaldehyde	ug/L	ND	ND		30	
Benzo(a)anthracene	ug/L	ND	ND		30	
Benzo(a)pyrene	ug/L	ND	ND		30	
Benzo(b)fluoranthene	ug/L	ND	ND		30	
Benzo(g,h,i)perylene	ug/L	ND	ND		30	
Benzo(k)fluoranthene	ug/L	ND	ND		30	
Biphenyl (Diphenyl)	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

SAMPLE DUPLICATE: 1620612

Parameter	Units	92278147003 Result	Dup Result	RPD	Max RPD	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	ND	ND		30	
bis(2-Chloroethyl) ether	ug/L	ND	ND		30	
bis(2-Ethylhexyl)phthalate	ug/L	ND	ND		30	
Butylbenzylphthalate	ug/L	ND	ND		30	
Caprolactam	ug/L	ND	ND		30	
Carbazole	ug/L	ND	ND		30	
Chrysene	ug/L	ND	ND		30	
Di-n-butylphthalate	ug/L	ND	ND		30	
Di-n-octylphthalate	ug/L	ND	ND		30	
Dibenz(a,h)anthracene	ug/L	ND	ND		30	
Dibenzofuran	ug/L	ND	ND		30	
Diethylphthalate	ug/L	ND	ND		30	
Dimethylphthalate	ug/L	ND	ND		30	
Fluoranthene	ug/L	ND	ND		30	
Fluorene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Hexachlorobenzene	ug/L	ND	ND		30	
Hexachlorocyclopentadiene	ug/L	ND	ND		30	
Hexachloroethane	ug/L	ND	ND		30	
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND		30	
Isophorone	ug/L	ND	ND		30	
N-Nitroso-di-n-propylamine	ug/L	ND	ND		30	
N-Nitrosodiphenylamine	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
Nitrobenzene	ug/L	ND	ND		30	
Pentachlorophenol	ug/L	ND	ND		30	
Phenanthrene	ug/L	ND	ND		30	
Phenol	ug/L	ND	ND		30	
Pyrene	ug/L	ND	ND		30	
2,4,6-Tribromophenol (S)	%	59	52	13		
2-Fluorobiphenyl (S)	%	41	42	2		
2-Fluorophenol (S)	%	20	20	3		
Nitrobenzene-d5 (S)	%	44	43	3		
Phenol-d6 (S)	%	12	12	1		
Terphenyl-d14 (S)	%	91	98	7		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: TAMP/7938 | Analysis Method: EPA 8315
QC Batch Method: EPA 8315 | Analysis Description: 8318 HPLC
Associated Lab Samples: 92278269001

METHOD BLANK: 1413233 | Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Formaldehyde	ug/L	ND	50.0	25.0	12/08/15 18:44	N2

LABORATORY CONTROL SAMPLE: 1413234

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Formaldehyde	ug/L	500	424	84.8	70-130	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1413235 1413236

Parameter	Units	92278269001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Formaldehyde	ug/L	180J	2500	2500	2410	1920	89.1	69.6	70-130	22.5	40	M1,N2

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: WET/41811
QC Batch Method: EPA 9040
Analysis Method: EPA 9040
Analysis Description: 9040 pH
Associated Lab Samples: 92278269001

SAMPLE DUPLICATE: 1622127

Parameter	Units	92278455001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	8.1	8.1	0	9	H6

SAMPLE DUPLICATE: 1622128

Parameter	Units	92278377002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	6.8	6.8	0	9	H6

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: WETA/25650 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92278269001

METHOD BLANK: 1621360 | Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.50	0.25	12/07/15 15:40	
Sulfate	mg/L	ND	2.0	1.0	12/07/15 15:40	

LABORATORY CONTROL SAMPLE: 1621361

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	98	90-110	
Sulfate	mg/L	20	20.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621362 1621363

Parameter	Units	92277996001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	26.5	2.5	2.5	28.4	28.5	76	77	90-110	0	10	M6
Sulfate	mg/L	194	20	20	212	213	91	93	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621526 1621527

Parameter	Units	92278389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	3.0	3.0	101	100	90-110	1	10	
Sulfate	mg/L	206	20	20	218	222	61	80	90-110	2	10	M6

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: WETA/25626
QC Batch Method: EPA 350.1
Analysis Method: EPA 350.1
Analysis Description: 350.1 Ammonia
Associated Lab Samples: 92278269001

METHOD BLANK: 1619415
Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.050	12/04/15 06:08	

LABORATORY CONTROL SAMPLE: 1619416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1619417 1619418

Parameter	Units	92277647002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	19.1	5	5	24.0	24.2	98	103	90-110	1	7	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1619419 1619420

Parameter	Units	92277707001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	22.3	50	50	75.1	75.1	106	106	90-110	0	7	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: WETA/25630
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92278269001

METHOD BLANK: 1619707
Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	0.013J	0.020	0.010	12/03/15 23:19	
Nitrogen, Nitrite	mg/L	ND	0.020	0.010	12/03/15 23:19	
Nitrogen, NO2 plus NO3	mg/L	0.013J	0.020	0.010	12/03/15 23:19	

LABORATORY CONTROL SAMPLE: 1619708

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.5	99	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	100	90-110	
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1619709 1619710

Parameter	Units	92276650005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	0.070	2.5	2.5	2.4	2.4	92	92	90-110	0	10	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	101	101	90-110	0	10	
Nitrogen, NO2 plus NO3	mg/L	0.070	2.5	2.5	2.4	2.4	92	92	90-110	0	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: WETA/25664
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Phosphorus, Total
Associated Lab Samples: 92278269001

METHOD BLANK: 1622001
Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	0.025	12/09/15 12:46	

LABORATORY CONTROL SAMPLE: 1622002

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1622003 1622004

Parameter	Units	92278289001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	ND	2.5	2.5	2.5	2.5	99	99	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1622005 1622006

Parameter	Units	92278335001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	2.4	2.5	2.5	4.8	4.8	95	95	90-110	0	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: WETA/25718
QC Batch Method: SM 4500-Cl-E
Analysis Method: SM 4500-Cl-E
Analysis Description: 4500 Chloride
Associated Lab Samples: 92278269001

METHOD BLANK: 1625607
Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	12/10/15 17:30	

LABORATORY CONTROL SAMPLE: 1625608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.4	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1625609 1625610

Parameter	Units	92278363001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.3	20	20	24.1	24.2	99	100	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1625611 1625612

Parameter	Units	92277330011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	16.8	40	40	56.0	56.7	98	100	90-110	1	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: WETA/25636
QC Batch Method: SM 4500-CN-E
Analysis Method: SM 4500-CN-E
Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92278269001

METHOD BLANK: 1620029
Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0080	0.0040	12/04/15 15:53	

LABORATORY CONTROL SAMPLE: 1620030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620031 1620032

Parameter	Units	92277799001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	0.0088	.1	.1	0.14	0.14	129	133	75-125	3	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620033 1620034

Parameter	Units	92278269001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	0.0079J	.1	.1	0.12	0.12	117	111	75-125	5	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: WETA/25632
QC Batch Method: SM 4500-P E
Analysis Method: SM 4500-P E
Analysis Description: SM4500P-E Phosphorus, Ortho
Associated Lab Samples: 92278269001

METHOD BLANK: 1619733
Matrix: Water
Associated Lab Samples: 92278269001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.050	0.025	12/04/15 09:30	

LABORATORY CONTROL SAMPLE: 1619734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.25	0.26	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1619735 1619736

Parameter	Units	92278269001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.64	1.2	1.2	1.8	1.8	93	92	90-110	1	10	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278269

Sample: PSW-1 **Lab ID: 92278269001** Collected: 12/02/15 11:15 Received: 12/02/15 17:33 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**2.07 ± 1.33 (1.94)** **C:NA T:NA**	pCi/L	12/15/15 06:19	12587-46-1	
Gross Beta	EPA 900.0	**6.49 ± 2.00 (2.58)** **C:NA T:NA**	pCi/L	12/15/15 06:19	12587-47-2	
Radium-226	EPA 903.1	**0.0893 ± 0.553 (0.989)** **C:NA T:71%**	pCi/L	12/23/15 11:24	13982-63-3	
Radium-228	EPA 904.0	**0.620 ± 0.489 (0.970)** **C:85% T:57%**	pCi/L	12/15/15 18:10	15262-20-1	
Total Uranium	ASTM D5174-97	**0.500 ± 0.015 (1.927)** **C:NA T:NA**	ug/L	12/23/15 16:08	7440-61-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: RADC/27161 | Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 | Analysis Description: 904.0 Radium 228
Associated Lab Samples: 92278269001

METHOD BLANK: 995083 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0606 ± 0.268 (0.609) C:86% T:91%	pCi/L	12/15/15 18:08	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: RADC/27181 | Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0 | Analysis Description: 900.0 Gross Alpha/Beta
Associated Lab Samples: 92278269001

METHOD BLANK: 995103 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.281 ± 0.542 (1.24) C:NA T:NA	pCi/L	12/15/15 06:20	
Gross Beta	-0.628 ± 0.625 (1.76) C:NA T:NA	pCi/L	12/15/15 06:20	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: RADC/27168
QC Batch Method: ASTM D5174-97
Analysis Method: ASTM D5174-97
Analysis Description: D5174.97 Total Uranium KPA
Associated Lab Samples: 92278269001

METHOD BLANK: 995090
Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Total Uranium	0.077 ± 0.002 (0.193) C:NA T:NA	ug/L	12/16/15 15:23	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278269

QC Batch: RADC/27137 | Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 | Analysis Description: 903.1 Radium-226
Associated Lab Samples: 92278269001

METHOD BLANK: 993674 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.350 ± 0.355 (0.538) C:NA T:102%	pCi/L	12/23/15 11:24	

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QUALIFIERS

Project: Wright Chemical Site
Pace Project No.: 92278269

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.

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, Styrene, and Vinyl chloride.

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H2	Extraction or preparation conducted outside EPA method holding time.
H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
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.

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QUALIFIERS

Project: Wright Chemical Site
Pace Project No.: 92278269

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N	Tentatively identified compound (TIC) based on mass spectral library search. Result is estimated.
N2	The lab does not hold TNI accreditation for this parameter.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Wright Chemical Site
Pace Project No.: 92278269

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92278269001	**PSW-1**	EPA 3510	OEXT/39578	EPA 8081	GCSV/23507
92278269001	**PSW-1**	EPA 3010A	MPRP/20176	EPA 6010	ICP/18200
92278269001	**PSW-1**	EPA 7470	MERP/8735	EPA 7470	MERC/8390
92278269001	**PSW-1**	EPA 3510	OEXT/39479	EPA 8270	MSSV/11605
92278269001	**PSW-1**	EPA 8260	MSV/34538		
92278269001	**PSW-1**	EPA 8260	MSV/35043		
92278269001	**PSW-1**	EPA 900.0	RADC/27181		
92278269001	**PSW-1**	EPA 903.1	RADC/27137		
92278269001	**PSW-1**	EPA 904.0	RADC/27161		
92278269001	**PSW-1**	ASTM D5174-97	RADC/27168		
92278269001	**PSW-1**	EPA 8315	TAMP/7938	EPA 8315	TAMP/7960
92278269001	**PSW-1**	EPA 9040	WET/41811		
92278269001	**PSW-1**	EPA 300.0	WETA/25650		
92278269001	**PSW-1**	EPA 350.1	WETA/25626		
92278269001	**PSW-1**	EPA 353.2	WETA/25630		
92278269001	**PSW-1**	EPA 365.1	WETA/25664		
92278269001	**PSW-1**	SM 4500-Cl-E	WETA/25718		
92278269001	**PSW-1**	SM 4500-CN-E	WETA/25636		
92278269001	**PSW-1**	SM 4500-P E	WETA/25632		

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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 2

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Shield Engineering	Report To:	DAVE WALLACE	Attention:	
Address:	4301 TAGGART CREEK RD CHARLOTTE NC 28208	Copy To:		Company Name:	
				Address:	
Email To:	dwallace@shieldengineering.com	Purchase Order #:		Pace Quote:	
Phone:	704 374 6913 Fax /	Project Name:	Wright Chemical Site	Pace Project Manager:	Nicole Gasiorowski
Requested Due Date:	Standard	Project Number:	1100044-05	Pace Profile #:	7739-4

Regulatory Agency: | State / Location: NC

NMG 12-3-15

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 (2015)	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	TCL VOCs + TICs	TCL SVOCs + TICs	TCL Pesticides	TAL Metals	Cyanide	NH3/PO4	NO2/NO3/Ortho-P	pH/Cl/F/SO4	RAD	Formaldehyde			Residual Chlorine (Y/N)	92278269
1	PSW-1	WT	G			12/2	1115		14	8	1	4	3	1					X	X	X	X	X	X	X	X	X	X				001
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Note: TICs include chloropicrin, hexamine, methanol, mercaptans,	Dayle Hefner / SHIELD	12-2	1733	J Minch / PACE	12-2	1733				
and silanes				Sylvia Hoey / PACE HVI	12-3-15	1015	3.3	Y	N	Y
SVOCs includes 1,1-biphenyl										
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: DAYLEY HEFNER

SIGNATURE of SAMPLER: Dayle Hefner

DATE Signed: 12-2-15

WO# : 92278269

92278269

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

December 31, 2015

Mr. Mike Armour
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

RE: Project: Wright Chemical Site
Pace Project No.: 92278500

Dear Mr. Armour:
Enclosed are the analytical results for sample(s) received by the laboratory on December 03, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Nicole Gasiorowski

Nicole Gasiorowski
nicole.gasiorowski@pacelabs.com
Project Manager

Enclosures

cc: Dave Stoner
Dave Wallace

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Wright Chemical Site
Pace Project No.: 92278500

Pennsylvania Certification IDs

Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
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
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

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
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: Wright Chemical Site
Pace Project No.: 92278500

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92278500001	**PSW-2**	Water	12/03/15 09:50	12/03/15 17:55
92278500002	**PSW-2 DUP**	Water	12/03/15 10:15	12/03/15 17:55

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SAMPLE ANALYTE COUNT

Project: Wright Chemical Site
Pace Project No.: 92278500

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92278500001	**PSW-2**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8270	BPJ	73	PASI-C
		EPA 8260	NB	57	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	SER	1	PASI-A
92278500002	**PSW-2 DUP**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8270	BPJ	74	PASI-C
		EPA 8260	NB	57	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	SER	1	PASI-A

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 8081**
Description: 8081 Organochlorine Pesticides
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 8081. 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.

H5: Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.
- PSW-2 DUP (Lab ID: 92278500002)

Sample Preparation:
The samples were prepared in accordance with EPA 3510 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.

QC Batch: OEXT/39578

S4: Surrogate recovery not evaluated against control limits due to sample dilution.
- PSW-2 (Lab ID: 92278500001)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)

QC Batch: OEXT/39722

S4: Surrogate recovery not evaluated against control limits due to sample dilution.
- PSW-2 DUP (Lab ID: 92278500002)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (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.

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.

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 8081**
Description: 8081 Organochlorine Pesticides
Client: Shield
Date: December 31, 2015

Additional Comments:

Analyte Comments:

QC Batch: OEXT/39578

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- PSW-2 (Lab ID: 92278500001)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)

QC Batch: OEXT/39722

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- PSW-2 DUP (Lab ID: 92278500002)
  - Tetrachloro-m-xylene (S)

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 6010. 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 3010A 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.

QC Batch: MPRP/20188

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278413001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1621513)
  - Aluminum
- MSD (Lab ID: 1621514)
  - Aluminum

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 7470**
Description: 7470 Mercury
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 7470. 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 7470 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: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 8270. 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 3510 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: OEXT/39571

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- PSW-2 (Lab ID: 92278500001)
  - 2,4,6-Tribromophenol (S)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Nitrobenzene-d5 (S)
  - Phenol-d6 (S)
  - Terphenyl-d14 (S)
- PSW-2 DUP (Lab ID: 92278500002)
  - 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: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Shield
Date: December 31, 2015

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

QC Batch: OEXT/39571

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278503001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1623579)
  - 2,3,4,6-Tetrachlorophenol
  - 2-Chloronaphthalene
  - Benzaldehyde
  - Butylbenzylphthalate
  - Caprolactam
  - Di-n-butylphthalate
  - bis(2-Ethylhexyl)phthalate
- MSD (Lab ID: 1623580)
  - 2,3,4,6-Tetrachlorophenol
  - Benzaldehyde
  - Butylbenzylphthalate
  - Caprolactam
  - Di-n-butylphthalate
  - bis(2-Ethylhexyl)phthalate

R1: RPD value was outside control limits.

- MSD (Lab ID: 1623580)
  - 2-Chloronaphthalene

Additional Comments:

Analyte Comments:

QC Batch: OEXT/39571

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- PSW-2 (Lab ID: 92278500001)
  - Nitrobenzene-d5 (S)
- PSW-2 DUP (Lab ID: 92278500002)
  - Nitrobenzene-d5 (S)

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 8260. 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.

QC Batch: MSV/34555

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278556001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1621055)
  - 1,4-Dioxane (p-Dioxane)
  - Bromomethane

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: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 900.0**
Description: 900.0 Gross Alpha/Beta
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 900.0. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 903.1. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 904.0. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278500

Method: **ASTM D5174-97**
Description: D517497 Total Uranium KPA
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for ASTM D5174-97. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 9040**
Description: 9040 pH
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 9040. 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.

H6: Analysis initiated outside of the 15 minute EPA recommended holding time.
- PSW-2 (Lab ID: 92278500001)
- PSW-2 DUP (Lab ID: 92278500002)

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: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 300.0. 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.

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: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 350.1**
Description: 350.1 Ammonia
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 350.1. 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.

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: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 353.2. 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.

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: Wright Chemical Site
Pace Project No.: 92278500

Method: **EPA 365.1**
Description: 365.1 Phosphorus, Total
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for EPA 365.1. 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.

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: Wright Chemical Site
Pace Project No.: 92278500

Method: **SM 4500-Cl-E**
Description: 4500 Chloride
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for SM 4500-Cl-E. 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.

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: WETA/25719

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92277791001,92278045001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1625626)
  - Chloride
- MSD (Lab ID: 1625627)
  - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278500

Method: **SM 4500-CN-E**
Description: 4500CNE Cyanide, Total
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for SM 4500-CN-E. 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.

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: WETA/25694

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278292002,92278577001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1623961)
  - Cyanide
- MS (Lab ID: 1623996)
  - Cyanide
- MSD (Lab ID: 1623962)
  - Cyanide
- MSD (Lab ID: 1623997)
  - Cyanide

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278500

Method: **SM 4500-P E**
Description: SM4500P-E, Phosphate, Ortho
Client: Shield
Date: December 31, 2015

General Information:
2 samples were analyzed for SM 4500-P E. 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.

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: WETA/25643

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278500001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1620990)
  - Orthophosphate as P
- MSD (Lab ID: 1620991)
  - Orthophosphate as P

Additional Comments:

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

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 **Lab ID: 92278500001** Collected: 12/03/15 09:50 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	309-00-2	
alpha-BHC	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	319-84-6	
beta-BHC	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	319-85-7	
delta-BHC	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	58-89-9	
Chlordane (Technical)	ND	ug/L	2.0	2.0	10	12/08/15 12:15	12/11/15 20:30	57-74-9	
4,4'-DDD	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	72-54-8	
4,4'-DDE	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	72-55-9	
4,4'-DDT	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	50-29-3	
Dieldrin	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	60-57-1	
Endosulfan I	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	959-98-8	
Endosulfan II	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	1031-07-8	
Endrin	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	72-20-8	
Endrin aldehyde	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	7421-93-4	
Endrin ketone	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	53494-70-5	
Heptachlor	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	76-44-8	
Heptachlor epoxide	ND	ug/L	0.50	0.50	10	12/08/15 12:15	12/11/15 20:30	1024-57-3	
Methoxychlor	ND	ug/L	1.5	1.5	10	12/08/15 12:15	12/11/15 20:30	72-43-5	
Toxaphene	ND	ug/L	2.0	2.0	10	12/08/15 12:15	12/11/15 20:30	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	0	%	20-130		10	12/08/15 12:15	12/11/15 20:30	877-09-8	D3,S4
Decachlorobiphenyl (S)	0	%	20-130		10	12/08/15 12:15	12/11/15 20:30	2051-24-3	D3,S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**622**	ug/L	100	50.0	1	12/07/15 16:00	12/08/15 18:10	7429-90-5	
Antimony	ND	ug/L	5.0	3.9	1	12/07/15 16:00	12/08/15 18:10	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	12/07/15 16:00	12/08/15 18:10	7440-38-2	
Barium	**14.4**	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:10	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/07/15 16:00	12/08/15 18:10	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/07/15 16:00	12/08/15 18:10	7440-43-9	
Calcium	**5490**	ug/L	100	50.0	1	12/07/15 16:00	12/08/15 18:10	7440-70-2	
Chromium	**2.6J**	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:10	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:10	7440-48-4	
Copper	**14.6**	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:10	7440-50-8	
Iron	**811**	ug/L	50.0	25.0	1	12/07/15 16:00	12/08/15 18:10	7439-89-6	
Lead	**4.3J**	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:10	7439-92-1	
Magnesium	**871**	ug/L	100	50.0	1	12/07/15 16:00	12/08/15 18:10	7439-95-4	
Manganese	**112**	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:10	7439-96-5	
Nickel	**4.9J**	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:10	7440-02-0	
Potassium	**4080J**	ug/L	5000	2500	1	12/07/15 16:00	12/08/15 18:10	7440-09-7	
Selenium	ND	ug/L	10.0	5.0	1	12/07/15 16:00	12/08/15 18:10	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:10	7440-22-4	
Sodium	**7560**	ug/L	5000	2500	1	12/07/15 16:00	12/08/15 18:10	7440-23-5	
Thallium	**5.1J**	ug/L	10.0	5.0	1	12/07/15 16:00	12/09/15 17:11	7440-28-0	
Vanadium	**12.7**	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:10	7440-62-2	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 **Lab ID: 92278500001** Collected: 12/03/15 09:50 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	**58.2**	ug/L	10.0	5.0	1	12/07/15 16:00	12/08/15 18:10	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	ND	ug/L	0.20	0.10	1	12/08/15 10:00	12/09/15 11:33	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	100	2.5	10	12/09/15 11:00	12/09/15 17:37	83-32-9	
Acenaphthylene	ND	ug/L	100	2.1	10	12/09/15 11:00	12/09/15 17:37	208-96-8	
Acetophenone	ND	ug/L	100	19.5	10	12/09/15 11:00	12/09/15 17:37	98-86-2	
Anthracene	ND	ug/L	100	1.4	10	12/09/15 11:00	12/09/15 17:37	120-12-7	
Atrazine	ND	ug/L	200	16.5	10	12/09/15 11:00	12/09/15 17:37	1912-24-9	
Benzaldehyde	ND	ug/L	200	47.0	10	12/09/15 11:00	12/09/15 17:37	100-52-7	
Benzo(a)anthracene	ND	ug/L	100	3.3	10	12/09/15 11:00	12/09/15 17:37	56-55-3	
Benzo(a)pyrene	ND	ug/L	100	3.0	10	12/09/15 11:00	12/09/15 17:37	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	100	2.8	10	12/09/15 11:00	12/09/15 17:37	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	100	3.8	10	12/09/15 11:00	12/09/15 17:37	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	100	4.3	10	12/09/15 11:00	12/09/15 17:37	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	100	18.7	10	12/09/15 11:00	12/09/15 17:37	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	100	13.2	10	12/09/15 11:00	12/09/15 17:37	101-55-3	
Butylbenzylphthalate	ND	ug/L	100	7.5	10	12/09/15 11:00	12/09/15 17:37	85-68-7	
Caprolactam	ND	ug/L	100	17.7	10	12/09/15 11:00	12/09/15 17:37	105-60-2	
Carbazole	ND	ug/L	100	7.3	10	12/09/15 11:00	12/09/15 17:37	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	200	41.7	10	12/09/15 11:00	12/09/15 17:37	59-50-7	
4-Chloroaniline	ND	ug/L	200	33.9	10	12/09/15 11:00	12/09/15 17:37	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	100	16.8	10	12/09/15 11:00	12/09/15 17:37	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	100	14.7	10	12/09/15 11:00	12/09/15 17:37	111-44-4	
2-Chloronaphthalene	ND	ug/L	100	22.1	10	12/09/15 11:00	12/09/15 17:37	91-58-7	
2-Chlorophenol	ND	ug/L	100	14.6	10	12/09/15 11:00	12/09/15 17:37	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	100	20.9	10	12/09/15 11:00	12/09/15 17:37	7005-72-3	
Chrysene	ND	ug/L	100	2.1	10	12/09/15 11:00	12/09/15 17:37	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	100	5.5	10	12/09/15 11:00	12/09/15 17:37	53-70-3	
Dibenzofuran	ND	ug/L	100	17.7	10	12/09/15 11:00	12/09/15 17:37	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	200	14.2	10	12/09/15 11:00	12/09/15 17:37	91-94-1	
2,4-Dichlorophenol	ND	ug/L	100	16.6	10	12/09/15 11:00	12/09/15 17:37	120-83-2	
Diethylphthalate	ND	ug/L	100	13.3	10	12/09/15 11:00	12/09/15 17:37	84-66-2	
2,4-Dimethylphenol	ND	ug/L	100	21.9	10	12/09/15 11:00	12/09/15 17:37	105-67-9	
Dimethylphthalate	ND	ug/L	100	14.8	10	12/09/15 11:00	12/09/15 17:37	131-11-3	
Di-n-butylphthalate	ND	ug/L	100	10.6	10	12/09/15 11:00	12/09/15 17:37	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	200	16.6	10	12/09/15 11:00	12/09/15 17:37	534-52-1	
2,4-Dinitrophenol	ND	ug/L	500	65.3	10	12/09/15 11:00	12/09/15 17:37	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	100	11.9	10	12/09/15 11:00	12/09/15 17:37	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	100	16.8	10	12/09/15 11:00	12/09/15 17:37	606-20-2	
Di-n-octylphthalate	ND	ug/L	100	8.6	10	12/09/15 11:00	12/09/15 17:37	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	60.0	8.5	10	12/09/15 11:00	12/09/15 17:37	117-81-7	
Fluoranthene	ND	ug/L	100	2.1	10	12/09/15 11:00	12/09/15 17:37	206-44-0	
Fluorene	ND	ug/L	100	2.1	10	12/09/15 11:00	12/09/15 17:37	86-73-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 **Lab ID: 92278500001** Collected: 12/03/15 09:50 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	100	18.4	10	12/09/15 11:00	12/09/15 17:37	87-68-3	
Hexachlorobenzene	ND	ug/L	100	11.4	10	12/09/15 11:00	12/09/15 17:37	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	100	17.5	10	12/09/15 11:00	12/09/15 17:37	77-47-4	
Hexachloroethane	ND	ug/L	100	14.6	10	12/09/15 11:00	12/09/15 17:37	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	100	2.9	10	12/09/15 11:00	12/09/15 17:37	193-39-5	
Isophorone	ND	ug/L	100	17.7	10	12/09/15 11:00	12/09/15 17:37	78-59-1	
2-Methylnaphthalene	ND	ug/L	100	2.8	10	12/09/15 11:00	12/09/15 17:37	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	100	17.4	10	12/09/15 11:00	12/09/15 17:37	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	100	17.2	10	12/09/15 11:00	12/09/15 17:37		
Naphthalene	ND	ug/L	100	3.4	10	12/09/15 11:00	12/09/15 17:37	91-20-3	
2-Nitroaniline	ND	ug/L	500	28.2	10	12/09/15 11:00	12/09/15 17:37	88-74-4	
3-Nitroaniline	ND	ug/L	500	24.2	10	12/09/15 11:00	12/09/15 17:37	99-09-2	
4-Nitroaniline	ND	ug/L	200	25.4	10	12/09/15 11:00	12/09/15 17:37	100-01-6	
Nitrobenzene	ND	ug/L	100	16.6	10	12/09/15 11:00	12/09/15 17:37	98-95-3	
2-Nitrophenol	ND	ug/L	100	16.5	10	12/09/15 11:00	12/09/15 17:37	88-75-5	
4-Nitrophenol	ND	ug/L	500	57.9	10	12/09/15 11:00	12/09/15 17:37	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	100	20.7	10	12/09/15 11:00	12/09/15 17:37	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	100	13.2	10	12/09/15 11:00	12/09/15 17:37	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	100	16.2	10	12/09/15 11:00	12/09/15 17:37	108-60-1	
Pentachlorophenol	ND	ug/L	250	23.2	10	12/09/15 11:00	12/09/15 17:37	87-86-5	
Phenanthrene	ND	ug/L	100	2.2	10	12/09/15 11:00	12/09/15 17:37	85-01-8	
Phenol	ND	ug/L	100	16.8	10	12/09/15 11:00	12/09/15 17:37	108-95-2	
Pyrene	ND	ug/L	100	1.9	10	12/09/15 11:00	12/09/15 17:37	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	100	16.7	10	12/09/15 11:00	12/09/15 17:37	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	100	22.6	10	12/09/15 11:00	12/09/15 17:37	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	100	22.5	10	12/09/15 11:00	12/09/15 17:37	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100	18.9	10	12/09/15 11:00	12/09/15 17:37	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	0	%	21-110		10	12/09/15 11:00	12/09/15 17:37	4165-60-0	D3,S4
2-Fluorobiphenyl (S)	0	%	27-110		10	12/09/15 11:00	12/09/15 17:37	321-60-8	S4
Terphenyl-d14 (S)	0	%	31-107		10	12/09/15 11:00	12/09/15 17:37	1718-51-0	S4
Phenol-d6 (S)	0	%	10-110		10	12/09/15 11:00	12/09/15 17:37	13127-88-3	S4
2-Fluorophenol (S)	0	%	12-110		10	12/09/15 11:00	12/09/15 17:37	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	27-110		10	12/09/15 11:00	12/09/15 17:37	118-79-6	S4
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		12/05/15 21:29	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		12/05/15 21:29	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		12/05/15 21:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/15 21:29	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		12/05/15 21:29	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		12/05/15 21:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		12/05/15 21:29	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		12/05/15 21:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/15 21:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		12/05/15 21:29	108-90-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 **Lab ID: 92278500001** Collected: 12/03/15 09:50 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Chloroethane	ND	ug/L	1.0	0.54	1		12/05/15 21:29	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		12/05/15 21:29	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/15 21:29	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		12/05/15 21:29	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		12/05/15 21:29	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		12/05/15 21:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/15 21:29	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		12/05/15 21:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		12/05/15 21:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/05/15 21:29	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		12/05/15 21:29	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		12/05/15 21:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		12/05/15 21:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		12/05/15 21:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		12/05/15 21:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		12/05/15 21:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/15 21:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/15 21:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/15 21:29	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		12/05/15 21:29	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/15 21:29	100-41-4	
2-Hexanone	**2.2J**	ug/L	5.0	0.46	1		12/05/15 21:29	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		12/05/15 21:29	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		12/05/15 21:29	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		12/05/15 21:29	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		12/05/15 21:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		12/05/15 21:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		12/05/15 21:29	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		12/05/15 21:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		12/05/15 21:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/15 21:29	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/15 21:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		12/05/15 21:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		12/05/15 21:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/15 21:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/15 21:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/05/15 21:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/15 21:29	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		12/05/15 21:29	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/15 21:29	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		12/05/15 21:29	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		12/05/15 21:29	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		12/05/15 21:29	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		12/05/15 21:29	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		12/05/15 21:29	2037-26-5	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 **Lab ID: 92278500001** Collected: 12/03/15 09:50 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Tentatively Identified Compounds									
Unknown	**64.6**	ug/L			1		12/05/15 21:29		N
Cyclotetrasiloxane, octa	**67.0**	ug/L			1		12/05/15 21:29	556-67-2	N
9040 pH	Analytical Method: EPA 9040								
pH	**7.4**	Std. Units	0.10	0.10	1		12/08/15 12:55		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.47J**	mg/L	0.50	0.25	1		12/09/15 13:42	16984-48-8	
Sulfate	**4.9**	mg/L	2.0	1.0	1		12/09/15 13:42	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**29.0**	mg/L	0.50	0.25	5		12/08/15 05:04	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.058**	mg/L	0.020	0.010	1		12/05/15 01:20		
Nitrogen, Nitrite	**0.072**	mg/L	0.020	0.010	1		12/05/15 01:20		
Nitrogen, NO2 plus NO3	**0.13**	mg/L	0.020	0.010	1		12/05/15 01:20		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**7.1**	mg/L	0.10	0.050	2		12/10/15 10:28	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**11.1**	mg/L	1.0	0.50	1		12/10/15 18:12	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0080	0.0040	1		12/10/15 16:26	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	**2.1**	mg/L	0.25	0.12	5		12/05/15 01:40		M6

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 DUP **Lab ID: 92278500002** Collected: 12/03/15 10:15 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	309-00-2	
alpha-BHC	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	319-84-6	
beta-BHC	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	319-85-7	
delta-BHC	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	58-89-9	
Chlordane (Technical)	ND	ug/L	1.0	1.0	5	12/15/15 12:15	12/15/15 13:14	57-74-9	
4,4'-DDD	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	72-54-8	
4,4'-DDE	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	72-55-9	
4,4'-DDT	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	50-29-3	
Dieldrin	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	60-57-1	
Endosulfan I	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	959-98-8	
Endosulfan II	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	1031-07-8	
Endrin	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	72-20-8	
Endrin aldehyde	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	7421-93-4	
Endrin ketone	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	53494-70-5	
Heptachlor	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	76-44-8	
Heptachlor epoxide	ND	ug/L	0.25	0.25	5	12/15/15 12:15	12/15/15 13:14	1024-57-3	
Methoxychlor	ND	ug/L	0.75	0.75	5	12/15/15 12:15	12/15/15 13:14	72-43-5	
Toxaphene	ND	ug/L	1.0	1.0	5	12/15/15 12:15	12/15/15 13:14	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	0	%	20-130		5	12/15/15 12:15	12/15/15 13:14	877-09-8	D3,H5, S4
Decachlorobiphenyl (S)	0	%	20-130		5	12/15/15 12:15	12/15/15 13:14	2051-24-3	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**147**	ug/L	100	50.0	1	12/07/15 16:00	12/08/15 18:13	7429-90-5	
Antimony	ND	ug/L	5.0	3.9	1	12/07/15 16:00	12/08/15 18:13	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	12/07/15 16:00	12/08/15 18:13	7440-38-2	
Barium	**4.4J**	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:13	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/07/15 16:00	12/08/15 18:13	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/07/15 16:00	12/08/15 18:13	7440-43-9	
Calcium	**3440**	ug/L	100	50.0	1	12/07/15 16:00	12/08/15 18:13	7440-70-2	
Chromium	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:13	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:13	7440-48-4	
Copper	**4.1J**	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:13	7440-50-8	
Iron	**287**	ug/L	50.0	25.0	1	12/07/15 16:00	12/08/15 18:13	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:13	7439-92-1	
Magnesium	**496**	ug/L	100	50.0	1	12/07/15 16:00	12/08/15 18:13	7439-95-4	
Manganese	**54.4**	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:13	7439-96-5	
Nickel	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:13	7440-02-0	
Potassium	**3530J**	ug/L	5000	2500	1	12/07/15 16:00	12/08/15 18:13	7440-09-7	
Selenium	ND	ug/L	10.0	5.0	1	12/07/15 16:00	12/08/15 18:13	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:13	7440-22-4	
Sodium	**7820**	ug/L	5000	2500	1	12/07/15 16:00	12/08/15 18:13	7440-23-5	
Thallium	ND	ug/L	10.0	5.0	1	12/07/15 16:00	12/09/15 17:14	7440-28-0	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 DUP **Lab ID: 92278500002** Collected: 12/03/15 10:15 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Vanadium	**6.1**	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:13	7440-62-2	
Zinc	**15.2**	ug/L	10.0	5.0	1	12/07/15 16:00	12/08/15 18:13	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	ND	ug/L	0.20	0.10	1	12/08/15 10:00	12/09/15 11:35	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	100	2.5	10	12/09/15 11:00	12/09/15 18:09	83-32-9	
Acenaphthylene	ND	ug/L	100	2.1	10	12/09/15 11:00	12/09/15 18:09	208-96-8	
Acetophenone	ND	ug/L	100	19.5	10	12/09/15 11:00	12/09/15 18:09	98-86-2	
Anthracene	ND	ug/L	100	1.4	10	12/09/15 11:00	12/09/15 18:09	120-12-7	
Atrazine	ND	ug/L	200	16.5	10	12/09/15 11:00	12/09/15 18:09	1912-24-9	
Benzaldehyde	ND	ug/L	200	47.0	10	12/09/15 11:00	12/09/15 18:09	100-52-7	
Benzo(a)anthracene	ND	ug/L	100	3.3	10	12/09/15 11:00	12/09/15 18:09	56-55-3	
Benzo(a)pyrene	ND	ug/L	100	3.0	10	12/09/15 11:00	12/09/15 18:09	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	100	2.8	10	12/09/15 11:00	12/09/15 18:09	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	100	3.8	10	12/09/15 11:00	12/09/15 18:09	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	100	4.3	10	12/09/15 11:00	12/09/15 18:09	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	100	18.7	10	12/09/15 11:00	12/09/15 18:09	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	100	13.2	10	12/09/15 11:00	12/09/15 18:09	101-55-3	
Butylbenzylphthalate	ND	ug/L	100	7.5	10	12/09/15 11:00	12/09/15 18:09	85-68-7	
Caprolactam	ND	ug/L	100	17.7	10	12/09/15 11:00	12/09/15 18:09	105-60-2	
Carbazole	ND	ug/L	100	7.3	10	12/09/15 11:00	12/09/15 18:09	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	200	41.7	10	12/09/15 11:00	12/09/15 18:09	59-50-7	
4-Chloroaniline	ND	ug/L	200	33.9	10	12/09/15 11:00	12/09/15 18:09	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	100	16.8	10	12/09/15 11:00	12/09/15 18:09	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	100	14.7	10	12/09/15 11:00	12/09/15 18:09	111-44-4	
2-Chloronaphthalene	ND	ug/L	100	22.1	10	12/09/15 11:00	12/09/15 18:09	91-58-7	
2-Chlorophenol	ND	ug/L	100	14.6	10	12/09/15 11:00	12/09/15 18:09	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	100	20.9	10	12/09/15 11:00	12/09/15 18:09	7005-72-3	
Chrysene	ND	ug/L	100	2.1	10	12/09/15 11:00	12/09/15 18:09	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	100	5.5	10	12/09/15 11:00	12/09/15 18:09	53-70-3	
Dibenzofuran	ND	ug/L	100	17.7	10	12/09/15 11:00	12/09/15 18:09	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	200	14.2	10	12/09/15 11:00	12/09/15 18:09	91-94-1	
2,4-Dichlorophenol	ND	ug/L	100	16.6	10	12/09/15 11:00	12/09/15 18:09	120-83-2	
Diethylphthalate	ND	ug/L	100	13.3	10	12/09/15 11:00	12/09/15 18:09	84-66-2	
2,4-Dimethylphenol	ND	ug/L	100	21.9	10	12/09/15 11:00	12/09/15 18:09	105-67-9	
Dimethylphthalate	ND	ug/L	100	14.8	10	12/09/15 11:00	12/09/15 18:09	131-11-3	
Di-n-butylphthalate	ND	ug/L	100	10.6	10	12/09/15 11:00	12/09/15 18:09	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	200	16.6	10	12/09/15 11:00	12/09/15 18:09	534-52-1	
2,4-Dinitrophenol	ND	ug/L	500	65.3	10	12/09/15 11:00	12/09/15 18:09	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	100	11.9	10	12/09/15 11:00	12/09/15 18:09	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	100	16.8	10	12/09/15 11:00	12/09/15 18:09	606-20-2	
Di-n-octylphthalate	ND	ug/L	100	8.6	10	12/09/15 11:00	12/09/15 18:09	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	60.0	8.5	10	12/09/15 11:00	12/09/15 18:09	117-81-7	
Fluoranthene	ND	ug/L	100	2.1	10	12/09/15 11:00	12/09/15 18:09	206-44-0	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 DUP **Lab ID: 92278500002** Collected: 12/03/15 10:15 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Fluorene	ND	ug/L	100	2.1	10	12/09/15 11:00	12/09/15 18:09	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	100	18.4	10	12/09/15 11:00	12/09/15 18:09	87-68-3	
Hexachlorobenzene	ND	ug/L	100	11.4	10	12/09/15 11:00	12/09/15 18:09	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	100	17.5	10	12/09/15 11:00	12/09/15 18:09	77-47-4	
Hexachloroethane	ND	ug/L	100	14.6	10	12/09/15 11:00	12/09/15 18:09	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	100	2.9	10	12/09/15 11:00	12/09/15 18:09	193-39-5	
Isophorone	ND	ug/L	100	17.7	10	12/09/15 11:00	12/09/15 18:09	78-59-1	
2-Methylnaphthalene	ND	ug/L	100	2.8	10	12/09/15 11:00	12/09/15 18:09	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	100	17.4	10	12/09/15 11:00	12/09/15 18:09	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	100	17.2	10	12/09/15 11:00	12/09/15 18:09		
Naphthalene	ND	ug/L	100	3.4	10	12/09/15 11:00	12/09/15 18:09	91-20-3	
2-Nitroaniline	ND	ug/L	500	28.2	10	12/09/15 11:00	12/09/15 18:09	88-74-4	
3-Nitroaniline	ND	ug/L	500	24.2	10	12/09/15 11:00	12/09/15 18:09	99-09-2	
4-Nitroaniline	ND	ug/L	200	25.4	10	12/09/15 11:00	12/09/15 18:09	100-01-6	
Nitrobenzene	ND	ug/L	100	16.6	10	12/09/15 11:00	12/09/15 18:09	98-95-3	
2-Nitrophenol	ND	ug/L	100	16.5	10	12/09/15 11:00	12/09/15 18:09	88-75-5	
4-Nitrophenol	ND	ug/L	500	57.9	10	12/09/15 11:00	12/09/15 18:09	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	100	20.7	10	12/09/15 11:00	12/09/15 18:09	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	100	13.2	10	12/09/15 11:00	12/09/15 18:09	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	100	16.2	10	12/09/15 11:00	12/09/15 18:09	108-60-1	
Pentachlorophenol	ND	ug/L	250	23.2	10	12/09/15 11:00	12/09/15 18:09	87-86-5	
Phenanthrene	ND	ug/L	100	2.2	10	12/09/15 11:00	12/09/15 18:09	85-01-8	
Phenol	ND	ug/L	100	16.8	10	12/09/15 11:00	12/09/15 18:09	108-95-2	
Pyrene	ND	ug/L	100	1.9	10	12/09/15 11:00	12/09/15 18:09	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	100	16.7	10	12/09/15 11:00	12/09/15 18:09	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	100	22.6	10	12/09/15 11:00	12/09/15 18:09	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	100	22.5	10	12/09/15 11:00	12/09/15 18:09	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100	18.9	10	12/09/15 11:00	12/09/15 18:09	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	0	%	21-110		10	12/09/15 11:00	12/09/15 18:09	4165-60-0	D3,S4
2-Fluorobiphenyl (S)	0	%	27-110		10	12/09/15 11:00	12/09/15 18:09	321-60-8	S4
Terphenyl-d14 (S)	0	%	31-107		10	12/09/15 11:00	12/09/15 18:09	1718-51-0	S4
Phenol-d6 (S)	0	%	10-110		10	12/09/15 11:00	12/09/15 18:09	13127-88-3	S4
2-Fluorophenol (S)	0	%	12-110		10	12/09/15 11:00	12/09/15 18:09	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	27-110		10	12/09/15 11:00	12/09/15 18:09	118-79-6	S4
Tentatively Identified Compounds									
Methylene Chloride	**66.6**	ug/L			10	12/09/15 11:00	12/09/15 18:09	75-09-2	N
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		12/05/15 21:46	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		12/05/15 21:46	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		12/05/15 21:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/15 21:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		12/05/15 21:46	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		12/05/15 21:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		12/05/15 21:46	78-93-3	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 DUP **Lab ID: 92278500002** Collected: 12/03/15 10:15 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Carbon disulfide	ND	ug/L	2.0	1.2	1		12/05/15 21:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/15 21:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		12/05/15 21:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		12/05/15 21:46	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		12/05/15 21:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/15 21:46	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		12/05/15 21:46	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		12/05/15 21:46	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		12/05/15 21:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/15 21:46	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		12/05/15 21:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		12/05/15 21:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/05/15 21:46	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		12/05/15 21:46	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		12/05/15 21:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		12/05/15 21:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		12/05/15 21:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		12/05/15 21:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		12/05/15 21:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/15 21:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/15 21:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/15 21:46	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		12/05/15 21:46	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/15 21:46	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		12/05/15 21:46	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		12/05/15 21:46	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		12/05/15 21:46	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		12/05/15 21:46	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		12/05/15 21:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		12/05/15 21:46	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		12/05/15 21:46	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		12/05/15 21:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		12/05/15 21:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/15 21:46	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/15 21:46	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		12/05/15 21:46	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		12/05/15 21:46	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/15 21:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/15 21:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/05/15 21:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/15 21:46	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		12/05/15 21:46	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/15 21:46	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		12/05/15 21:46	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		12/05/15 21:46	95-47-6	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 DUP **Lab ID: 92278500002** Collected: 12/03/15 10:15 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		12/05/15 21:46	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		12/05/15 21:46	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		12/05/15 21:46	2037-26-5	
Tentatively Identified Compounds									
Unknown	**62.7**	ug/L			1		12/05/15 21:46		N
Cyclotetrasiloxane, octa	**61.1**	ug/L			1		12/05/15 21:46	556-67-2	N
9040 pH	Analytical Method: EPA 9040								
pH	**8.5**	Std. Units	0.10	0.10	1		12/08/15 12:55		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.45J**	mg/L	0.50	0.25	1		12/09/15 14:41	16984-48-8	
Sulfate	**4.4**	mg/L	2.0	1.0	1		12/09/15 14:41	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**26.5**	mg/L	0.50	0.25	5		12/08/15 05:07	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.025**	mg/L	0.020	0.010	1		12/05/15 01:21		
Nitrogen, Nitrite	**0.063**	mg/L	0.020	0.010	1		12/05/15 01:21		
Nitrogen, NO2 plus NO3	**0.088**	mg/L	0.020	0.010	1		12/05/15 01:21		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**3.7**	mg/L	0.050	0.025	1		12/10/15 09:24	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**10.6**	mg/L	1.0	0.50	1		12/10/15 18:16	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0080	0.0040	1		12/10/15 16:29	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	**2.1**	mg/L	0.25	0.12	5		12/05/15 01:40		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: MERP/8735 | Analysis Method: EPA 7470
QC Batch Method: EPA 7470 | Analysis Description: 7470 Mercury
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 1621535 | Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.10	12/09/15 11:14	

LABORATORY CONTROL SAMPLE: 1621536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.6	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621537 1621538

Parameter	Units	92278176004 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	2.6	2.7	104	105	75-125	1	25	

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.

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: MPRP/20188
Analysis Method: EPA 6010
QC Batch Method: EPA 3010A
Analysis Description: 6010 MET
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 1621511
Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	50.0	12/08/15 16:47	
Antimony	ug/L	ND	5.0	3.9	12/08/15 16:47	
Arsenic	ug/L	ND	10.0	5.0	12/08/15 16:47	
Barium	ug/L	ND	5.0	2.5	12/08/15 16:47	
Beryllium	ug/L	ND	1.0	0.50	12/08/15 16:47	
Cadmium	ug/L	ND	1.0	0.50	12/08/15 16:47	
Calcium	ug/L	ND	100	50.0	12/08/15 16:47	
Chromium	ug/L	ND	5.0	2.5	12/08/15 16:47	
Cobalt	ug/L	ND	5.0	2.5	12/08/15 16:47	
Copper	ug/L	ND	5.0	2.5	12/08/15 16:47	
Iron	ug/L	ND	50.0	25.0	12/08/15 16:47	
Lead	ug/L	ND	5.0	2.5	12/08/15 16:47	
Magnesium	ug/L	ND	100	50.0	12/08/15 16:47	
Manganese	ug/L	ND	5.0	2.5	12/08/15 16:47	
Nickel	ug/L	ND	5.0	2.5	12/08/15 16:47	
Potassium	ug/L	ND	5000	2500	12/08/15 16:47	
Selenium	ug/L	ND	10.0	5.0	12/08/15 16:47	
Silver	ug/L	ND	5.0	2.5	12/08/15 16:47	
Sodium	ug/L	ND	5000	2500	12/08/15 16:47	
Thallium	ug/L	ND	10.0	5.0	12/09/15 17:05	
Vanadium	ug/L	ND	5.0	2.5	12/08/15 16:47	
Zinc	ug/L	ND	10.0	5.0	12/08/15 16:47	

LABORATORY CONTROL SAMPLE: 1621512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	4980	100	80-120	
Antimony	ug/L	500	513	103	80-120	
Arsenic	ug/L	500	498	100	80-120	
Barium	ug/L	500	510	102	80-120	
Beryllium	ug/L	500	511	102	80-120	
Cadmium	ug/L	500	513	103	80-120	
Calcium	ug/L	5000	4910	98	80-120	
Chromium	ug/L	500	510	102	80-120	
Cobalt	ug/L	500	512	102	80-120	
Copper	ug/L	500	518	104	80-120	
Iron	ug/L	5000	4970	99	80-120	
Lead	ug/L	500	506	101	80-120	
Magnesium	ug/L	5000	4880	98	80-120	
Manganese	ug/L	500	502	100	80-120	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

LABORATORY CONTROL SAMPLE: 1621512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel	ug/L	500	512	102	80-120	
Potassium	ug/L	5000	4910J	98	80-120	
Selenium	ug/L	500	504	101	80-120	
Silver	ug/L	250	249	100	80-120	
Sodium	ug/L	5000	4970J	99	80-120	
Thallium	ug/L	500	494	99	80-120	
Vanadium	ug/L	500	511	102	80-120	
Zinc	ug/L	500	504	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621513 1621514

Parameter	Units	92278413001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	3540	5000	5000	14600	15600	222	241	75-125	7	20	M1
Antimony	ug/L	ND	500	500	469	499	94	100	75-125	6	20	
Arsenic	ug/L	5.5J	500	500	461	490	91	97	75-125	6	20	
Barium	ug/L	60.6	500	500	548	581	98	104	75-125	6	20	
Beryllium	ug/L	ND	500	500	475	503	95	101	75-125	6	20	
Cadmium	ug/L	ND	500	500	475	503	95	101	75-125	6	20	
Calcium	ug/L	3850	5000	5000	8550	8930	94	102	75-125	4	20	
Chromium	ug/L	5.4	500	500	477	510	94	101	75-125	7	20	
Cobalt	ug/L	ND	500	500	473	502	94	100	75-125	6	20	
Copper	ug/L	4.7J	500	500	486	521	96	103	75-125	7	20	
Iron	ug/L	3180	5000	5000	7980	8650	96	109	75-125	8	20	
Lead	ug/L	8.1	500	500	478	509	94	100	75-125	6	20	
Magnesium	ug/L	595	5000	5000	5140	5460	91	97	75-125	6	20	
Manganese	ug/L	31.4	500	500	497	529	93	99	75-125	6	20	
Nickel	ug/L	ND	500	500	475	503	95	100	75-125	6	20	
Potassium	ug/L	ND	5000	5000	5400	5670	93	98	75-125	5	20	
Selenium	ug/L	ND	500	500	461	488	92	98	75-125	6	20	
Silver	ug/L	ND	250	250	230	245	92	98	75-125	6	20	
Sodium	ug/L	ND	5000	5000	7180	7550	94	102	75-125	5	20	
Thallium	ug/L	ND	500	500	446	489	89	98	75-125	9	20	
Vanadium	ug/L	10.9	500	500	484	516	95	101	75-125	6	20	
Zinc	ug/L	26.1	500	500	496	522	94	99	75-125	5	20	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: MSV/34555 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 1621053 | Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	12/05/15 16:05	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	12/05/15 16:05	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	12/05/15 16:05	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	12/05/15 16:05	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	12/05/15 16:05	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	12/05/15 16:05	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	12/05/15 16:05	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	12/05/15 16:05	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	12/05/15 16:05	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	12/05/15 16:05	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	12/05/15 16:05	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	12/05/15 16:05	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	12/05/15 16:05	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	12/05/15 16:05	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	12/05/15 16:05	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	12/05/15 16:05	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	12/05/15 16:05	
2-Hexanone	ug/L	ND	5.0	0.46	12/05/15 16:05	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	12/05/15 16:05	
Acetone	ug/L	ND	25.0	10.0	12/05/15 16:05	
Benzene	ug/L	ND	1.0	0.25	12/05/15 16:05	
Bromochloromethane	ug/L	ND	1.0	0.17	12/05/15 16:05	
Bromodichloromethane	ug/L	ND	1.0	0.18	12/05/15 16:05	
Bromoform	ug/L	ND	1.0	0.26	12/05/15 16:05	
Bromomethane	ug/L	ND	2.0	0.29	12/05/15 16:05	
Carbon disulfide	ug/L	ND	2.0	1.2	12/05/15 16:05	
Carbon tetrachloride	ug/L	ND	1.0	0.25	12/05/15 16:05	
Chlorobenzene	ug/L	ND	1.0	0.23	12/05/15 16:05	
Chloroethane	ug/L	ND	1.0	0.54	12/05/15 16:05	
Chloroform	ug/L	ND	1.0	0.14	12/05/15 16:05	
Chloromethane	ug/L	ND	1.0	0.11	12/05/15 16:05	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	12/05/15 16:05	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	12/05/15 16:05	
Cyclohexane	ug/L	ND	1.0	0.36	12/05/15 16:05	
Dibromochloromethane	ug/L	ND	1.0	0.21	12/05/15 16:05	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	12/05/15 16:05	
Ethylbenzene	ug/L	ND	1.0	0.30	12/05/15 16:05	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	12/05/15 16:05	
m&p-Xylene	ug/L	ND	2.0	0.66	12/05/15 16:05	
Methyl acetate	ug/L	ND	10.0	0.82	12/05/15 16:05	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	12/05/15 16:05	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

METHOD BLANK: 1621053 Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	12/05/15 16:05	
Methylene Chloride	ug/L	ND	2.0	0.97	12/05/15 16:05	
o-Xylene	ug/L	ND	1.0	0.23	12/05/15 16:05	
Styrene	ug/L	ND	1.0	0.26	12/05/15 16:05	
Tetrachloroethene	ug/L	ND	1.0	0.46	12/05/15 16:05	
Toluene	ug/L	ND	1.0	0.26	12/05/15 16:05	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	12/05/15 16:05	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	12/05/15 16:05	
Trichloroethene	ug/L	ND	1.0	0.47	12/05/15 16:05	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	12/05/15 16:05	
Vinyl chloride	ug/L	ND	1.0	0.62	12/05/15 16:05	
1,2-Dichloroethane-d4 (S)	%	98	70-130		12/05/15 16:05	
4-Bromofluorobenzene (S)	%	100	70-130		12/05/15 16:05	
Toluene-d8 (S)	%	98	70-130		12/05/15 16:05	

LABORATORY CONTROL SAMPLE: 1621054

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	45.7	91	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.5	95	70-130	
1,1,2-Trichloroethane	ug/L	50	43.9	88	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	50.2	100	70-130	
1,1-Dichloroethane	ug/L	50	47.0	94	70-130	
1,1-Dichloroethene	ug/L	50	49.9	100	70-132	
1,2,3-Trichlorobenzene	ug/L	50	49.3	99	70-135	
1,2,4-Trichlorobenzene	ug/L	50	48.9	98	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	45.6	91	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.2	100	70-130	
1,2-Dichlorobenzene	ug/L	50	54.1	108	70-130	
1,2-Dichloroethane	ug/L	50	44.8	90	70-130	
1,2-Dichloropropane	ug/L	50	46.8	94	70-130	
1,3-Dichlorobenzene	ug/L	50	53.6	107	70-130	
1,4-Dichlorobenzene	ug/L	50	53.2	106	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	865	86	71-125	
2-Butanone (MEK)	ug/L	100	100	100	70-145	
2-Hexanone	ug/L	100	99.5	100	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	101	101	70-140	
Acetone	ug/L	100	103	103	50-175	
Benzene	ug/L	50	50.6	101	70-130	
Bromochloromethane	ug/L	50	50.3	101	70-130	
Bromodichloromethane	ug/L	50	44.6	89	70-130	
Bromoform	ug/L	50	42.1	84	70-130	
Bromomethane	ug/L	50	32.1	64	54-130	
Carbon disulfide	ug/L	50	45.5	91	70-131	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

LABORATORY CONTROL SAMPLE: 1621054

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	48.3	97	70-132	
Chlorobenzene	ug/L	50	50.1	100	70-130	
Chloroethane	ug/L	50	43.5	87	64-134	
Chloroform	ug/L	50	46.6	93	70-130	
Chloromethane	ug/L	50	41.1	82	64-130	
cis-1,2-Dichloroethene	ug/L	50	48.9	98	70-131	
cis-1,3-Dichloropropene	ug/L	50	46.7	93	70-130	
Cyclohexane	ug/L	50	48.3	97	70-130	
Dibromochloromethane	ug/L	50	44.7	89	70-130	
Dichlorodifluoromethane	ug/L	50	50.0	100	56-130	
Ethylbenzene	ug/L	50	50.1	100	70-130	
Isopropylbenzene (Cumene)	ug/L	50	54.8	110	70-130	
m&p-Xylene	ug/L	100	99.7	100	70-130	
Methyl acetate	ug/L	50	52.5	105	70-130	
Methyl-tert-butyl ether	ug/L	50	45.8	92	70-130	
Methylcyclohexane	ug/L	50	47.8	96	70-130	
Methylene Chloride	ug/L	50	44.2	88	63-130	
o-Xylene	ug/L	50	49.5	99	70-130	
Styrene	ug/L	50	51.1	102	70-130	
Tetrachloroethene	ug/L	50	52.8	106	70-130	
Toluene	ug/L	50	48.2	96	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.7	97	70-130	
trans-1,3-Dichloropropene	ug/L	50	45.8	92	70-132	
Trichloroethene	ug/L	50	47.0	94	70-130	
Trichlorofluoromethane	ug/L	50	51.5	103	62-133	
Vinyl chloride	ug/L	50	52.2	104	50-150	
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE SAMPLE: 1621055

Parameter	Units	92278556001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	20	19.3	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.2	91	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	17.2	86	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	21.1	106	70-130	
1,1-Dichloroethane	ug/L	ND	20	19.6	98	70-130	
1,1-Dichloroethene	ug/L	ND	20	21.4	107	70-166	
1,2,3-Trichlorobenzene	ug/L	ND	20	18.1	91	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	18.0	90	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	17.2	86	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.8	99	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	21.6	108	70-130	
1,2-Dichloroethane	ug/L	ND	20	18.1	90	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

MATRIX SPIKE SAMPLE: 1621055

Parameter	Units	92278556001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	ug/L	ND	20	19.3	97	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	21.0	105	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	20.7	104	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	151	38	70-130	M1
2-Butanone (MEK)	ug/L	ND	40	37.4	93	70-130	
2-Hexanone	ug/L	ND	40	37.6	94	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	39.9	100	70-130	
Acetone	ug/L	ND	40	36.6	92	70-130	
Benzene	ug/L	ND	20	21.2	106	70-148	
Bromochloromethane	ug/L	ND	20	20.5	102	70-130	
Bromodichloromethane	ug/L	ND	20	17.7	89	70-130	
Bromoform	ug/L	ND	20	15.3	76	70-130	
Bromomethane	ug/L	ND	20	12.7	64	70-130	M1
Carbon disulfide	ug/L	ND	20	18.8	94	70-130	
Carbon tetrachloride	ug/L	ND	20	20.7	104	70-130	
Chlorobenzene	ug/L	ND	20	20.1	100	70-146	
Chloroethane	ug/L	ND	20	18.4	92	70-130	
Chloroform	ug/L	ND	20	19.8	99	70-130	
Chloromethane	ug/L	ND	20	17.7	89	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	20.6	103	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	18.0	90	70-130	
Cyclohexane	ug/L	ND	20	20.2	101	70-130	
Dibromochloromethane	ug/L	ND	20	17.1	85	70-130	
Dichlorodifluoromethane	ug/L	ND	20	22.1	110	70-130	
Ethylbenzene	ug/L	ND	20	20.1	101	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	20	21.7	109	70-130	
m&p-Xylene	ug/L	ND	40	40.1	99	70-130	
Methyl acetate	ug/L	ND	20	17.5	88	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	19.5	97	70-130	
Methylcyclohexane	ug/L	ND	20	18.9	95	70-130	
Methylene Chloride	ug/L	ND	20	18.6	93	70-130	
o-Xylene	ug/L	ND	20	20.2	101	70-130	
Styrene	ug/L	ND	20	19.7	99	70-130	
Tetrachloroethene	ug/L	ND	20	20.9	104	70-130	
Toluene	ug/L	ND	20	20.0	99	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	20.8	104	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	17.6	88	70-130	
Trichloroethene	ug/L	1.5	20	21.5	100	69-151	
Trichlorofluoromethane	ug/L	ND	20	22.1	111	70-130	
Vinyl chloride	ug/L	ND	20	21.9	110	70-130	
1,2-Dichloroethane-d4 (S)	%				100	70-130	
4-Bromofluorobenzene (S)	%				102	70-130	
Toluene-d8 (S)	%				97	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

SAMPLE DUPLICATE: 1621056

Parameter	Units	92278556002 Result	Dup Result	RPD	Max RPD	Qualifiers
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	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	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	
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	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	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	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Cyclohexane	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl acetate	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylcyclohexane	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

SAMPLE DUPLICATE: 1621056

Parameter	Units	92278556002 Result	Dup Result	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	100	98	1		
4-Bromofluorobenzene (S)	%	100	101	1		
Toluene-d8 (S)	%	98	96	2		

SAMPLE DUPLICATE: 1621057

Parameter	Units	92278445009 Result	Dup Result	RPD	Max RPD	Qualifiers
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	
1,1,2-Trichlorotrifluoroethane	ug/L	1060	1080	2	30	
1,1-Dichloroethane	ug/L	ND	5.0J		30	
1,1-Dichloroethene	ug/L	234	242	3	30	
1,2,3-Trichlorobenzene	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	
1,2-Dichloroethane	ug/L	ND	2.9J		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	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	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	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

SAMPLE DUPLICATE: 1621057

Parameter	Units	92278445009 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyclohexane	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl acetate	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylcyclohexane	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	11.0J		30	
o-Xylene	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	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	98	101	3		
4-Bromofluorobenzene (S)	%	98	99	1		
Toluene-d8 (S)	%	99	99	0		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: OEXT/39578
QC Batch Method: EPA 3510
Associated Lab Samples: 92278500001

Analysis Method: EPA 8081
Analysis Description: 8081A GCS Pesticides

METHOD BLANK: 1623835
Matrix: Water
Associated Lab Samples: 92278500001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	0.050	12/11/15 05:32	
4,4'-DDE	ug/L	ND	0.050	0.050	12/11/15 05:32	
4,4'-DDT	ug/L	ND	0.050	0.050	12/11/15 05:32	
Aldrin	ug/L	ND	0.050	0.050	12/11/15 05:32	
alpha-BHC	ug/L	ND	0.050	0.050	12/11/15 05:32	
beta-BHC	ug/L	ND	0.050	0.050	12/11/15 05:32	
Chlordane (Technical)	ug/L	ND	0.20	0.20	12/11/15 05:32	
delta-BHC	ug/L	ND	0.050	0.050	12/11/15 05:32	
Dieldrin	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endosulfan I	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endosulfan II	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endosulfan sulfate	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endrin	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endrin aldehyde	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endrin ketone	ug/L	ND	0.050	0.050	12/11/15 05:32	
gamma-BHC (Lindane)	ug/L	ND	0.050	0.050	12/11/15 05:32	
Heptachlor	ug/L	ND	0.050	0.050	12/11/15 05:32	
Heptachlor epoxide	ug/L	ND	0.050	0.050	12/11/15 05:32	
Methoxychlor	ug/L	ND	0.15	0.15	12/11/15 05:32	
Toxaphene	ug/L	ND	0.20	0.20	12/11/15 05:32	
Decachlorobiphenyl (S)	%	74	20-130		12/11/15 05:32	
Tetrachloro-m-xylene (S)	%	74	20-130		12/11/15 05:32	

LABORATORY CONTROL SAMPLE: 1623836

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	.25	0.23	95	20-150	
4,4'-DDE	ug/L	.25	0.22	90	20-150	
4,4'-DDT	ug/L	.25	0.22	91	20-150	
Aldrin	ug/L	.25	0.20	80	20-150	
alpha-BHC	ug/L	.25	0.21	87	20-150	
beta-BHC	ug/L	.25	0.23	92	20-150	
delta-BHC	ug/L	.25	0.23	91	20-150	
Dieldrin	ug/L	.25	0.22	89	20-150	
Endosulfan I	ug/L	.25	0.22	90	20-150	
Endosulfan II	ug/L	.25	0.24	95	20-150	
Endosulfan sulfate	ug/L	.25	0.24	95	20-150	
Endrin	ug/L	.25	0.23	95	20-150	
Endrin aldehyde	ug/L	.25	0.22	88	20-150	
Endrin ketone	ug/L	.25	0.21	86	20-150	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

LABORATORY CONTROL SAMPLE: 1623836

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
gamma-BHC (Lindane)	ug/L	.25	0.22	88	20-150	
Heptachlor	ug/L	.25	0.20	79	20-150	
Heptachlor epoxide	ug/L	.25	0.21	85	20-150	
Methoxychlor	ug/L	.74	0.70	95	20-150	
Decachlorobiphenyl (S)	%			63	20-130	
Tetrachloro-m-xylene (S)	%			85	20-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623837 1623838

Parameter	Units	92278506003 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	.5	.5	0.40	0.38	80	76	20-150	5	30	
4,4'-DDE	ug/L	ND	.5	.5	0.36	0.35	74	71	20-150	4	30	
4,4'-DDT	ug/L	ND	.5	.5	0.37	0.38	76	77	20-150	1	30	
Aldrin	ug/L	ND	.5	.5	0.28	0.25	57	50	20-150	13	30	
alpha-BHC	ug/L	ND	.5	.5	0.35	0.35	70	71	20-150	1	30	
beta-BHC	ug/L	ND	.5	.5	0.35	0.36	70	73	20-150	4	30	
delta-BHC	ug/L	ND	.5	.5	0.40	0.41	80	83	20-150	3	30	
Dieldrin	ug/L	ND	.5	.5	0.37	0.34	76	68	20-150	11	30	
Endosulfan I	ug/L	ND	.5	.5	0.36	0.34	74	68	20-150	7	30	
Endosulfan II	ug/L	ND	.5	.5	0.40	0.37	80	74	20-150	8	30	
Endosulfan sulfate	ug/L	ND	.5	.5	0.42	0.41	86	84	20-150	2	30	
Endrin	ug/L	ND	.5	.5	0.41	0.39	82	79	20-150	4	30	
Endrin aldehyde	ug/L	ND	.5	.5	0.34	0.37	70	74	20-150	7	30	
Endrin ketone	ug/L	ND	.5	.5	0.38	0.37	77	74	20-150	3	30	
gamma-BHC (Lindane)	ug/L	ND	.5	.5	0.35	0.36	71	73	20-150	2	30	
Heptachlor	ug/L	ND	.5	.5	0.29	0.24	59	49	20-150	18	30	
Heptachlor epoxide	ug/L	ND	.5	.5	0.35	0.31	71	63	20-150	12	30	
Methoxychlor	ug/L	ND	1.5	1.5	1.2	1.1	80	76	20-150	5	30	
Decachlorobiphenyl (S)	%						62	66	20-130			
Tetrachloro-m-xylene (S)	%						67	58	20-130			

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: OEXT/39722
QC Batch Method: EPA 3510
Analysis Method: EPA 8081
Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 92278500002

METHOD BLANK: 1628876
Matrix: Water
Associated Lab Samples: 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	0.050	12/15/15 13:32	
4,4'-DDE	ug/L	ND	0.050	0.050	12/15/15 13:32	
4,4'-DDT	ug/L	ND	0.050	0.050	12/15/15 13:32	
Aldrin	ug/L	ND	0.050	0.050	12/15/15 13:32	
alpha-BHC	ug/L	ND	0.050	0.050	12/15/15 13:32	
beta-BHC	ug/L	ND	0.050	0.050	12/15/15 13:32	
Chlordane (Technical)	ug/L	ND	0.20	0.20	12/15/15 13:32	
delta-BHC	ug/L	ND	0.050	0.050	12/15/15 13:32	
Dieldrin	ug/L	ND	0.050	0.050	12/15/15 13:32	
Endosulfan I	ug/L	ND	0.050	0.050	12/15/15 13:32	
Endosulfan II	ug/L	ND	0.050	0.050	12/15/15 13:32	
Endosulfan sulfate	ug/L	ND	0.050	0.050	12/15/15 13:32	
Endrin	ug/L	ND	0.050	0.050	12/15/15 13:32	
Endrin aldehyde	ug/L	ND	0.050	0.050	12/15/15 13:32	
Endrin ketone	ug/L	ND	0.050	0.050	12/15/15 13:32	
gamma-BHC (Lindane)	ug/L	ND	0.050	0.050	12/15/15 13:32	
Heptachlor	ug/L	ND	0.050	0.050	12/15/15 13:32	
Heptachlor epoxide	ug/L	ND	0.050	0.050	12/15/15 13:32	
Methoxychlor	ug/L	ND	0.15	0.15	12/15/15 13:32	
Toxaphene	ug/L	ND	0.20	0.20	12/15/15 13:32	
Decachlorobiphenyl (S)	%	67	20-130		12/15/15 13:32	
Tetrachloro-m-xylene (S)	%	83	20-130		12/15/15 13:32	

LABORATORY CONTROL SAMPLE: 1628877

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	.25	0.24	98	20-150	
4,4'-DDE	ug/L	.25	0.24	95	20-150	
4,4'-DDT	ug/L	.25	0.26	104	20-150	
Aldrin	ug/L	.25	0.22	88	20-150	
alpha-BHC	ug/L	.25	0.23	92	20-150	
beta-BHC	ug/L	.25	0.24	95	20-150	
delta-BHC	ug/L	.25	0.25	99	20-150	
Dieldrin	ug/L	.25	0.24	98	20-150	
Endosulfan I	ug/L	.25	0.24	96	20-150	
Endosulfan II	ug/L	.25	0.25	99	20-150	
Endosulfan sulfate	ug/L	.25	0.25	101	20-150	
Endrin	ug/L	.25	0.25	102	20-150	
Endrin aldehyde	ug/L	.25	0.23	94	20-150	
Endrin ketone	ug/L	.25	0.23	93	20-150	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

LABORATORY CONTROL SAMPLE: 1628877

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
gamma-BHC (Lindane)	ug/L	.25	0.23	94	20-150	
Heptachlor	ug/L	.25	0.22	88	20-150	
Heptachlor epoxide	ug/L	.25	0.23	95	20-150	
Methoxychlor	ug/L	.74	0.75	101	20-150	
Decachlorobiphenyl (S)	%			78	20-130	
Tetrachloro-m-xylene (S)	%			90	20-130	

MATRIX SPIKE SAMPLE: 1628878

Parameter	Units	92279302002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	ND	.25	0.20	81	20-150	
4,4'-DDE	ug/L	ND	.25	0.20	80	20-150	
4,4'-DDT	ug/L	ND	.25	0.21	83	20-150	
Aldrin	ug/L	ND	.25	0.18	71	20-150	
alpha-BHC	ug/L	ND	.25	0.20	79	20-150	
beta-BHC	ug/L	ND	.25	0.21	84	20-150	
delta-BHC	ug/L	ND	.25	0.21	86	20-150	
Dieldrin	ug/L	ND	.25	0.20	81	20-150	
Endosulfan I	ug/L	ND	.25	0.20	79	20-150	
Endosulfan II	ug/L	ND	.25	0.21	84	20-150	
Endosulfan sulfate	ug/L	ND	.25	0.21	83	20-150	
Endrin	ug/L	ND	.25	0.20	81	20-150	
Endrin aldehyde	ug/L	ND	.25	0.19	79	20-150	
Endrin ketone	ug/L	ND	.25	0.19	78	20-150	
gamma-BHC (Lindane)	ug/L	ND	.25	0.20	81	20-150	
Heptachlor	ug/L	ND	.25	0.18	71	20-150	
Heptachlor epoxide	ug/L	ND	.25	0.19	78	20-150	
Methoxychlor	ug/L	ND	.74	0.61	82	20-150	
Decachlorobiphenyl (S)	%				77	20-130	
Tetrachloro-m-xylene (S)	%				72	20-130	

SAMPLE DUPLICATE: 1628879

Parameter	Units	92279304003 Result	Dup Result	RPD	Max RPD	Qualifiers
4,4'-DDD	ug/L	ND	ND		30	
4,4'-DDE	ug/L	ND	ND		30	
4,4'-DDT	ug/L	ND	ND		30	
Aldrin	ug/L	ND	ND		30	
alpha-BHC	ug/L	ND	ND		30	
beta-BHC	ug/L	ND	ND		30	
Chlordane (Technical)	ug/L	ND	ND		30	
delta-BHC	ug/L	ND	ND		30	
Dieldrin	ug/L	ND	ND		30	
Endosulfan I	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

SAMPLE DUPLICATE: 1628879

Parameter	Units	92279304003 Result	Dup Result	RPD	Max RPD	Qualifiers
Endosulfan II	ug/L	ND	ND		30	
Endosulfan sulfate	ug/L	ND	ND		30	
Endrin	ug/L	ND	ND		30	
Endrin aldehyde	ug/L	ND	ND		30	
Endrin ketone	ug/L	ND	ND		30	
gamma-BHC (Lindane)	ug/L	ND	ND		30	
Heptachlor	ug/L	ND	ND		30	
Heptachlor epoxide	ug/L	ND	ND		30	
Methoxychlor	ug/L	ND	ND		30	
Toxaphene	ug/L	ND	ND		30	
Decachlorobiphenyl (S)	%	71	84	16		
Tetrachloro-m-xylene (S)	%	52	50	5		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: OEXT/39571 | Analysis Method: EPA 8270
QC Batch Method: EPA 3510 | Analysis Description: 8270 Water MSSV
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 1623577 | Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	1.7	12/09/15 17:04	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	1.6	12/09/15 17:04	
2,3,4,6-Tetrachlorophenol	ug/L	ND	10.0	2.3	12/09/15 17:04	
2,4,5-Trichlorophenol	ug/L	ND	10.0	2.2	12/09/15 17:04	
2,4,6-Trichlorophenol	ug/L	ND	10.0	1.9	12/09/15 17:04	
2,4-Dichlorophenol	ug/L	ND	10.0	1.7	12/09/15 17:04	
2,4-Dimethylphenol	ug/L	ND	10.0	2.2	12/09/15 17:04	
2,4-Dinitrophenol	ug/L	ND	50.0	6.5	12/09/15 17:04	
2,4-Dinitrotoluene	ug/L	ND	10.0	1.2	12/09/15 17:04	
2,6-Dinitrotoluene	ug/L	ND	10.0	1.7	12/09/15 17:04	
2-Chloronaphthalene	ug/L	ND	10.0	2.2	12/09/15 17:04	
2-Chlorophenol	ug/L	ND	10.0	1.5	12/09/15 17:04	
2-Methylnaphthalene	ug/L	ND	10.0	0.28	12/09/15 17:04	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	1.7	12/09/15 17:04	
2-Nitroaniline	ug/L	ND	50.0	2.8	12/09/15 17:04	
2-Nitrophenol	ug/L	ND	10.0	1.7	12/09/15 17:04	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	1.7	12/09/15 17:04	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	1.4	12/09/15 17:04	
3-Nitroaniline	ug/L	ND	50.0	2.4	12/09/15 17:04	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	1.7	12/09/15 17:04	
4-Bromophenylphenyl ether	ug/L	ND	10.0	1.3	12/09/15 17:04	
4-Chloro-3-methylphenol	ug/L	ND	20.0	4.2	12/09/15 17:04	
4-Chloroaniline	ug/L	ND	20.0	3.4	12/09/15 17:04	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	2.1	12/09/15 17:04	
4-Nitroaniline	ug/L	ND	20.0	2.5	12/09/15 17:04	
4-Nitrophenol	ug/L	ND	50.0	5.8	12/09/15 17:04	
Acenaphthene	ug/L	ND	10.0	0.25	12/09/15 17:04	
Acenaphthylene	ug/L	ND	10.0	0.21	12/09/15 17:04	
Acetophenone	ug/L	ND	10.0	2.0	12/09/15 17:04	
Anthracene	ug/L	ND	10.0	0.14	12/09/15 17:04	
Atrazine	ug/L	ND	20.0	1.7	12/09/15 17:04	
Benzaldehyde	ug/L	ND	20.0	4.7	12/09/15 17:04	
Benzo(a)anthracene	ug/L	ND	10.0	0.33	12/09/15 17:04	
Benzo(a)pyrene	ug/L	ND	10.0	0.30	12/09/15 17:04	
Benzo(b)fluoranthene	ug/L	ND	10.0	0.28	12/09/15 17:04	
Benzo(g,h,i)perylene	ug/L	ND	10.0	0.38	12/09/15 17:04	
Benzo(k)fluoranthene	ug/L	ND	10.0	0.43	12/09/15 17:04	
Biphenyl (Diphenyl)	ug/L	ND	10.0	1.9	12/09/15 17:04	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	1.7	12/09/15 17:04	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	1.5	12/09/15 17:04	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	0.85	12/09/15 17:04	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

METHOD BLANK: 1623577 Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Butylbenzylphthalate	ug/L	ND	10.0	0.75	12/09/15 17:04	
Caprolactam	ug/L	ND	10.0	1.8	12/09/15 17:04	
Carbazole	ug/L	ND	10.0	0.73	12/09/15 17:04	
Chrysene	ug/L	ND	10.0	0.21	12/09/15 17:04	
Di-n-butylphthalate	ug/L	ND	10.0	1.1	12/09/15 17:04	
Di-n-octylphthalate	ug/L	ND	10.0	0.86	12/09/15 17:04	
Dibenz(a,h)anthracene	ug/L	ND	10.0	0.55	12/09/15 17:04	
Dibenzofuran	ug/L	ND	10.0	1.8	12/09/15 17:04	
Diethylphthalate	ug/L	ND	10.0	1.3	12/09/15 17:04	
Dimethylphthalate	ug/L	ND	10.0	1.5	12/09/15 17:04	
Fluoranthene	ug/L	ND	10.0	0.21	12/09/15 17:04	
Fluorene	ug/L	ND	10.0	0.21	12/09/15 17:04	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	1.8	12/09/15 17:04	
Hexachlorobenzene	ug/L	ND	10.0	1.1	12/09/15 17:04	
Hexachlorocyclopentadiene	ug/L	ND	10.0	1.8	12/09/15 17:04	
Hexachloroethane	ug/L	ND	10.0	1.5	12/09/15 17:04	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	0.29	12/09/15 17:04	
Isophorone	ug/L	ND	10.0	1.8	12/09/15 17:04	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	2.1	12/09/15 17:04	
N-Nitrosodiphenylamine	ug/L	ND	10.0	1.3	12/09/15 17:04	
Naphthalene	ug/L	ND	10.0	0.34	12/09/15 17:04	
Nitrobenzene	ug/L	ND	10.0	1.7	12/09/15 17:04	
Pentachlorophenol	ug/L	ND	25.0	2.3	12/09/15 17:04	
Phenanthrene	ug/L	ND	10.0	0.22	12/09/15 17:04	
Phenol	ug/L	ND	10.0	1.7	12/09/15 17:04	
Pyrene	ug/L	ND	10.0	0.19	12/09/15 17:04	
2,4,6-Tribromophenol (S)	%	79	27-110		12/09/15 17:04	
2-Fluorobiphenyl (S)	%	72	27-110		12/09/15 17:04	
2-Fluorophenol (S)	%	36	12-110		12/09/15 17:04	
Nitrobenzene-d5 (S)	%	71	21-110		12/09/15 17:04	
Phenol-d6 (S)	%	23	10-110		12/09/15 17:04	
Terphenyl-d14 (S)	%	92	31-107		12/09/15 17:04	

LABORATORY CONTROL SAMPLE: 1623578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	37.6	75	16-129	
2,2'-Oxybis(1-chloropropane)	ug/L	50	28.1	56	18-120	
2,3,4,6-Tetrachlorophenol	ug/L	50	90.7	181	54-276	
2,4,5-Trichlorophenol	ug/L	50	45.8	92	43-113	
2,4,6-Trichlorophenol	ug/L	50	42.2	84	42-120	
2,4-Dichlorophenol	ug/L	50	40.2	80	30-120	
2,4-Dimethylphenol	ug/L	50	36.0	72	29-111	
2,4-Dinitrophenol	ug/L	250	225	90	19-132	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

LABORATORY CONTROL SAMPLE: 1623578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/L	50	48.6	97	58-128	
2,6-Dinitrotoluene	ug/L	50	48.5	97	54-129	
2-Chloronaphthalene	ug/L	50	46.7	93	43-117	
2-Chlorophenol	ug/L	50	33.4	67	37-120	
2-Methylnaphthalene	ug/L	50	36.7	73	33-120	
2-Methylphenol(o-Cresol)	ug/L	50	33.4	67	31-120	
2-Nitroaniline	ug/L	100	78.2	78	48-121	
2-Nitrophenol	ug/L	50	42.0	84	25-116	
3&4-Methylphenol(m&p Cresol)	ug/L	50	25.9	52	23-120	
3,3'-Dichlorobenzidine	ug/L	250	81.6	33	10-154	
3-Nitroaniline	ug/L	100	84.2	84	43-115	
4,6-Dinitro-2-methylphenol	ug/L	100	92.3	92	44-124	
4-Bromophenylphenyl ether	ug/L	50	42.7	85	34-113	
4-Chloro-3-methylphenol	ug/L	100	78.7	79	31-110	
4-Chloroaniline	ug/L	100	65.9	66	20-120	
4-Chlorophenylphenyl ether	ug/L	50	38.6	77	34-116	
4-Nitroaniline	ug/L	100	93.6	94	46-128	
4-Nitrophenol	ug/L	250	103	41	11-120	
Acenaphthene	ug/L	50	43.7	87	48-114	
Acenaphthylene	ug/L	50	45.8	92	48-112	
Acetophenone	ug/L	50	35.8	72	24-120	
Anthracene	ug/L	50	48.7	97	57-118	
Atrazine	ug/L	50	53.0	106	33-160	
Benzaldehyde	ug/L	50	10J	20	10-120	
Benzo(a)anthracene	ug/L	50	47.5	95	56-121	
Benzo(a)pyrene	ug/L	50	40.8	82	55-127	
Benzo(b)fluoranthene	ug/L	50	44.2	88	53-128	
Benzo(g,h,i)perylene	ug/L	50	34.6	69	54-125	
Benzo(k)fluoranthene	ug/L	50	49.4	99	51-123	
Biphenyl (Diphenyl)	ug/L	50	39.6	79	38-120	
bis(2-Chloroethoxy)methane	ug/L	50	35.3	71	32-120	
bis(2-Chloroethyl) ether	ug/L	50	33.2	66	33-111	
bis(2-Ethylhexyl)phthalate	ug/L	50	58.0	116	50-145	
Butylbenzylphthalate	ug/L	50	60.7	121	54-138	
Caprolactam	ug/L	50	13.4	27	10-115	
Carbazole	ug/L	50	46.9	94	59-119	
Chrysene	ug/L	50	48.2	96	58-127	
Di-n-butylphthalate	ug/L	50	55.5	111	56-125	
Di-n-octylphthalate	ug/L	50	47.2	94	50-134	
Dibenz(a,h)anthracene	ug/L	50	36.2	72	53-129	
Dibenzofuran	ug/L	50	42.3	85	45-120	
Diethylphthalate	ug/L	50	46.2	92	53-120	
Dimethylphthalate	ug/L	50	44.3	89	55-116	
Fluoranthene	ug/L	50	49.5	99	57-125	
Fluorene	ug/L	50	46.1	92	53-118	
Hexachloro-1,3-butadiene	ug/L	50	31.4	63	23-120	
Hexachlorobenzene	ug/L	50	47.4	95	49-116	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

LABORATORY CONTROL SAMPLE: 1623578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachlorocyclopentadiene	ug/L	50	31.0	62	26-158	
Hexachloroethane	ug/L	50	33.4	67	30-114	
Indeno(1,2,3-cd)pyrene	ug/L	50	36.0	72	55-128	
Isophorone	ug/L	50	37.2	74	31-118	
N-Nitroso-di-n-propylamine	ug/L	50	34.6	69	32-119	
N-Nitrosodiphenylamine	ug/L	50	43.9	88	43-120	
Naphthalene	ug/L	50	36.7	73	32-120	
Nitrobenzene	ug/L	50	36.5	73	33-110	
Pentachlorophenol	ug/L	250	84.5	34	10-137	
Phenanthrene	ug/L	50	44.1	88	57-117	
Phenol	ug/L	50	16.2	32	10-120	
Pyrene	ug/L	50	54.9	110	55-122	
2,4,6-Tribromophenol (S)	%			92	27-110	
2-Fluorobiphenyl (S)	%			81	27-110	
2-Fluorophenol (S)	%			42	12-110	
Nitrobenzene-d5 (S)	%			77	21-110	
Phenol-d6 (S)	%			28	10-110	
Terphenyl-d14 (S)	%			98	31-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623579 1623580

Parameter	Units	92278503001 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	100	100	69.8	73.6	70	74	50-150	5	30	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	100	100	51.8	53.0	52	53	50-150	2	30	
2,3,4,6-Tetrachlorophenol	ug/L	ND	100	100	185	185	185	185	50-150	0	30	M1
2,4,5-Trichlorophenol	ug/L	ND	100	100	90.9	92.6	91	93	19-105	2	30	
2,4,6-Trichlorophenol	ug/L	ND	100	100	82.5	83.1	82	83	13-108	1	30	
2,4-Dichlorophenol	ug/L	ND	100	100	76.2	77.4	76	77	29-111	2	30	
2,4-Dimethylphenol	ug/L	ND	100	100	70.2	71.3	70	71	21-103	2	30	
2,4-Dinitrophenol	ug/L	ND	500	500	496	487	99	97	10-109	2	30	
2,4-Dinitrotoluene	ug/L	ND	100	100	99.7	101	100	101	27-104	1	30	
2,6-Dinitrotoluene	ug/L	ND	100	100	99.0	98.7	99	99	28-101	0	30	
2-Chloronaphthalene	ug/L	ND	100	100	157	93.3	157	93	14-102	51	30	M1,R1
2-Chlorophenol	ug/L	ND	100	100	67.2	67.2	67	67	16-110	0	30	
2-Methylnaphthalene	ug/L	ND	100	100	70.6	73.0	71	73	13-110	3	30	
2-Methylphenol(o-Cresol)	ug/L	ND	100	100	71.5	68.8	71	69	19-110	4	30	
2-Nitroaniline	ug/L	ND	200	200	155	157	77	78	26-103	1	30	
2-Nitrophenol	ug/L	ND	100	100	78.0	81.4	78	81	20-110	4	30	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	100	59.2	55.5	59	56	20-110	6	30	
3,3'-Dichlorobenzidine	ug/L	ND	500	500	171	179	34	36	25-112	5	30	
3-Nitroaniline	ug/L	ND	200	200	175	175	88	87	29-110	0	30	
4,6-Dinitro-2-methylphenol	ug/L	ND	200	200	193	197	97	99	10-117	2	30	
4-Bromophenylphenyl ether	ug/L	ND	100	100	82.4	83.9	82	84	20-105	2	30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623579 1623580

Parameter	Units	92278503001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4-Chloro-3-methylphenol	ug/L	ND	200	200	165	161	83	80	22-110	3	30	
4-Chloroaniline	ug/L	ND	200	200	125	129	63	64	20-100	3	30	
4-Chlorophenylphenyl ether	ug/L	ND	100	100	75.5	78.0	75	78	19-102	3	30	
4-Nitroaniline	ug/L	ND	200	200	190	198	95	99	29-110	4	30	
4-Nitrophenol	ug/L	ND	500	500	325	287	65	57	10-110	12	30	
Acenaphthene	ug/L	ND	100	100	84.7	87.0	85	87	17-100	3	30	
Acenaphthylene	ug/L	ND	100	100	89.1	90.7	89	91	21-100	2	30	
Acetophenone	ug/L	ND	100	100	68.1	69.1	68	69	50-150	1	30	
Anthracene	ug/L	ND	100	100	95.8	99.0	96	99	24-109	3	30	
Atrazine	ug/L	ND	100	100	92.9	105	93	105	50-150	12	30	
Benzaldehyde	ug/L	ND	100	100	ND	ND	7	7	50-150		30	M1
Benzo(a)anthracene	ug/L	ND	100	100	95.2	96.5	95	96	22-117	1	30	
Benzo(a)pyrene	ug/L	ND	100	100	82.7	85.2	83	85	23-104	3	30	
Benzo(b)fluoranthene	ug/L	ND	100	100	87.7	91.4	88	91	23-103	4	30	
Benzo(g,h,i)perylene	ug/L	ND	100	100	70.2	71.7	70	72	18-111	2	30	
Benzo(k)fluoranthene	ug/L	ND	100	100	101	104	101	104	22-113	3	30	
Biphenyl (Diphenyl)	ug/L	ND	100	100	75.7	78.1	76	78	50-150	3	30	
bis(2-Chloroethoxy)methane	ug/L	ND	100	100	64.9	68.0	65	68	22-110	5	30	
bis(2-Chloroethyl) ether	ug/L	ND	100	100	61.6	63.1	62	63	16-110	2	30	
bis(2-Ethylhexyl)phthalate	ug/L	ND	100	100	114	113	114	113	23-102	0	30	M1
Butylbenzylphthalate	ug/L	ND	100	100	117	118	117	118	25-110	1	30	M1
Caprolactam	ug/L	ND	100	100	49.4	40.2	49	40	50-150	21	30	M1
Carbazole	ug/L	ND	100	100	94.9	99.0	95	99	50-150	4	30	
Chrysene	ug/L	ND	100	100	95.0	95.7	95	96	23-115	1	30	
Di-n-butylphthalate	ug/L	ND	100	100	112	116	112	116	26-110	4	30	M1
Di-n-octylphthalate	ug/L	ND	100	100	98.9	99.4	99	99	22-110	0	30	
Dibenz(a,h)anthracene	ug/L	ND	100	100	72.4	74.3	72	74	21-112	3	30	
Dibenzofuran	ug/L	ND	100	100	82.9	85.0	83	85	19-102	2	30	
Diethylphthalate	ug/L	ND	100	100	95.0	95.5	95	96	29-110	1	30	
Dimethylphthalate	ug/L	ND	100	100	89.2	90.8	89	91	27-110	2	30	
Fluoranthene	ug/L	ND	100	100	100	104	100	104	23-112	4	30	
Fluorene	ug/L	ND	100	100	91.5	93.2	91	93	22-104	2	30	
Hexachloro-1,3-butadiene	ug/L	ND	100	100	68.1	68.9	68	69	10-110	1	30	
Hexachlorobenzene	ug/L	ND	100	100	92.0	94.4	92	94	21-116	3	30	
Hexachlorocyclopentadiene	ug/L	ND	100	100	63.0	65.1	63	65	10-110	3	30	
Hexachloroethane	ug/L	ND	100	100	73.3	74.1	73	74	10-110	1	30	
Indeno(1,2,3-cd)pyrene	ug/L	ND	100	100	72.6	74.8	73	75	20-113	3	30	
Isophorone	ug/L	ND	100	100	69.6	72.4	70	72	50-150	4	30	
N-Nitroso-di-n-propylamine	ug/L	ND	100	100	66.3	66.6	66	67	21-105	0	30	
N-Nitrosodiphenylamine	ug/L	ND	100	100	85.7	87.4	86	87	23-107	2	30	
Naphthalene	ug/L	ND	100	100	72.1	74.6	72	75	10-110	3	30	
Nitrobenzene	ug/L	ND	100	100	67.1	70.1	67	70	20-110	4	30	
Pentachlorophenol	ug/L	ND	500	500	179	179	36	36	10-118	0	30	
Phenanthrene	ug/L	ND	100	100	87.5	90.0	87	90	24-106	3	30	
Phenol	ug/L	ND	100	100	46.0	39.9	46	40	12-110	14	30	
Pyrene	ug/L	ND	100	100	106	106	106	106	24-114	0	30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623579 1623580

Parameter	Units	92278503001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4,6-Tribromophenol (S)	%						87	90	27-110			
2-Fluorobiphenyl (S)	%						73	77	27-110			
2-Fluorophenol (S)	%						49	46	12-110			
Nitrobenzene-d5 (S)	%						68	71	21-110			
Phenol-d6 (S)	%						40	35	10-110			
Terphenyl-d14 (S)	%						87	91	31-107			

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: WET/41811 | Analysis Method: EPA 9040
QC Batch Method: EPA 9040 | Analysis Description: 9040 pH
Associated Lab Samples: 92278500001, 92278500002

SAMPLE DUPLICATE: 1622127

Parameter	Units	92278455001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	8.1	8.1	0	9	H6

SAMPLE DUPLICATE: 1622128

Parameter	Units	92278377002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	6.8	6.8	0	9	H6

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: WETA/25672 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 1622490 | Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.50	0.25	12/09/15 13:03	
Sulfate	mg/L	ND	2.0	1.0	12/09/15 13:03	

LABORATORY CONTROL SAMPLE: 1622491

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	20	21.1	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1622492 1622493

Parameter	Units	92278500001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.47J	2.5	2.5	2.9	2.9	98	96	90-110	1	10	
Sulfate	mg/L	4.9	20	20	26.1	26.2	106	107	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: WETA/25652 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 1621391 | Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.050	12/08/15 01:53	

LABORATORY CONTROL SAMPLE: 1621392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621393 1621394

Parameter	Units	92278367001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	49.5	5	5	54.7	54.6	104	102	90-110	0	7	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621395 1621396

Parameter	Units	92277931002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	0.66	5	5	6.0	6.0	108	107	90-110	0	7	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: WETA/25641 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 1620972 | Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	0.010	12/05/15 01:12	
Nitrogen, Nitrite	mg/L	ND	0.020	0.010	12/05/15 01:12	
Nitrogen, NO2 plus NO3	mg/L	ND	0.020	0.010	12/05/15 01:12	

LABORATORY CONTROL SAMPLE: 1620973

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.5	100	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	103	90-110	
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620974 1620975

Parameter	Units	92278556001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	0.24	2.5	2.5	2.8	2.8	103	103	90-110	0	10	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	100	101	90-110	0	10	
Nitrogen, NO2 plus NO3	mg/L	0.24	2.5	2.5	2.8	2.8	103	103	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620976 1620977

Parameter	Units	92278556002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	2.5	2.5	2.6	2.7	105	107	90-110	2	10	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	103	103	90-110	0	10	
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.5	2.6	2.7	105	107	90-110	2	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: WETA/25674 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Phosphorus, Total
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 1622568 | Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	0.025	12/10/15 09:17	

LABORATORY CONTROL SAMPLE: 1622569

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.7	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1622570 1622571

Parameter	Units	92278500001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	7.1	2.5	2.5	9.5	9.6	96	98	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1622572 1622573

Parameter	Units	92278122001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	0.54	2.5	2.5	3.2	3.1	105	103	90-110	1	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: WETA/25719 | Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E | Analysis Description: 4500 Chloride
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 1625622 | Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	12/10/15 17:58	

LABORATORY CONTROL SAMPLE: 1625623

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.2	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1625624 1625625

Parameter	Units	92277791001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	19.0	100	100	121	121	102	102	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1625626 1625627

Parameter	Units	92278045001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	33.2	20	20	57.6	58.0	122	124	90-110	1	10	M1

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: WETA/25694 | Analysis Method: SM 4500-CN-E
QC Batch Method: SM 4500-CN-E | Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 1623959 | Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0080	0.0040	12/10/15 16:18	

LABORATORY CONTROL SAMPLE: 1623960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.11	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623961 1623962

Parameter	Units	92278292002 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	.1	.1	0.13	0.13	126	126	75-125	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623996 1623997

Parameter	Units	92278577001 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	.1	.1	0.020	0.018	17	15	75-125	9	10	M1

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: WETA/25643 | Analysis Method: SM 4500-P E
QC Batch Method: SM 4500-P E | Analysis Description: SM4500P-E Phosphorus, Ortho
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 1620988 | Matrix: Water
Associated Lab Samples: 92278500001, 92278500002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.050	0.025	12/05/15 01:40	

LABORATORY CONTROL SAMPLE: 1620989

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.25	0.24	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620990 1620991

Parameter	Units	92278500001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	2.1	2.5	2.5	4.2	4.1	86	81	90-110	3	10	M6

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 **Lab ID: 92278500001** Collected: 12/03/15 09:50 Received: 12/03/15 17:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**1.87 ± 1.51 (2.94)** **C:NA T:NA**	pCi/L	12/15/15 07:58	12587-46-1	
Gross Beta	EPA 900.0	**3.79 ± 1.20 (1.83)** **C:NA T:NA**	pCi/L	12/15/15 07:58	12587-47-2	
Radium-226	EPA 903.1	**0.138 ± 0.555 (0.972)** **C:NA T:47%**	pCi/L	12/17/15 11:42	13982-63-3	
Radium-228	EPA 904.0	**0.517 ± 0.793 (1.71)** **C:76% T:33%**	pCi/L	12/18/15 11:40	15262-20-1	
Total Uranium	ASTM D5174-97	**0.073 ± 0.002 (0.193)** **C:NA T:NA**	ug/L	12/24/15 11:21	7440-61-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278500

Sample: PSW-2 DUP **Lab ID: 92278500002** Collected: 12/03/15 10:15 Received: 12/03/15 17:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**1.75 ± 1.14 (1.65)** **C:NA T:NA**	pCi/L	12/15/15 07:59	12587-46-1	
Gross Beta	EPA 900.0	**3.13 ± 1.12 (1.81)** **C:NA T:NA**	pCi/L	12/15/15 07:59	12587-47-2	
Radium-226	EPA 903.1	**0.365 ± 0.533 (0.894)** **C:NA T:51%**	pCi/L	12/17/15 11:39	13982-63-3	
Radium-228	EPA 904.0	**0.256 ± 1.01 (2.26)** **C:81% T:24%**	pCi/L	12/18/15 11:40	15262-20-1	
Total Uranium	ASTM D5174-97	**0.043 ± 0.002 (0.193)** **C:NA T:NA**	ug/L	12/24/15 11:30	7440-61-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: RADC/27163 | Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 | Analysis Description: 904.0 Radium 228
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 995085 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.0148 ± 0.270 (0.631) C:85% T:87%	pCi/L	12/18/15 11:39	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: RADC/27179 | Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0 | Analysis Description: 900.0 Gross Alpha/Beta
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 995101 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.183 ± 0.744 (1.86) C:NA T:NA	pCi/L	12/15/15 07:58	
Gross Beta	0.138 ± 1.03 (2.46) C:NA T:NA	pCi/L	12/15/15 07:58	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: RADC/27222 | Analysis Method: ASTM D5174-97
QC Batch Method: ASTM D5174-97 | Analysis Description: D5174.97 Total Uranium KPA
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 997052 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Total Uranium	0.094 ± 0.003 (0.193) C:NA T:NA	ug/L	12/23/15 11:50	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278500

QC Batch: RADC/27159 | Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 | Analysis Description: 903.1 Radium-226
Associated Lab Samples: 92278500001, 92278500002

METHOD BLANK: 995081 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.341 ± 0.446 (0.735) C:NA T:86%	pCi/L	12/17/15 10:47	

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QUALIFIERS

Project: Wright Chemical Site
Pace Project No.: 92278500

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.

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, Styrene, and Vinyl chloride.

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H5	Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.
H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N	Tentatively identified compound (TIC) based on mass spectral library search. Result is estimated.
R1	RPD value was outside control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Wright Chemical Site
Pace Project No.: 92278500

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92278500001	**PSW-2**	EPA 3510	OEXT/39578	EPA 8081	GCSV/23507
92278500002	**PSW-2 DUP**	EPA 3510	OEXT/39722	EPA 8081	GCSV/23555
92278500001	**PSW-2**	EPA 3010A	MPRP/20188	EPA 6010	ICP/18217
92278500002	**PSW-2 DUP**	EPA 3010A	MPRP/20188	EPA 6010	ICP/18217
92278500001	**PSW-2**	EPA 7470	MERP/8735	EPA 7470	MERC/8390
92278500002	**PSW-2 DUP**	EPA 7470	MERP/8735	EPA 7470	MERC/8390
92278500001	**PSW-2**	EPA 3510	OEXT/39571	EPA 8270	MSSV/11622
92278500002	**PSW-2 DUP**	EPA 3510	OEXT/39571	EPA 8270	MSSV/11622
92278500001	**PSW-2**	EPA 8260	MSV/34555		
92278500001	**PSW-2**	EPA 8260	MSV/35012		
92278500002	**PSW-2 DUP**	EPA 8260	MSV/34555		
92278500002	**PSW-2 DUP**	EPA 8260	MSV/35012		
92278500001	**PSW-2**	EPA 900.0	RADC/27179		
92278500002	**PSW-2 DUP**	EPA 900.0	RADC/27179		
92278500001	**PSW-2**	EPA 903.1	RADC/27159		
92278500002	**PSW-2 DUP**	EPA 903.1	RADC/27159		
92278500001	**PSW-2**	EPA 904.0	RADC/27163		
92278500002	**PSW-2 DUP**	EPA 904.0	RADC/27163		
92278500001	**PSW-2**	ASTM D5174-97	RADC/27222		
92278500002	**PSW-2 DUP**	ASTM D5174-97	RADC/27222		
92278500001	**PSW-2**	EPA 9040	WET/41811		
92278500002	**PSW-2 DUP**	EPA 9040	WET/41811		
92278500001	**PSW-2**	EPA 300.0	WETA/25672		
92278500002	**PSW-2 DUP**	EPA 300.0	WETA/25672		
92278500001	**PSW-2**	EPA 350.1	WETA/25652		
92278500002	**PSW-2 DUP**	EPA 350.1	WETA/25652		
92278500001	**PSW-2**	EPA 353.2	WETA/25641		
92278500002	**PSW-2 DUP**	EPA 353.2	WETA/25641		
92278500001	**PSW-2**	EPA 365.1	WETA/25674		
92278500002	**PSW-2 DUP**	EPA 365.1	WETA/25674		
92278500001	**PSW-2**	SM 4500-Cl-E	WETA/25719		
92278500002	**PSW-2 DUP**	SM 4500-Cl-E	WETA/25719		
92278500001	**PSW-2**	SM 4500-CN-E	WETA/25694		
92278500002	**PSW-2 DUP**	SM 4500-CN-E	WETA/25694		
92278500001	**PSW-2**	SM 4500-P E	WETA/25643		
92278500002	**PSW-2 DUP**	SM 4500-P E	WETA/25643		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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 ~~2~~

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Shield Engineering	Report To: David Stoner	Attention: David Stoner
Address: 4301 Taggart Creek Rd Charlotte, NC 28208	Copy To:	Company Name: Shield
		Address: 4301 Taggart Creek Rd Charlotte NC
Email To: dstoner@shieldengineering.com	Purchase Order #: 92623	Pace Quote:
Phone: 704-394-6913 Fax: 704-394-6968	Project Name: Wright Chemical Site	Pace Project Manager: Nicole Gasiorowski
Requested Due Date: Standard	Project Number: 1100044-05	Pace Profile #: 7730-5

Regulatory Agency	State / Location
	NC

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 (2015)	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	TCL VOCs + TICs	TCL SVOCs + TICs	TCL Pesticides	TAL Metals	Cyanide	NH3/PO4	NO2/NO3/Ortho-P	pH/Cl/F/SO4	RAD	Formaldehyde			Residual Chlorine (Y/N)	92278500
1	PSW-2	WT	G			12/3	0950		17	8	1	4	3	1					X	X	X	X	X	X	X	X	X	X				001
2	PSW-2 Dup	WT	G			12/3	1015		17	8	1	4	3	1					X	X	X	X	X	X	X	X	X	X				002
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Note: TICs include chloropicrin, hexamine, methanol, mercaptans,	Danny Hefner / SHIELD	12/3/15	17:55	J. Dixon / Pace	12-3	1753				
and silanes				~~Adam Clifton~~ / Pace	~~12/5/15~~	1755	3.6	Y	N	Y
SVOCs includes 1,1-biphenyl				AC 12/8/15	12/4/15					

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: Danny Hefner					
SIGNATURE of SAMPLER: Danny Hefner	DATE Signed: 12/3/15				

WO# : 92278500

92278500

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

December 16, 2015

Nicole Gasiorowski
Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville NC 28078

TEL: (704) 875-9092
FAX: (704) 875-9091

RE: 92278500

Dear Nicole Gasiorowski: Order No: 1512508

Analytical Environmental Services, Inc. received 2 samples on 12/5/2015 9:34:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/15-06/30/16.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Dorothy deBruyn
Project Manager

Revision 12/16/2015

1512508

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 92278500 **Workorder Name:** Wright Chemical Site **Results Requested** 12/14/2015

Report / Invoice To	Subcontract To
Nicole Gasiorowski Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092 Email: nicole.gasiorowski@pacelabs.com	AES P.O. NMG 14593

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved						Requested Analysis: Formaldehyde											LAB USE ONLY
1	PSW-2	12/3/2015 09:50	92278500001	Water	2						X											
2	PSW-2 DUP	12/3/2015 10:15	92278500002	Water	2						X											
3																						
4																						
5																						

Transfers	Released By	Date/Time	Received By	Date/Time
1	M Gasiorowski PACE	12/4/15 17:00	FEDEX	
2			Guy Rodriguez (FEDEX)	12/5/15 9:35
3				

Comments

Cooler Temperature on Receipt ____ °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.

Analytical Environmental Services, Inc

Date: 16-Dec-15

Client: Pace Analytical Services, Inc.
Project: 92278500
Lab ID: 1512508

Case Narrative

Samples went out of hold over the weekend, as samples were received on Saturday, 12/5/15. Proceed with analysis per Nicole G. via email on 12/7/15.

Analytical Environmental Services, Inc

Date: 16-Dec-15

Client:	Pace Analytical Services, Inc.	**Client Sample ID:**	PSW-2
Project Name:	92278500	**Collection Date:**	12/3/2015 9:50:00 AM
Lab ID:	1512508-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbonyl Compounds by HPLC SW8315A								
Formaldehyde	580	50	H	ug/L	216846	1	12/09/2015 20:32	RF

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 16-Dec-15

Client:	Pace Analytical Services, Inc.	**Client Sample ID:**	PSW-2 DUP
Project Name:	92278500	**Collection Date:**	12/3/2015 10:15:00 AM
Lab ID:	1512508-002	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbonyl Compounds by HPLC SW8315A								
Formaldehyde	540	50	H	ug/L	216846	1	12/09/2015 20:46	RF

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Pace Analytical Work Order Number 1512508

Checklist completed by [signature] 12/5/15
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.4 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by [signature]

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

Analytical Environmental Services, Inc

Date: 14-Dec-15

Client: Pace Analytical Services, Inc.
Project Name: 92278500
Lab Order: 1512508

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1512508-001A	PSW-2	12/3/2015 9:50:00AM	Aqueous	Carbonyl Compounds by HPLC SW8315		12/9/2015 11:00:00AM	12/09/2015
1512508-002A	PSW-2 DUP	12/3/2015 10:15:00AM	Aqueous	Carbonyl Compounds by HPLC SW8315		12/9/2015 11:00:00AM	12/09/2015

Client: Pace Analytical Services, Inc.
Project Name: 92278500
Workorder: 1512508

ANALYTICAL QC SUMMARY REPORT

BatchID: 216846

Sample ID: **MB-216846** Client ID: Units: **ug/L** Prep Date: **12/09/2015** Run No: **306040**
SampleType: **MBLK** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **216846** Analysis Date: **12/09/2015** Seq No: **6560021**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	BRL	50									

Sample ID: **LCS-216846** Client ID: Units: **ug/L** Prep Date: **12/09/2015** Run No: **306040**
SampleType: **LCS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **216846** Analysis Date: **12/09/2015** Seq No: **6560022**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1154	50	1000		115	70	130				

Sample ID: **1512687-002BMS** Client ID: Units: **ug/L** Prep Date: **12/09/2015** Run No: **306040**
SampleType: **MS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **216846** Analysis Date: **12/09/2015** Seq No: **6560028**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1299	50	1000	56.72	124	42.9	130				

Sample ID: **1512687-002BMSD** Client ID: Units: **ug/L** Prep Date: **12/09/2015** Run No: **306040**
SampleType: **MSD** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **216846** Analysis Date: **12/09/2015** Seq No: **6560029**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1151	50	1000	56.72	109	42.9	130	1299	12.1	30.4	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 04, 2016

Mr. Mike Armour
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

RE: Project: Wright Chemical Site
Pace Project No.: 92281016

Dear Mr. Armour:
Enclosed are the analytical results for sample(s) received by the laboratory on December 22, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Nicole Gasiorowski

Nicole Gasiorowski
nicole.gasiorowski@pacelabs.com
Project Manager

Enclosures

cc: Dave Stoner
Dave Wallace

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: Wright Chemical Site
Pace Project No.: 92281016

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92281016001	**PSW-2 Dup**	Water	12/22/15 13:20	12/22/15 17:47
92281016002	**PSW-2**	Water	12/22/15 13:15	12/22/15 17:47
92281016003	**PSW-1**	Water	12/22/15 15:30	12/22/15 17:47

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project:
Pace Project No.:

Method:
Description:
Client:
Date:

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

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Sample Condition Upon Receipt

Client Name: Shield

Project #: WO# : 92281016

92281016

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

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No

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

Thermometer Used: ☑ T1505

Type of Ice: ☑ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 4.5

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C **Correction Factor:** 0.0 °C **Date and Initials of Person Examining Contents:** AP 12-23-15

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

If Yes to either question, fill out a Regulated Soil Checklist and include with SCUR/COC paperwork.

				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 and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ 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. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: W				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☑ N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg	☐ Yes	☐ No	☑ N/A	
Samples checked for dechlorization	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>5-6mm)?	☐ 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? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager SCURF Review: NMG NMG **Date:** 12-23-15 12/24/15

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

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:

Company:	All Seasons Self Storage
Address:	6635 Gordon Road
	Unit 323, Wilmington, NC 28411
Email:	dstoner@shieldengineering.com
Phone:	704-944-0913 Fax 704-944-0916
Requested Due Date:	Standard

Section B
Required Project Information.

Report To:	Pace, Lori McLennan ; David Stoner
Copy To:	
Purchase Order #:	
Project Name:	Formaldehyde Resample
Project #:	1100044

Section C
Invoice Information:

Attention:	David Stoner
Company Name:	Shield
Address:	4301 Tuggers Creek Rd Charlotte
Pace Quote:	
Pace Project Manager:	nicole.gasiorowski@pacelabs.com,
Pace Profile #:	7739-4

Regulatory Agency	State / Location
	NC

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 (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	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test: Formaldehyde (Requested Analysis Filtered (Y/N))	Residual Chlorine (Y/N)	92281016
						2015														
1	PSW-2 DUP	WT	C			12/22	1320		3	3								X		001
2	PSW-2	WT	C			↓	1315		4	4								X		002
3	PSW-1	WT	C			↓	1530		2	2								X		003
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] / Shield	12/22/15	1747	J. Dixon / Pace	12/22	1747				
							4.5	✓	✓	✓

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt Smith, Aylia Horne

SIGNATURE of SAMPLER: [signature] DATE Signed: 12/22/15

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

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

December 29, 2015

Nicole Gasiorowski
Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville NC 28078

TEL: (704) 875-9092
FAX: (704) 875-9091

RE: 92281016

Dear Nicole Gasiorowski: Order No: 1512K08

Analytical Environmental Services, Inc. received 3 samples on 12/24/2015 12:45:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/15-06/30/16.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Dorothy J. deBruyn

Dorothy deBruyn
Project Manager

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: 92281016 Workorder Name: Formaldehyde Resample Results Requested 1/4/2016

Report / Invoice To	Subcontract To	Requested Analysis
Nicole Gasiorowski Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092 Email: nicole.gasiorowski@pacelabs.com	AES P.O. NMG 15172	Formaldehyde

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Formaldehyde	LAB USE ONLY
1	PSW-2 Dup	12/22/2015 13:20	92281016001	Water	2	X	
2	PSW-2	12/22/2015 13:15	92281016002	Water	3	X	
3	PSW-1	12/22/2015 15:30	92281016003	Water	2	X	
4							
5							

Comments

Transfers	Released By	Date/Time	Received By	Date/Time
1	N Gasiorowski PACE	12/23/15 1700	FEDEX	
2			Marilyn	12/24/15 12:45
3				

Cooler Temperature on Receipt °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.

Analytical Environmental Services, Inc

Date: 29-Dec-15

Client:	Pace Analytical Services, Inc.	**Client Sample ID:**	PSW-2 DUP
Project Name:	92281016	**Collection Date:**	12/22/2015 1:20:00 PM
Lab ID:	1512K08-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbonyl Compounds by HPLC SW8315A								
Formaldehyde	BRL	50		ug/L	217554	1	12/24/2015 18:46	RF

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 29-Dec-15

Client:	Pace Analytical Services, Inc.	**Client Sample ID:**	PSW-2
Project Name:	92281016	**Collection Date:**	12/22/2015 1:15:00 PM
Lab ID:	1512K08-002	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbonyl Compounds by HPLC SW8315A								
Formaldehyde	BRL	50		ug/L	217554	1	12/24/2015 19:00	RF

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 29-Dec-15

Client:	Pace Analytical Services, Inc.	**Client Sample ID:**	PSW-1
Project Name:	92281016	**Collection Date:**	12/22/2015 3:30:00 PM
Lab ID:	1512K08-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbonyl Compounds by HPLC SW8315A								
Formaldehyde	96	50		ug/L	217554	1	12/24/2015 19:14	RF

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client PACE Work Order Number 1512K08

Checklist completed by [signature] 12/24/15
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.6 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by MS

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\\Aes_server\I\Sample Receipt\My Documents\COCs and pH Adjustment Sheet\Sample_Cooler_Recipt_Checklist_Rev1.rtf

Analytical Environmental Services, Inc

Date: 31-Dec-15

Client: Pace Analytical Services, Inc.
Project Name: 92281016
Lab Order: 1512K08

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1512K08-001A	PSW-2 DUP	12/22/2015 1:20:00PM	Aqueous	Carbonyl Compounds by HPLC SW8315		12/24/2015 1:00:00PM	12/24/2015
1512K08-002A	PSW-2	12/22/2015 1:15:00PM	Aqueous	Carbonyl Compounds by HPLC SW8315		12/24/2015 1:00:00PM	12/24/2015
1512K08-003A	PSW-1	12/22/2015 3:30:00PM	Aqueous	Carbonyl Compounds by HPLC SW8315		12/24/2015 1:00:00PM	12/24/2015

Client: Pace Analytical Services, Inc.
Project Name: 92281016
Workorder: 1512K08

ANALYTICAL QC SUMMARY REPORT

BatchID: **217554**

Sample ID: **MB-217554** Client ID: Units: **ug/L** Prep Date: **12/23/2015** Run No: **307240**
SampleType: **MBLK** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217554** Analysis Date: **12/23/2015** Seq No: **6592012**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	BRL	50									

Sample ID: **LCS-217554** Client ID: Units: **ug/L** Prep Date: **12/23/2015** Run No: **307240**
SampleType: **LCS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217554** Analysis Date: **12/23/2015** Seq No: **6592013**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1142	50	1000		114	70	130				

Sample ID: **1512J36-001AMS-2** Client ID: Units: **ug/L** Prep Date: **12/24/2015** Run No: **307241**
SampleType: **MS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217554** Analysis Date: **12/24/2015** Seq No: **6592028**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	881.7	50	1000		88.2	44.7	135				

Sample ID: **1512K45-001AMS** Client ID: Units: **ug/L** Prep Date: **12/23/2015** Run No: **307240**
SampleType: **MS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217554** Analysis Date: **12/23/2015** Seq No: **6592020**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1286	50	1000	95.39	119	44.7	135				H

Sample ID: **1512J36-001AMSD-2** Client ID: Units: **ug/L** Prep Date: **12/24/2015** Run No: **307241**
SampleType: **MSD** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217554** Analysis Date: **12/24/2015** Seq No: **6592029**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	911.5	50	1000		91.2	44.7	135	0	0	27.3	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc

Date: 29-Dec-15

Client: Pace Analytical Services, Inc.
Project Name: 92281016
Workorder: 1512K08

ANALYTICAL QC SUMMARY REPORT

BatchID: **217554**

Sample ID: **1512K45-001AMSD** Client ID:
SampleType: **MSD** TestCode: **Carbonyl Compounds by HPLC SW8315A**
Units: **ug/L** BatchID: **217554**
Prep Date: **12/23/2015** Analysis Date: **12/23/2015**
Run No: **307240** Seq No: **6592021**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1346	50	1000	95.39	125	44.7	135	1286	4.51	27.3	H

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

ATTACHMENT C

MONOFILL CELL CONTENTS

LABORATORY RESULTS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 12, 2016

Mr. Mike Armour
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

RE: Project: Wright Chemical Site
Pace Project No.: 92278244

Dear Mr. Armour:
Enclosed are the analytical results for sample(s) received by the laboratory on December 02, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Nicole Gasiorowski
nicole.gasiorowski@pacelabs.com
Project Manager

Enclosures

cc: Dave Stoner
Dave Wallace

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CERTIFICATIONS

Project: Wright Chemical Site
Pace Project No.: 92278244

Pennsylvania Certification IDs

Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Tampa Certification IDs

5460 Beaumont Center Blvd, Ste 520, Tampa, FL 33634
Florida Certification #: E84809

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
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
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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CERTIFICATIONS

Project:	Wright Chemical Site
Pace Project No.:	92278244

Asheville Certification IDs
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
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: Wright Chemical Site
Pace Project No.: 92278244

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92278244001	**HAB-1 3-5 FT.**	Solid	12/02/15 14:15	12/02/15 17:33

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SAMPLE ANALYTE COUNT

Project: Wright Chemical Site
Pace Project No.: 92278244

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92278244001	**HAB-1 3-5 FT.**	EPA 8081	SWB	22	PASI-C
		EPA 6010	JMW	22	PASI-A
		EPA 7471	SH1	1	PASI-A
		EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	60	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
		EPA 900.0	LAL	2	PASI-PA
		EPA 901.1	MAH	2	PASI-PA
		HSL-300	LAL	3	PASI-PA
		EPA 8315	JH1	1	
		EPA 9045	MLS	1	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 365.4	KHC	1	PASI-O
		EPA 9012	AIS	1	PASI-O
		EPA 9056	KEK	3	PASI-O
		EPA 9056	KEK	3	PASI-O

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 8081**
Description: 8081 GCS Pesticides
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 8081. 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 3546 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.

QC Batch: OEXT/39459

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- HAB-1 3-5 FT. (Lab ID: 92278244001)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (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.

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: OEXT/39459

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- HAB-1 3-5 FT. (Lab ID: 92278244001)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 6010. 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 3050 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.

QC Batch: MPRP/20178

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278235002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1620451)
  - Aluminum
  - Antimony
  - Iron
  - Lead
  - Potassium
  - Zinc
- MSD (Lab ID: 1620452)
  - Aluminum
  - Antimony
  - Iron
  - Lead
  - Manganese
  - Potassium
  - Zinc

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Shield
Date: January 12, 2016

QC Batch: MPRP/20178

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278235002

R1: RPD value was outside control limits.

- MSD (Lab ID: 1620452)
  - Antimony
  - Cadmium
  - Cobalt
  - Lead
  - Zinc

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 7471**
Description: 7471 Mercury
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 7471. 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 7471 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: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 8270**
Description: 8270 MSSV Microwave
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 8270. 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 3546 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: OEXT/39483

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1620739)
  - Benzaldehyde
- LCSD (Lab ID: 1620740)
  - Benzaldehyde

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: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 8260. 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.

QC Batch: MSV/34587

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278215005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1623560)
  - 1,2,3-Trichlorobenzene
  - 1,2,4-Trichlorobenzene
  - 2-Hexanone
  - 4-Methyl-2-pentanone (MIBK)
  - Acetone

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: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Shield
Date: January 12, 2016

Analyte Comments:

QC Batch: MSV/34587

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- HAB-1 3-5 FT. (Lab ID: 92278244001)
  - Acetone
- MS (Lab ID: 1623560)
  - Acetone

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 900.0**
Description: 900.0 Gross Alpha/Beta
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 900.0. 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:

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(704)875-9092

PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 901.1**
Description: 901.1 Gamma Spec INGROWTH
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 901.1. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278244

Method: **HSL-300**
Description: HSL300(AS) Actinides
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for HSL-300. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 8315**
Description: 8315 HPLC
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 8315. 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 8315 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.

QC Batch: TAMP/7944

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278244001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1413394)
  - Formaldehyde
- MSD (Lab ID: 1413395)
  - Formaldehyde

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 9045**
Description: 9045 pH Soil
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 9045. 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: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 350.1**
Description: 350.1 Ammonia
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 350.1. 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.

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: WETA/25688

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278244001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 1623357)
  - Nitrogen, Ammonia

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1623356)
  - Nitrogen, Ammonia

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 365.4**
Description: 365.4 Phosphorus, Total
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 365.4. 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 365.4 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.

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: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 9012**
Description: 9012 Cyanide, Total
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 9012. 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 9012 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: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 9056**
Description: 9056 IC Anions
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 9056. 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.

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:

Analyte Comments:

QC Batch: WETA/52702

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- HAB-1 3-5 FT. (Lab ID: 92278244001)
  - Chloride

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278244

Method: **EPA 9056**
Description: 9056 IC Anions 48hr
Client: Shield
Date: January 12, 2016

General Information:
1 sample was analyzed for EPA 9056. 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.

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: Wright Chemical Site
Pace Project No.: 92278244

Sample: HAB-1 3-5 FT. **Lab ID: 92278244001** Collected: 12/02/15 14:15 Received: 12/02/15 17:33 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3546								
Aldrin	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	309-00-2	
alpha-BHC	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	319-84-6	
beta-BHC	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	319-85-7	
delta-BHC	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	319-86-8	
gamma-BHC (Lindane)	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	58-89-9	
Chlordane (Technical)	ND	ug/kg	261	261	20	12/04/15 08:05	12/04/15 20:36	57-74-9	
4,4'-DDD	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	72-54-8	
4,4'-DDE	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	72-55-9	
4,4'-DDT	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	50-29-3	
Dieldrin	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	60-57-1	
Endosulfan I	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	959-98-8	
Endosulfan II	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	33213-65-9	
Endosulfan sulfate	**146**	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	1031-07-8	
Endrin	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	72-20-8	
Endrin aldehyde	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	7421-93-4	
Endrin ketone	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	53494-70-5	
Heptachlor	**222**	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	76-44-8	
Heptachlor epoxide	ND	ug/kg	74.5	74.5	20	12/04/15 08:05	12/04/15 20:36	1024-57-3	
Methoxychlor	ND	ug/kg	186	186	20	12/04/15 08:05	12/04/15 20:36	72-43-5	
Toxaphene	ND	ug/kg	261	261	20	12/04/15 08:05	12/04/15 20:36	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	0	%	29-103		20	12/04/15 08:05	12/04/15 20:36	877-09-8	D3,S4
Decachlorobiphenyl (S)	0	%	25-145		20	12/04/15 08:05	12/04/15 20:36	2051-24-3	D3,S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Aluminum	**14000**	mg/kg	15.5	7.8	1	12/04/15 22:34	12/07/15 13:04	7429-90-5	
Antimony	**0.76J**	mg/kg	0.78	0.61	1	12/04/15 22:34	12/07/15 13:04	7440-36-0	
Arsenic	**7.0**	mg/kg	1.6	0.78	1	12/04/15 22:34	12/07/15 13:04	7440-38-2	
Barium	**26.2**	mg/kg	0.78	0.39	1	12/04/15 22:34	12/07/15 13:04	7440-39-3	
Beryllium	**0.55**	mg/kg	0.16	0.078	1	12/04/15 22:34	12/07/15 13:04	7440-41-7	
Cadmium	**0.44**	mg/kg	0.16	0.078	1	12/04/15 22:34	12/07/15 13:04	7440-43-9	
Calcium	**4120**	mg/kg	15.5	7.8	1	12/04/15 22:34	12/07/15 13:04	7440-70-2	
Chromium	**32.7**	mg/kg	0.78	0.39	1	12/04/15 22:34	12/07/15 13:04	7440-47-3	
Cobalt	**3.4**	mg/kg	0.78	0.39	1	12/04/15 22:34	12/07/15 13:04	7440-48-4	
Copper	**57.1**	mg/kg	0.78	0.39	1	12/04/15 22:34	12/07/15 13:04	7440-50-8	
Iron	**11900**	mg/kg	15.5	7.8	1	12/04/15 22:34	12/07/15 13:04	7439-89-6	
Lead	**177**	mg/kg	0.78	0.39	1	12/04/15 22:34	12/07/15 13:04	7439-92-1	
Magnesium	**305**	mg/kg	15.5	0.39	1	12/04/15 22:34	12/07/15 13:04	7439-95-4	
Manganese	**77.0**	mg/kg	0.78	0.39	1	12/04/15 22:34	12/07/15 13:04	7439-96-5	
Nickel	**13.9**	mg/kg	0.78	0.39	1	12/04/15 22:34	12/07/15 13:04	7440-02-0	
Potassium	ND	mg/kg	776	776	1	12/04/15 22:34	12/07/15 13:04	7440-09-7	
Selenium	**2.4**	mg/kg	1.6	0.78	1	12/04/15 22:34	12/07/15 13:04	7782-49-2	
Silver	ND	mg/kg	0.78	0.39	1	12/04/15 22:34	12/07/15 13:04	7440-22-4	
Sodium	**411J**	mg/kg	776	388	1	12/04/15 22:34	12/07/15 13:04	7440-23-5	
Thallium	ND	mg/kg	1.6	0.78	1	12/04/15 22:34	12/07/15 13:04	7440-28-0	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278244

Sample: HAB-1 3-5 FT. **Lab ID: 92278244001** Collected: 12/02/15 14:15 Received: 12/02/15 17:33 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Vanadium	**53.8**	mg/kg	0.78	0.39	1	12/04/15 22:34	12/07/15 13:04	7440-62-2	
Zinc	**142**	mg/kg	1.6	0.78	1	12/04/15 22:34	12/07/15 13:04	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.033**	mg/kg	0.0087	0.00017	1	12/04/15 10:30	12/04/15 16:59	7439-97-6	
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	4610	1060	1	12/05/15 16:51	12/08/15 12:40	83-32-9	
Acenaphthylene	ND	ug/kg	4610	1090	1	12/05/15 16:51	12/08/15 12:40	208-96-8	
Acetophenone	ND	ug/kg	4610	2370	1	12/05/15 16:51	12/08/15 12:40	98-86-2	
Anthracene	ND	ug/kg	4610	1030	1	12/05/15 16:51	12/08/15 12:40	120-12-7	
Atrazine	ND	ug/kg	9220	1820	1	12/05/15 16:51	12/07/15 17:17	1912-24-9	
Benzaldehyde	ND	ug/kg	9220	4610	1	12/05/15 16:51	12/07/15 17:17	100-52-7	L2
Benzo(a)anthracene	ND	ug/kg	4610	852	1	12/05/15 16:51	12/08/15 12:40	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4610	880	1	12/05/15 16:51	12/08/15 12:40	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4610	796	1	12/05/15 16:51	12/08/15 12:40	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4610	1170	1	12/05/15 16:51	12/08/15 12:40	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4610	908	1	12/05/15 16:51	12/08/15 12:40	207-08-9	
Biphenyl (Diphenyl)	**3480J**	ug/kg	4610	1450	1	12/05/15 16:51	12/08/15 12:40	92-52-4	
4-Bromophenylphenyl ether	ND	ug/kg	4610	838	1	12/05/15 16:51	12/08/15 12:40	101-55-3	
Butylbenzylphthalate	ND	ug/kg	4610	977	1	12/05/15 16:51	12/08/15 12:40	85-68-7	
Caprolactam	ND	ug/kg	4610	796	1	12/05/15 16:51	12/07/15 17:17	105-60-2	
Carbazole	ND	ug/kg	4610	880	1	12/05/15 16:51	12/08/15 12:40	86-74-8	
4-Chloro-3-methylphenol	ND	ug/kg	9220	949	1	12/05/15 16:51	12/08/15 12:40	59-50-7	
4-Chloroaniline	ND	ug/kg	23000	1280	1	12/05/15 16:51	12/08/15 12:40	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	4610	1080	1	12/05/15 16:51	12/08/15 12:40	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	4610	1170	1	12/05/15 16:51	12/08/15 12:40	111-44-4	
2-Chloronaphthalene	ND	ug/kg	4610	908	1	12/05/15 16:51	12/08/15 12:40	91-58-7	
2-Chlorophenol	ND	ug/kg	4610	1260	1	12/05/15 16:51	12/08/15 12:40	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	4610	949	1	12/05/15 16:51	12/08/15 12:40	7005-72-3	
Chrysene	ND	ug/kg	4610	614	1	12/05/15 16:51	12/08/15 12:40	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4610	977	1	12/05/15 16:51	12/08/15 12:40	53-70-3	
Dibenzofuran	ND	ug/kg	4610	754	1	12/05/15 16:51	12/08/15 12:40	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/kg	23000	1010	1	12/05/15 16:51	12/08/15 12:40	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	4610	1010	1	12/05/15 16:51	12/08/15 12:40	120-83-2	
Diethylphthalate	ND	ug/kg	4610	712	1	12/05/15 16:51	12/08/15 12:40	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	4610	1820	1	12/05/15 16:51	12/08/15 12:40	105-67-9	
Dimethylphthalate	ND	ug/kg	4610	936	1	12/05/15 16:51	12/08/15 12:40	131-11-3	
Di-n-butylphthalate	ND	ug/kg	4610	754	1	12/05/15 16:51	12/08/15 12:40	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	9220	922	1	12/05/15 16:51	12/08/15 12:40	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	23000	754	1	12/05/15 16:51	12/08/15 12:40	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	4610	866	1	12/05/15 16:51	12/08/15 12:40	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	4610	963	1	12/05/15 16:51	12/08/15 12:40	606-20-2	
Di-n-octylphthalate	ND	ug/kg	4610	963	1	12/05/15 16:51	12/08/15 12:40	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	4610	1260	1	12/05/15 16:51	12/08/15 12:40	117-81-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278244

Sample: HAB-1 3-5 FT. **Lab ID: 92278244001** Collected: 12/02/15 14:15 Received: 12/02/15 17:33 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Fluoranthene	ND	ug/kg	4610	670	1	12/05/15 16:51	12/08/15 12:40	206-44-0	
Fluorene	ND	ug/kg	4610	949	1	12/05/15 16:51	12/08/15 12:40	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	4610	796	1	12/05/15 16:51	12/08/15 12:40	87-68-3	
Hexachlorobenzene	ND	ug/kg	4610	586	1	12/05/15 16:51	12/08/15 12:40	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	4610	852	1	12/05/15 16:51	12/08/15 12:40	77-47-4	
Hexachloroethane	ND	ug/kg	4610	1210	1	12/05/15 16:51	12/08/15 12:40	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4610	949	1	12/05/15 16:51	12/08/15 12:40	193-39-5	
Isophorone	ND	ug/kg	4610	1030	1	12/05/15 16:51	12/08/15 12:40	78-59-1	
2-Methylnaphthalene	ND	ug/kg	4610	991	1	12/05/15 16:51	12/08/15 12:40	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	4610	1400	1	12/05/15 16:51	12/08/15 12:40	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	4610	1820	1	12/05/15 16:51	12/08/15 12:40		
Naphthalene	ND	ug/kg	4610	1130	1	12/05/15 16:51	12/08/15 12:40	91-20-3	
2-Nitroaniline	ND	ug/kg	23000	1420	1	12/05/15 16:51	12/08/15 12:40	88-74-4	
3-Nitroaniline	ND	ug/kg	23000	1260	1	12/05/15 16:51	12/08/15 12:40	99-09-2	
4-Nitroaniline	ND	ug/kg	9220	1300	1	12/05/15 16:51	12/08/15 12:40	100-01-6	
Nitrobenzene	ND	ug/kg	4610	1260	1	12/05/15 16:51	12/08/15 12:40	98-95-3	
2-Nitrophenol	ND	ug/kg	4610	1120	1	12/05/15 16:51	12/08/15 12:40	88-75-5	
4-Nitrophenol	ND	ug/kg	23000	824	1	12/05/15 16:51	12/08/15 12:40	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/kg	4610	880	1	12/05/15 16:51	12/08/15 12:40	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	4610	1370	1	12/05/15 16:51	12/08/15 12:40	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	4610	1230	1	12/05/15 16:51	12/08/15 12:40	108-60-1	
Pentachlorophenol	ND	ug/kg	23000	838	1	12/05/15 16:51	12/08/15 12:40	87-86-5	
Phenanthrene	ND	ug/kg	4610	768	1	12/05/15 16:51	12/08/15 12:40	85-01-8	
Phenol	ND	ug/kg	4610	1380	1	12/05/15 16:51	12/08/15 12:40	108-95-2	
Pyrene	ND	ug/kg	4610	782	1	12/05/15 16:51	12/08/15 12:40	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/kg	4610	1680	1	12/05/15 16:51	12/07/15 17:17	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/kg	4610	1820	1	12/05/15 16:51	12/08/15 12:40	58-90-2	
2,4,5-Trichlorophenol	ND	ug/kg	4610	1420	1	12/05/15 16:51	12/08/15 12:40	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	4610	1020	1	12/05/15 16:51	12/08/15 12:40	88-06-2	
Surrogates									
2-Fluorobiphenyl (S)	67	%	30-110		1	12/05/15 16:51	12/08/15 12:40	321-60-8	
Terphenyl-d14 (S)	87	%	28-110		1	12/05/15 16:51	12/08/15 12:40	1718-51-0	
Phenol-d6 (S)	63	%	22-110		1	12/05/15 16:51	12/08/15 12:40	13127-88-3	
2-Fluorophenol (S)	60	%	13-110		1	12/05/15 16:51	12/08/15 12:40	367-12-4	
2,4,6-Tribromophenol (S)	78	%	27-110		1	12/05/15 16:51	12/08/15 12:40	118-79-6	
Nitrobenzene-d5 (S)	65	%	23-110		1	12/05/15 16:51	12/08/15 12:40	4165-60-0	
Tentatively Identified Compounds									
1,3,5-Trithiane	**2860**	ug/kg			1	12/05/15 16:51	12/08/15 12:40	291-21-4	N
Unknown	**5350**	ug/kg			1	12/05/15 16:51	12/08/15 12:40		N
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	**971**	ug/kg	241	24.1	1		12/08/15 13:14	67-64-1	E
Benzene	ND	ug/kg	12.0	3.8	1		12/08/15 13:14	71-43-2	
Bromochloromethane	ND	ug/kg	12.0	4.1	1		12/08/15 13:14	74-97-5	
Bromodichloromethane	ND	ug/kg	12.0	4.6	1		12/08/15 13:14	75-27-4	

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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278244

Sample: HAB-1 3-5 FT. **Lab ID: 92278244001** Collected: 12/02/15 14:15 Received: 12/02/15 17:33 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Bromoform	ND	ug/kg	12.0	5.5	1		12/08/15 13:14	75-25-2	
Bromomethane	ND	ug/kg	24.1	6.0	1		12/08/15 13:14	74-83-9	
2-Butanone (MEK)	**568**	ug/kg	241	7.0	1		12/08/15 13:14	78-93-3	
Carbon disulfide	**170**	ug/kg	24.1	7.2	1		12/08/15 13:14	75-15-0	
Carbon tetrachloride	ND	ug/kg	12.0	6.3	1		12/08/15 13:14	56-23-5	
Chlorobenzene	ND	ug/kg	12.0	4.6	1		12/08/15 13:14	108-90-7	
Chloroethane	ND	ug/kg	24.1	5.8	1		12/08/15 13:14	75-00-3	
Chloroform	ND	ug/kg	12.0	3.8	1		12/08/15 13:14	67-66-3	
Chloromethane	ND	ug/kg	24.1	5.8	1		12/08/15 13:14	74-87-3	
Cyclohexane	ND	ug/kg	12.0	3.8	1		12/08/15 13:14	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	12.0	8.7	1		12/08/15 13:14	96-12-8	
Dibromochloromethane	ND	ug/kg	12.0	4.3	1		12/08/15 13:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	12.0	4.3	1		12/08/15 13:14	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	12.0	4.6	1		12/08/15 13:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	12.0	4.8	1		12/08/15 13:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	12.0	4.1	1		12/08/15 13:14	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	24.1	8.7	1		12/08/15 13:14	75-71-8	
1,1-Dichloroethane	ND	ug/kg	12.0	3.6	1		12/08/15 13:14	75-34-3	
1,2-Dichloroethane	ND	ug/kg	12.0	5.3	1		12/08/15 13:14	107-06-2	
1,1-Dichloroethene	ND	ug/kg	12.0	4.3	1		12/08/15 13:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	12.0	3.4	1		12/08/15 13:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	12.0	4.6	1		12/08/15 13:14	156-60-5	
1,2-Dichloropropane	ND	ug/kg	12.0	4.1	1		12/08/15 13:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	12.0	4.3	1		12/08/15 13:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	12.0	3.6	1		12/08/15 13:14	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	361	289	1		12/08/15 13:14	123-91-1	
Ethylbenzene	**14.2**	ug/kg	12.0	4.3	1		12/08/15 13:14	100-41-4	
2-Hexanone	**44.9J**	ug/kg	120	9.4	1		12/08/15 13:14	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	12.0	4.6	1		12/08/15 13:14	98-82-8	
Methyl acetate	ND	ug/kg	24.1	3.4	1		12/08/15 13:14	79-20-9	
Methylcyclohexane	ND	ug/kg	24.1	3.6	1		12/08/15 13:14	108-87-2	
Methylene Chloride	**15.7J**	ug/kg	48.1	7.2	1		12/08/15 13:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	**61.5J**	ug/kg	120	8.9	1		12/08/15 13:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	12.0	3.6	1		12/08/15 13:14	1634-04-4	
Styrene	ND	ug/kg	12.0	4.3	1		12/08/15 13:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	12.0	4.6	1		12/08/15 13:14	79-34-5	
Tetrachloroethene	ND	ug/kg	12.0	4.1	1		12/08/15 13:14	127-18-4	
Toluene	**34.5**	ug/kg	12.0	4.3	1		12/08/15 13:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	12.0	5.3	1		12/08/15 13:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	12.0	3.8	1		12/08/15 13:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	12.0	4.3	1		12/08/15 13:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	12.0	5.1	1		12/08/15 13:14	79-00-5	
Trichloroethene	ND	ug/kg	12.0	5.1	1		12/08/15 13:14	79-01-6	
Trichlorofluoromethane	ND	ug/kg	12.0	5.3	1		12/08/15 13:14	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	12.0	4.6	1		12/08/15 13:14	76-13-1	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278244

Sample: HAB-1 3-5 FT. **Lab ID: 92278244001** Collected: 12/02/15 14:15 Received: 12/02/15 17:33 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Vinyl chloride	ND	ug/kg	24.1	4.3	1		12/08/15 13:14	75-01-4	
m&p-Xylene	ND	ug/kg	24.1	8.7	1		12/08/15 13:14	179601-23-1	
o-Xylene	ND	ug/kg	12.0	4.6	1		12/08/15 13:14	95-47-6	
Surrogates									
Toluene-d8 (S)	88	%	70-130		1		12/08/15 13:14	2037-26-5	IO
4-Bromofluorobenzene (S)	76	%	70-130		1		12/08/15 13:14	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-132		1		12/08/15 13:14	17060-07-0	
Tentatively Identified Compounds									
Hexane	**45.2**	ug/kg			1		12/08/15 13:14	110-54-3	N
Thiophene, 2-methyl-	**25.3**	ug/kg			1		12/08/15 13:14	554-14-3	N
Octane, 2,6-dimethyl-	**37.2**	ug/kg			1		12/08/15 13:14	2051-30-1	N
Biphenyl	**1410**	ug/kg			1		12/08/15 13:14	92-52-4	N
Diphenyl ether	**4420**	ug/kg			1		12/08/15 13:14	101-84-8	N
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**46.3**	%	0.10	0.10	1		12/04/15 06:57		
8315 HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	**88100**	ug/kg	37200	13100	10	12/08/15 17:00	12/10/15 12:57	50-00-0	M6,N2
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	**8.4**	Std. Units	0.10	0.10	1		12/07/15 16:15		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**9290**	mg/kg	448	448	25		12/10/15 09:03	7664-41-7	M1,M6
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4								
Phosphorus, Total (as P)	**1240**	mg/kg	174	87.0	20	12/09/15 12:00	12/10/15 15:28	7723-14-0	
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012								
Cyanide	ND	mg/kg	0.58	0.29	1	12/09/15 10:30	12/09/15 15:09	57-12-5	
9056 IC Anions	Analytical Method: EPA 9056								
Chloride	**283J**	mg/kg	469	235	5		12/04/15 12:46	16887-00-6	D3
Fluoride	**35.1J**	mg/kg	46.9	23.5	5		12/04/15 12:46	16984-48-8	
Sulfate	ND	mg/kg	469	235	5		12/04/15 12:46	14808-79-8	
9056 IC Anions 48hr	Analytical Method: EPA 9056								
Nitrate as N	ND	mg/kg	46.9	23.5	5		12/04/15 12:46	14797-55-8	
Nitrite as N	ND	mg/kg	46.9	23.5	5		12/04/15 12:46	14797-65-0	
Orthophosphate as P	**88.6J**	mg/kg	93.8	46.9	5		12/04/15 12:46		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: MERP/8726
QC Batch Method: EPA 7471
Analysis Method: EPA 7471
Analysis Description: 7471 Mercury
Associated Lab Samples: 92278244001

METHOD BLANK: 1619759
Matrix: Solid
Associated Lab Samples: 92278244001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	0.00057J	0.0062	0.00012	12/04/15 15:52	

LABORATORY CONTROL SAMPLE: 1619760

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.083	0.080	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1619761 1619762

Parameter	Units	92278026001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.010	.072	.064	0.076	0.075	91	100	75-125	2	20	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: MPRP/20178
QC Batch Method: EPA 3050
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 92278244001

METHOD BLANK: 1620449
Matrix: Solid
Associated Lab Samples: 92278244001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/kg	ND	10.0	5.0	12/07/15 12:31	
Antimony	mg/kg	ND	0.50	0.39	12/07/15 12:31	
Arsenic	mg/kg	ND	1.0	0.50	12/07/15 12:31	
Barium	mg/kg	ND	0.50	0.25	12/07/15 12:31	
Beryllium	mg/kg	ND	0.10	0.050	12/07/15 12:31	
Cadmium	mg/kg	ND	0.10	0.050	12/07/15 12:31	
Calcium	mg/kg	ND	10.0	5.0	12/07/15 12:31	
Chromium	mg/kg	ND	0.50	0.25	12/07/15 12:31	
Cobalt	mg/kg	ND	0.50	0.25	12/07/15 12:31	
Copper	mg/kg	ND	0.50	0.25	12/07/15 12:31	
Iron	mg/kg	ND	10.0	5.0	12/07/15 12:31	
Lead	mg/kg	ND	0.50	0.25	12/07/15 12:31	
Magnesium	mg/kg	0.32J	10.0	0.25	12/07/15 12:31	
Manganese	mg/kg	ND	0.50	0.25	12/07/15 12:31	
Nickel	mg/kg	ND	0.50	0.25	12/07/15 12:31	
Potassium	mg/kg	ND	500	500	12/07/15 12:31	
Selenium	mg/kg	ND	1.0	0.50	12/07/15 12:31	
Silver	mg/kg	ND	0.50	0.25	12/07/15 12:31	
Sodium	mg/kg	ND	500	250	12/07/15 12:31	
Thallium	mg/kg	ND	1.0	0.50	12/07/15 12:31	
Vanadium	mg/kg	ND	0.50	0.25	12/07/15 12:31	
Zinc	mg/kg	ND	1.0	0.50	12/07/15 12:31	

LABORATORY CONTROL SAMPLE: 1620450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/kg	500	512	102	80-120	
Antimony	mg/kg	50	52.8	106	80-120	
Arsenic	mg/kg	50	50.7	101	80-120	
Barium	mg/kg	50	52.7	105	80-120	
Beryllium	mg/kg	50	53.0	106	80-120	
Cadmium	mg/kg	50	53.1	106	80-120	
Calcium	mg/kg	500	519	104	80-120	
Chromium	mg/kg	50	53.1	106	80-120	
Cobalt	mg/kg	50	52.7	105	80-120	
Copper	mg/kg	50	52.8	106	80-120	
Iron	mg/kg	500	518	104	80-120	
Lead	mg/kg	50	52.3	105	80-120	
Magnesium	mg/kg	500	508	102	80-120	
Manganese	mg/kg	50	52.3	105	80-120	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

LABORATORY CONTROL SAMPLE: 1620450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel	mg/kg	50	52.8	106	80-120	
Potassium	mg/kg	500	ND	96	80-120	
Selenium	mg/kg	50	51.9	104	80-120	
Silver	mg/kg	25	25.6	102	80-120	
Sodium	mg/kg	500	477J	95	80-120	
Thallium	mg/kg	50	51.0	102	80-120	
Vanadium	mg/kg	50	53.3	107	80-120	
Zinc	mg/kg	50	52.9	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620451 1620452

Parameter	Units	92278235002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	mg/kg	17700	474	554	23200	21500	1170	687	75-125	8	20	M1
Antimony	mg/kg	ND	47.4	55.4	30.1	37.3	64	67	75-125	21	20	M1,R1
Arsenic	mg/kg	3.1	47.4	55.4	48.1	57.5	95	98	75-125	18	20	
Barium	mg/kg	57.5	47.4	55.4	104	115	97	104	75-125	10	20	
Beryllium	mg/kg	0.59	47.4	55.4	46.0	54.4	96	97	75-125	17	20	
Cadmium	mg/kg	40.6	47.4	55.4	83.1	106	90	118	75-125	24	20	R1
Calcium	mg/kg	518	474	554	933	1110	88	106	75-125	17	20	
Chromium	mg/kg	19.9	47.4	55.4	67.8	73.1	101	96	75-125	7	20	
Cobalt	mg/kg	0.74	47.4	55.4	44.4	54.8	92	98	75-125	21	20	R1
Copper	mg/kg	31.5	47.4	55.4	87.1	98.8	118	122	75-125	13	20	
Iron	mg/kg	18600	474	554	18600	18400	-9	-33	75-125	1	20	M1
Lead	mg/kg	126	47.4	55.4	198	254	152	231	75-125	25	20	M1,R1
Magnesium	mg/kg	893	474	554	1460	1410	120	94	75-125	3	20	
Manganese	mg/kg	228	47.4	55.4	271	318	91	163	75-125	16	20	M1
Nickel	mg/kg	6.3	47.4	55.4	50.7	58.9	94	95	75-125	15	20	
Potassium	mg/kg	2080	474	554	3290	2940	256	155	75-125	11	20	M1
Selenium	mg/kg	1.8	47.4	55.4	42.1	51.6	85	90	75-125	20	20	
Silver	mg/kg	0.82	23.6	27.6	24.3	28.1	99	99	75-125	14	20	
Sodium	mg/kg	ND	474	554	532	619	112	112	75-125	15	20	
Thallium	mg/kg	ND	47.4	55.4	36.8	44.8	77	80	75-125	20	20	
Vanadium	mg/kg	48.7	47.4	55.4	101	104	111	100	75-125	3	20	
Zinc	mg/kg	902	47.4	55.4	989	1230	184	585	75-125	21	20	M1,R1

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: MSV/34587
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92278244001

METHOD BLANK: 1622296
Matrix: Solid
Associated Lab Samples: 92278244001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.2	1.9	12/08/15 12:54	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.2	2.0	12/08/15 12:54	
1,1,2-Trichloroethane	ug/kg	ND	5.2	2.2	12/08/15 12:54	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	5.2	2.0	12/08/15 12:54	
1,1-Dichloroethane	ug/kg	ND	5.2	1.6	12/08/15 12:54	
1,1-Dichloroethene	ug/kg	ND	5.2	1.9	12/08/15 12:54	
1,2,3-Trichlorobenzene	ug/kg	ND	5.2	2.3	12/08/15 12:54	
1,2,4-Trichlorobenzene	ug/kg	ND	5.2	1.7	12/08/15 12:54	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.2	3.7	12/08/15 12:54	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.2	1.9	12/08/15 12:54	
1,2-Dichlorobenzene	ug/kg	ND	5.2	2.0	12/08/15 12:54	
1,2-Dichloroethane	ug/kg	ND	5.2	2.3	12/08/15 12:54	
1,2-Dichloropropane	ug/kg	ND	5.2	1.8	12/08/15 12:54	
1,3-Dichlorobenzene	ug/kg	ND	5.2	2.1	12/08/15 12:54	
1,4-Dichlorobenzene	ug/kg	ND	5.2	1.8	12/08/15 12:54	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	156	124	12/08/15 12:54	
2-Butanone (MEK)	ug/kg	ND	104	3.0	12/08/15 12:54	
2-Hexanone	ug/kg	ND	51.9	4.0	12/08/15 12:54	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	51.9	3.8	12/08/15 12:54	
Acetone	ug/kg	ND	104	10.4	12/08/15 12:54	
Benzene	ug/kg	ND	5.2	1.7	12/08/15 12:54	
Bromochloromethane	ug/kg	ND	5.2	1.8	12/08/15 12:54	
Bromodichloromethane	ug/kg	ND	5.2	2.0	12/08/15 12:54	
Bromoform	ug/kg	ND	5.2	2.4	12/08/15 12:54	
Bromomethane	ug/kg	ND	10.4	2.6	12/08/15 12:54	
Carbon disulfide	ug/kg	ND	10.4	3.1	12/08/15 12:54	
Carbon tetrachloride	ug/kg	ND	5.2	2.7	12/08/15 12:54	
Chlorobenzene	ug/kg	ND	5.2	2.0	12/08/15 12:54	
Chloroethane	ug/kg	ND	10.4	2.5	12/08/15 12:54	
Chloroform	ug/kg	ND	5.2	1.7	12/08/15 12:54	
Chloromethane	ug/kg	ND	10.4	2.5	12/08/15 12:54	
cis-1,2-Dichloroethene	ug/kg	ND	5.2	1.5	12/08/15 12:54	
cis-1,3-Dichloropropene	ug/kg	ND	5.2	1.9	12/08/15 12:54	
Cyclohexane	ug/kg	ND	5.2	1.7	12/08/15 12:54	
Dibromochloromethane	ug/kg	ND	5.2	1.9	12/08/15 12:54	
Dichlorodifluoromethane	ug/kg	ND	10.4	3.7	12/08/15 12:54	
Ethylbenzene	ug/kg	ND	5.2	1.9	12/08/15 12:54	
Isopropylbenzene (Cumene)	ug/kg	ND	5.2	2.0	12/08/15 12:54	
m&p-Xylene	ug/kg	ND	10.4	3.7	12/08/15 12:54	
Methyl acetate	ug/kg	ND	10.4	1.5	12/08/15 12:54	
Methyl-tert-butyl ether	ug/kg	ND	5.2	1.6	12/08/15 12:54	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

METHOD BLANK: 1622296 Matrix: Solid
Associated Lab Samples: 92278244001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/kg	ND	10.4	1.6	12/08/15 12:54	
Methylene Chloride	ug/kg	ND	20.7	3.1	12/08/15 12:54	
o-Xylene	ug/kg	ND	5.2	2.0	12/08/15 12:54	
Styrene	ug/kg	ND	5.2	1.9	12/08/15 12:54	
Tetrachloroethene	ug/kg	ND	5.2	1.8	12/08/15 12:54	
Toluene	ug/kg	ND	5.2	1.9	12/08/15 12:54	
trans-1,2-Dichloroethene	ug/kg	ND	5.2	2.0	12/08/15 12:54	
trans-1,3-Dichloropropene	ug/kg	ND	5.2	1.6	12/08/15 12:54	
Trichloroethene	ug/kg	ND	5.2	2.2	12/08/15 12:54	
Trichlorofluoromethane	ug/kg	ND	5.2	2.3	12/08/15 12:54	
Vinyl chloride	ug/kg	ND	10.4	1.9	12/08/15 12:54	
1,2-Dichloroethane-d4 (S)	%	89	70-132		12/08/15 12:54	
4-Bromofluorobenzene (S)	%	97	70-130		12/08/15 12:54	
Toluene-d8 (S)	%	99	70-130		12/08/15 12:54	

LABORATORY CONTROL SAMPLE: 1622297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	57.5	49.0	85	67-140	
1,1,2,2-Tetrachloroethane	ug/kg	57.5	53.7	93	72-141	
1,1,2-Trichloroethane	ug/kg	57.5	53.0	92	78-138	
1,1,2-Trichlorotrifluoroethane	ug/kg	57.5	49.7	86	82-143	
1,1-Dichloroethane	ug/kg	57.5	50.8	88	69-134	
1,1-Dichloroethene	ug/kg	57.5	50.3	87	67-138	
1,2,3-Trichlorobenzene	ug/kg	57.5	57.2	100	70-146	
1,2,4-Trichlorobenzene	ug/kg	57.5	54.1	94	68-148	
1,2-Dibromo-3-chloropropane	ug/kg	57.5	51.9	90	65-140	
1,2-Dibromoethane (EDB)	ug/kg	57.5	57.0	99	77-135	
1,2-Dichlorobenzene	ug/kg	57.5	57.3	100	77-141	
1,2-Dichloroethane	ug/kg	57.5	46.9	82	65-137	
1,2-Dichloropropane	ug/kg	57.5	54.0	94	72-136	
1,3-Dichlorobenzene	ug/kg	57.5	55.9	97	74-138	
1,4-Dichlorobenzene	ug/kg	57.5	55.8	97	76-138	
1,4-Dioxane (p-Dioxane)	ug/kg	1150	1090	95	54-154	
2-Butanone (MEK)	ug/kg	115	93.0J	81	58-147	
2-Hexanone	ug/kg	115	101	88	62-145	
4-Methyl-2-pentanone (MIBK)	ug/kg	115	106	92	64-149	
Acetone	ug/kg	115	83.5J	73	53-153	
Benzene	ug/kg	57.5	56.5	98	73-135	
Bromochloromethane	ug/kg	57.5	50.8	88	73-134	
Bromodichloromethane	ug/kg	57.5	52.1	91	71-135	
Bromoform	ug/kg	57.5	50.3	87	66-141	
Bromomethane	ug/kg	57.5	57.9	101	53-160	
Carbon disulfide	ug/kg	57.5	55.5	97	63-140	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

LABORATORY CONTROL SAMPLE: 1622297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	57.5	51.7	90	60-145	
Chlorobenzene	ug/kg	57.5	55.3	96	78-130	
Chloroethane	ug/kg	57.5	53.8	94	64-149	
Chloroform	ug/kg	57.5	50.3	88	70-134	
Chloromethane	ug/kg	57.5	52.2	91	52-150	
cis-1,2-Dichloroethene	ug/kg	57.5	53.1	92	70-133	
cis-1,3-Dichloropropene	ug/kg	57.5	52.3	91	68-134	
Cyclohexane	ug/kg	57.5	49.9	87	79-146	
Dibromochloromethane	ug/kg	57.5	53.4	93	71-138	
Dichlorodifluoromethane	ug/kg	57.5	54.7	95	40-160	
Ethylbenzene	ug/kg	57.5	52.1	91	75-133	
Isopropylbenzene (Cumene)	ug/kg	57.5	58.7	102	76-143	
m&p-Xylene	ug/kg	115	105	91	75-136	
Methyl acetate	ug/kg	57.5	45.3	79	31-160	
Methyl-tert-butyl ether	ug/kg	57.5	50.3	88	68-144	
Methylcyclohexane	ug/kg	57.5	56.0	97	84-149	
Methylene Chloride	ug/kg	57.5	49.2	86	45-154	
o-Xylene	ug/kg	57.5	53.0	92	76-141	
Styrene	ug/kg	57.5	55.1	96	79-137	
Tetrachloroethene	ug/kg	57.5	50.1	87	71-138	
Toluene	ug/kg	57.5	54.3	95	74-131	
trans-1,2-Dichloroethene	ug/kg	57.5	53.4	93	67-135	
trans-1,3-Dichloropropene	ug/kg	57.5	50.0	87	65-146	
Trichloroethene	ug/kg	57.5	55.3	96	67-135	
Trichlorofluoromethane	ug/kg	57.5	47.3	82	59-144	
Vinyl chloride	ug/kg	57.5	58.4	102	56-141	
1,2-Dichloroethane-d4 (S)	%			89	70-132	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 1623560

Parameter	Units	92278215005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	17.1	13.9	81	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	ND	17.1	20.2	118	70-130	
1,1,2-Trichloroethane	ug/kg	ND	17.1	18.5	108	70-130	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	17.1	15.3	90	70-130	
1,1-Dichloroethane	ug/kg	ND	17.1	14.5	85	70-130	
1,1-Dichloroethene	ug/kg	ND	17.1	14.0	82	49-180	
1,2,3-Trichlorobenzene	ug/kg	ND	17.1	8.1	47	70-130	M1
1,2,4-Trichlorobenzene	ug/kg	ND	17.1	7.8	46	70-130	M1
1,2-Dibromo-3-chloropropane	ug/kg	ND	17.1	18.0	105	70-130	
1,2-Dibromoethane (EDB)	ug/kg	ND	17.1	20.4	120	70-130	
1,2-Dichlorobenzene	ug/kg	ND	17.1	12.9	76	70-130	
1,2-Dichloroethane	ug/kg	ND	17.1	16.3	96	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

MATRIX SPIKE SAMPLE: 1623560

Parameter	Units	92278215005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	ug/kg	ND	17.1	16.4	96	70-130	
1,3-Dichlorobenzene	ug/kg	ND	17.1	12.5	73	70-130	
1,4-Dichlorobenzene	ug/kg	ND	17.1	12.5	73	70-130	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	341	415	122	70-130	
2-Butanone (MEK)	ug/kg	ND	34.1	43.4J	127	70-130	
2-Hexanone	ug/kg	ND	34.1	46.3	136	70-130	M1
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	34.1	48.1	141	70-130	M1
Acetone	ug/kg	ND	34.1	332	972	70-130	E,M1
Benzene	ug/kg	ND	17.1	16.7	98	50-166	
Bromochloromethane	ug/kg	ND	17.1	18.3	107	70-130	
Bromodichloromethane	ug/kg	ND	17.1	15.1	89	70-130	
Bromoform	ug/kg	ND	17.1	15.1	88	70-130	
Bromomethane	ug/kg	ND	17.1	16.8	99	70-130	
Carbon disulfide	ug/kg	ND	17.1	15.5	91	70-130	
Carbon tetrachloride	ug/kg	ND	17.1	13.5	79	70-130	
Chlorobenzene	ug/kg	ND	17.1	14.0	82	43-169	
Chloroethane	ug/kg	ND	17.1	15.6	91	70-130	
Chloroform	ug/kg	ND	17.1	15.6	91	70-130	
Chloromethane	ug/kg	ND	17.1	14.3	84	70-130	
cis-1,2-Dichloroethene	ug/kg	ND	17.1	15.6	91	70-130	
cis-1,3-Dichloropropene	ug/kg	ND	17.1	16.6	97	70-130	
Cyclohexane	ug/kg	ND	17.1	14.4	84	70-130	
Dibromochloromethane	ug/kg	ND	17.1	16.6	97	70-130	
Dichlorodifluoromethane	ug/kg	ND	17.1	13.4	78	70-130	
Ethylbenzene	ug/kg	ND	17.1	13.6	80	70-130	
Isopropylbenzene (Cumene)	ug/kg	ND	17.1	14.2	83	70-130	
m&p-Xylene	ug/kg	ND	34.1	26.3	77	70-130	
Methyl acetate	ug/kg	ND	17.1	15.7	92	70-130	
Methyl-tert-butyl ether	ug/kg	ND	17.1	21.1	124	70-130	
Methylcyclohexane	ug/kg	ND	17.1	14.2	83	70-130	
Methylene Chloride	ug/kg	ND	17.1	17.7	103	70-130	
o-Xylene	ug/kg	ND	17.1	13.7	80	70-130	
Styrene	ug/kg	ND	17.1	12.9	75	70-130	
Tetrachloroethene	ug/kg	ND	17.1	12.7	75	70-130	
Toluene	ug/kg	ND	17.1	15.6	91	52-163	
trans-1,2-Dichloroethene	ug/kg	ND	17.1	15.7	92	70-130	
trans-1,3-Dichloropropene	ug/kg	ND	17.1	16.0	93	70-130	
Trichloroethene	ug/kg	ND	17.1	15.1	89	49-167	
Trichlorofluoromethane	ug/kg	ND	17.1	13.7	80	70-130	
Vinyl chloride	ug/kg	ND	17.1	17.2	100	70-130	
1,2-Dichloroethane-d4 (S)	%				101	70-132	
4-Bromofluorobenzene (S)	%				97	70-130	
Toluene-d8 (S)	%				98	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

SAMPLE DUPLICATE: 1623559

Parameter	Units	92278707001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND		30	
1,1,2-Trichloroethane	ug/kg	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	ND		30	
1,1-Dichloroethane	ug/kg	ND	ND		30	
1,1-Dichloroethene	ug/kg	ND	ND		30	
1,2,3-Trichlorobenzene	ug/kg	ND	ND		30	
1,2,4-Trichlorobenzene	ug/kg	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/kg	ND	ND		30	
1,2-Dichlorobenzene	ug/kg	ND	ND		30	
1,2-Dichloroethane	ug/kg	ND	ND		30	
1,2-Dichloropropane	ug/kg	ND	ND		30	
1,3-Dichlorobenzene	ug/kg	ND	ND		30	
1,4-Dichlorobenzene	ug/kg	ND	ND		30	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	ND		30	
2-Butanone (MEK)	ug/kg	ND	ND		30	
2-Hexanone	ug/kg	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND		30	
Acetone	ug/kg	ND	21.9J		30	
Benzene	ug/kg	ND	ND		30	
Bromochloromethane	ug/kg	ND	ND		30	
Bromodichloromethane	ug/kg	ND	ND		30	
Bromoform	ug/kg	ND	ND		30	
Bromomethane	ug/kg	ND	ND		30	
Carbon disulfide	ug/kg	ND	ND		30	
Carbon tetrachloride	ug/kg	ND	ND		30	
Chlorobenzene	ug/kg	ND	ND		30	
Chloroethane	ug/kg	ND	ND		30	
Chloroform	ug/kg	ND	ND		30	
Chloromethane	ug/kg	ND	ND		30	
cis-1,2-Dichloroethene	ug/kg	ND	ND		30	
cis-1,3-Dichloropropene	ug/kg	ND	ND		30	
Cyclohexane	ug/kg	ND	ND		30	
Dibromochloromethane	ug/kg	ND	ND		30	
Dichlorodifluoromethane	ug/kg	ND	ND		30	
Ethylbenzene	ug/kg	ND	ND		30	
Isopropylbenzene (Cumene)	ug/kg	ND	ND		30	
m&p-Xylene	ug/kg	ND	ND		30	
Methyl acetate	ug/kg	ND	ND		30	
Methyl-tert-butyl ether	ug/kg	ND	ND		30	
Methylcyclohexane	ug/kg	ND	ND		30	
Methylene Chloride	ug/kg	ND	4.5J		30	
o-Xylene	ug/kg	ND	ND		30	
Styrene	ug/kg	ND	ND		30	
Tetrachloroethene	ug/kg	ND	ND		30	
Toluene	ug/kg	ND	ND		30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

SAMPLE DUPLICATE: 1623559

Parameter	Units	92278707001 Result	Dup Result	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/kg	ND	ND		30	
trans-1,3-Dichloropropene	ug/kg	ND	ND		30	
Trichloroethene	ug/kg	ND	ND		30	
Trichlorofluoromethane	ug/kg	ND	ND		30	
Vinyl chloride	ug/kg	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	88	91	15		
4-Bromofluorobenzene (S)	%	87	82	6		
Toluene-d8 (S)	%	95	90	8		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: OEXT/39459 | Analysis Method: EPA 8081
QC Batch Method: EPA 3546 | Analysis Description: 8081 GCS Pesticides
Associated Lab Samples: 92278244001

METHOD BLANK: 1619730 | Matrix: Solid
Associated Lab Samples: 92278244001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
4,4'-DDD	ug/kg	ND	2.0	2.0	12/04/15 21:48	
4,4'-DDE	ug/kg	ND	2.0	2.0	12/04/15 21:48	
4,4'-DDT	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Aldrin	ug/kg	ND	2.0	2.0	12/04/15 21:48	
alpha-BHC	ug/kg	ND	2.0	2.0	12/04/15 21:48	
beta-BHC	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Chlordane (Technical)	ug/kg	ND	7.0	7.0	12/04/15 21:48	
delta-BHC	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Dieldrin	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Endosulfan I	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Endosulfan II	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Endosulfan sulfate	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Endrin	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Endrin aldehyde	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Endrin ketone	ug/kg	ND	2.0	2.0	12/04/15 21:48	
gamma-BHC (Lindane)	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Heptachlor	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Heptachlor epoxide	ug/kg	ND	2.0	2.0	12/04/15 21:48	
Methoxychlor	ug/kg	ND	5.0	5.0	12/04/15 21:48	
Toxaphene	ug/kg	ND	7.0	7.0	12/04/15 21:48	
Decachlorobiphenyl (S)	%	87	21-123		12/04/15 21:48	
Tetrachloro-m-xylene (S)	%	93	35-108		12/04/15 21:48	

LABORATORY CONTROL SAMPLE & LCSD: 1619731 1619732

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
4,4'-DDD	ug/kg	8.3	8.3	8.4	100	102	63-126	2	30	
4,4'-DDE	ug/kg	8.3	7.9	8.2	96	99	62-126	3	30	
4,4'-DDT	ug/kg	8.3	8.6	9.0	104	109	65-135	5	30	
Aldrin	ug/kg	8.3	7.1	7.5	86	91	40-120	5	30	
alpha-BHC	ug/kg	8.3	7.2	7.4	87	90	37-123	4	30	
beta-BHC	ug/kg	8.3	7.7	8.0	93	97	51-113	3	30	
delta-BHC	ug/kg	8.3	7.8	8.2	94	99	25-139	5	30	
Dieldrin	ug/kg	8.3	8.1	8.4	99	102	54-125	3	30	
Endosulfan I	ug/kg	8.3	7.9	8.2	96	99	54-125	3	30	
Endosulfan II	ug/kg	8.3	8.2	8.5	100	103	62-121	3	30	
Endosulfan sulfate	ug/kg	8.3	8.3	8.6	100	104	39-121	4	30	
Endrin	ug/kg	8.3	8.3	8.6	101	104	65-134	3	30	
Endrin aldehyde	ug/kg	8.3	7.6	8.0	92	97	44-121	5	30	
Endrin ketone	ug/kg	8.3	7.8	8.0	94	97	59-124	3	30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

LABORATORY CONTROL SAMPLE & LCSD: 1619731 1619732

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
gamma-BHC (Lindane)	ug/kg	8.3	7.4	7.7	90	93	41-121	4	30	
Heptachlor	ug/kg	8.3	7.2	7.5	87	91	43-120	4	30	
Heptachlor epoxide	ug/kg	8.3	7.7	7.9	93	96	47-118	3	30	
Methoxychlor	ug/kg	24.8	25.6	26.3	103	106	68-125	3	30	
Decachlorobiphenyl (S)	%				95	96	21-123			
Tetrachloro-m-xylene (S)	%				98	101	35-108			

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: OEXT/39483
QC Batch Method: EPA 3546
Analysis Method: EPA 8270
Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 92278244001

METHOD BLANK: 1620738
Matrix: Solid
Associated Lab Samples: 92278244001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/kg	ND	330	120	12/07/15 16:11	
2,2'-Oxybis(1-chloropropane)	ug/kg	ND	330	88.0	12/08/15 12:12	
2,3,4,6-Tetrachlorophenol	ug/kg	ND	330	130	12/08/15 12:12	
2,4,5-Trichlorophenol	ug/kg	ND	330	102	12/08/15 12:12	
2,4,6-Trichlorophenol	ug/kg	ND	330	73.0	12/08/15 12:12	
2,4-Dichlorophenol	ug/kg	ND	330	72.0	12/08/15 12:12	
2,4-Dimethylphenol	ug/kg	ND	330	130	12/08/15 12:12	
2,4-Dinitrophenol	ug/kg	ND	1650	54.0	12/08/15 12:12	
2,4-Dinitrotoluene	ug/kg	ND	330	62.0	12/08/15 12:12	
2,6-Dinitrotoluene	ug/kg	ND	330	69.0	12/08/15 12:12	
2-Chloronaphthalene	ug/kg	ND	330	65.0	12/08/15 12:12	
2-Chlorophenol	ug/kg	ND	330	90.0	12/08/15 12:12	
2-Methylnaphthalene	ug/kg	ND	330	71.0	12/08/15 12:12	
2-Methylphenol(o-Cresol)	ug/kg	ND	330	100	12/08/15 12:12	
2-Nitroaniline	ug/kg	ND	1650	102	12/08/15 12:12	
2-Nitrophenol	ug/kg	ND	330	80.0	12/08/15 12:12	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	330	130	12/08/15 12:12	
3,3'-Dichlorobenzidine	ug/kg	ND	1650	72.0	12/08/15 12:12	
3-Nitroaniline	ug/kg	ND	1650	90.0	12/08/15 12:12	
4,6-Dinitro-2-methylphenol	ug/kg	ND	660	66.0	12/08/15 12:12	
4-Bromophenylphenyl ether	ug/kg	ND	330	60.0	12/08/15 12:12	
4-Chloro-3-methylphenol	ug/kg	ND	660	68.0	12/08/15 12:12	
4-Chloroaniline	ug/kg	ND	1650	92.0	12/08/15 12:12	
4-Chlorophenylphenyl ether	ug/kg	ND	330	68.0	12/08/15 12:12	
4-Nitroaniline	ug/kg	ND	660	93.0	12/08/15 12:12	
4-Nitrophenol	ug/kg	ND	1650	59.0	12/08/15 12:12	
Acenaphthene	ug/kg	ND	330	76.0	12/08/15 12:12	
Acenaphthylene	ug/kg	ND	330	78.0	12/08/15 12:12	
Acetophenone	ug/kg	ND	330	170	12/08/15 12:12	
Anthracene	ug/kg	ND	330	74.0	12/08/15 12:12	
Atrazine	ug/kg	ND	660	130	12/07/15 16:11	
Benzaldehyde	ug/kg	ND	660	330	12/07/15 16:11	
Benzo(a)anthracene	ug/kg	ND	330	61.0	12/08/15 12:12	
Benzo(a)pyrene	ug/kg	ND	330	63.0	12/08/15 12:12	
Benzo(b)fluoranthene	ug/kg	ND	330	57.0	12/08/15 12:12	
Benzo(g,h,i)perylene	ug/kg	ND	330	84.0	12/08/15 12:12	
Benzo(k)fluoranthene	ug/kg	ND	330	65.0	12/08/15 12:12	
Biphenyl (Diphenyl)	ug/kg	ND	330	104	12/08/15 12:12	
bis(2-Chloroethoxy)methane	ug/kg	ND	330	77.0	12/08/15 12:12	
bis(2-Chloroethyl) ether	ug/kg	ND	330	84.0	12/08/15 12:12	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	90.0	12/08/15 12:12	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

METHOD BLANK: 1620738 Matrix: Solid
Associated Lab Samples: 92278244001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Butylbenzylphthalate	ug/kg	ND	330	70.0	12/08/15 12:12	
Caprolactam	ug/kg	ND	330	57.0	12/07/15 16:11	
Carbazole	ug/kg	ND	330	63.0	12/08/15 12:12	
Chrysene	ug/kg	ND	330	44.0	12/08/15 12:12	
Di-n-butylphthalate	ug/kg	ND	330	54.0	12/08/15 12:12	
Di-n-octylphthalate	ug/kg	ND	330	69.0	12/08/15 12:12	
Dibenz(a,h)anthracene	ug/kg	ND	330	70.0	12/08/15 12:12	
Dibenzofuran	ug/kg	ND	330	54.0	12/08/15 12:12	
Diethylphthalate	ug/kg	ND	330	51.0	12/08/15 12:12	
Dimethylphthalate	ug/kg	ND	330	67.0	12/08/15 12:12	
Fluoranthene	ug/kg	ND	330	48.0	12/08/15 12:12	
Fluorene	ug/kg	ND	330	68.0	12/08/15 12:12	
Hexachloro-1,3-butadiene	ug/kg	ND	330	57.0	12/08/15 12:12	
Hexachlorobenzene	ug/kg	ND	330	42.0	12/08/15 12:12	
Hexachlorocyclopentadiene	ug/kg	ND	330	61.0	12/08/15 12:12	
Hexachloroethane	ug/kg	ND	330	87.0	12/08/15 12:12	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	68.0	12/08/15 12:12	
Isophorone	ug/kg	ND	330	74.0	12/08/15 12:12	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	63.0	12/08/15 12:12	
N-Nitrosodiphenylamine	ug/kg	ND	330	98.0	12/08/15 12:12	
Naphthalene	ug/kg	ND	330	81.0	12/08/15 12:12	
Nitrobenzene	ug/kg	ND	330	90.0	12/08/15 12:12	
Pentachlorophenol	ug/kg	ND	1650	60.0	12/08/15 12:12	
Phenanthrene	ug/kg	ND	330	55.0	12/08/15 12:12	
Phenol	ug/kg	ND	330	99.0	12/08/15 12:12	
Pyrene	ug/kg	ND	330	56.0	12/08/15 12:12	
2,4,6-Tribromophenol (S)	%	80	27-110		12/08/15 12:12	
2-Fluorobiphenyl (S)	%	78	30-110		12/08/15 12:12	
2-Fluorophenol (S)	%	65	13-110		12/08/15 12:12	
Nitrobenzene-d5 (S)	%	74	23-110		12/08/15 12:12	
Phenol-d6 (S)	%	67	22-110		12/08/15 12:12	
Terphenyl-d14 (S)	%	89	28-110		12/08/15 12:12	

LABORATORY CONTROL SAMPLE & LCSD: 1620739 1620740

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/kg	1670	1240	1220	74	73	36-124	1	30	
2,2'-Oxybis(1-chloropropane)	ug/kg	1670	969	1000	58	60	17-120	3	30	
2,3,4,6-Tetrachlorophenol	ug/kg	1670	2930	3060	176	184	82-262	4	30	
2,4,5-Trichlorophenol	ug/kg	1670	1460	1570	88	94	37-120	7	30	
2,4,6-Trichlorophenol	ug/kg	1670	1350	1460	81	88	40-120	8	30	
2,4-Dichlorophenol	ug/kg	1670	1360	1460	82	88	33-120	7	30	
2,4-Dimethylphenol	ug/kg	1670	1300	1370	78	82	36-120	5	30	
2,4-Dinitrophenol	ug/kg	8330	7180	7820	86	94	22-121	9	30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

LABORATORY CONTROL SAMPLE & LCSD: 1620739 1620740

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4-Dinitrotoluene	ug/kg	1670	1590	1670	96	100	60-120	5	30	
2,6-Dinitrotoluene	ug/kg	1670	1560	1630	94	98	54-120	5	30	
2-Chloronaphthalene	ug/kg	1670	1530	1860	92	111	41-120	19	30	
2-Chlorophenol	ug/kg	1670	1300	1380	78	83	39-120	6	30	
2-Methylnaphthalene	ug/kg	1670	1260	1350	76	81	26-120	7	30	
2-Methylphenol(o-Cresol)	ug/kg	1670	1450	1530	87	92	41-120	5	30	
2-Nitroaniline	ug/kg	3330	2460	2660	74	80	45-120	8	30	
2-Nitrophenol	ug/kg	1670	1340	1470	81	88	35-120	9	30	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	1240	1320	74	79	35-120	6	30	
3,3'-Dichlorobenzidine	ug/kg	8330	2590	2710	31	33	16-125	4	30	
3-Nitroaniline	ug/kg	3330	2810	2990	84	90	45-120	6	30	
4,6-Dinitro-2-methylphenol	ug/kg	3330	2890	3090	87	93	46-120	7	30	
4-Bromophenylphenyl ether	ug/kg	1670	1330	1380	80	83	36-120	3	30	
4-Chloro-3-methylphenol	ug/kg	3330	2840	3070	85	92	37-120	8	30	
4-Chloroaniline	ug/kg	3330	2200	2320	66	69	35-120	5	30	
4-Chlorophenylphenyl ether	ug/kg	1670	1280	1330	77	80	30-120	4	30	
4-Nitroaniline	ug/kg	3330	3130	3310	94	99	48-120	5	30	
4-Nitrophenol	ug/kg	8330	7850	8220	94	99	43-120	5	30	
Acenaphthene	ug/kg	1670	1430	1510	86	90	46-120	5	30	
Acenaphthylene	ug/kg	1670	1500	1590	90	96	46-120	6	30	
Acetophenone	ug/kg	1670	1250	1300	75	78	39-120	4	30	
Anthracene	ug/kg	1670	1550	1610	93	96	63-120	4	30	
Atrazine	ug/kg	1670	1630	1470	98	88	70-156	11	30	
Benzaldehyde	ug/kg	1670	ND	ND	4	4	10-120		30	L0
Benzo(a)anthracene	ug/kg	1670	1480	1530	89	92	61-120	3	30	
Benzo(a)pyrene	ug/kg	1670	1480	1520	89	91	59-120	3	30	
Benzo(b)fluoranthene	ug/kg	1670	1520	1560	91	94	55-120	2	30	
Benzo(g,h,i)perylene	ug/kg	1670	1240	1350	74	81	57-120	9	30	
Benzo(k)fluoranthene	ug/kg	1670	1860	1870	112	112	56-120	1	30	
Biphenyl (Diphenyl)	ug/kg	1670	1300	1380	78	83	40-120	6	30	
bis(2-Chloroethoxy)methane	ug/kg	1670	1180	1250	71	75	21-120	5	30	
bis(2-Chloroethyl) ether	ug/kg	1670	1110	1150	66	69	25-120	4	30	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1660	1810	100	109	56-123	9	30	
Butylbenzylphthalate	ug/kg	1670	1710	1870	103	112	57-120	9	30	
Caprolactam	ug/kg	1670	1540	1430	93	86	23-163	8	30	
Carbazole	ug/kg	1670	1530	1590	92	96	57-120	4	30	
Chrysene	ug/kg	1670	1450	1520	87	91	64-120	5	30	
Di-n-butylphthalate	ug/kg	1670	1760	1860	106	111	58-120	5	30	
Di-n-octylphthalate	ug/kg	1670	1450	1570	87	94	47-121	8	30	
Dibenz(a,h)anthracene	ug/kg	1670	1290	1380	78	83	56-120	6	30	
Dibenzofuran	ug/kg	1670	1390	1460	84	88	43-120	5	30	
Diethylphthalate	ug/kg	1670	1530	1620	92	97	55-120	5	30	
Dimethylphthalate	ug/kg	1670	1450	1530	87	92	54-120	5	30	
Fluoranthene	ug/kg	1670	1610	1690	97	101	61-120	5	30	
Fluorene	ug/kg	1670	1530	1600	92	96	51-120	5	30	
Hexachloro-1,3-butadiene	ug/kg	1670	1250	1340	75	80	22-120	7	30	
Hexachlorobenzene	ug/kg	1670	1470	1530	88	92	53-120	4	30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

LABORATORY CONTROL SAMPLE & LCSD: 1620739 1620740

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Hexachlorocyclopentadiene	ug/kg	1670	962	1060	58	63	18-150	9	30	
Hexachloroethane	ug/kg	1670	1480	1520	89	91	39-120	3	30	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1280	1390	77	83	58-120	8	30	
Isophorone	ug/kg	1670	1230	1310	74	79	38-120	7	30	
N-Nitroso-di-n-propylamine	ug/kg	1670	1280	1280	77	77	30-120	0	30	
N-Nitrosodiphenylamine	ug/kg	1670	1380	1430	83	86	50-120	4	30	
Naphthalene	ug/kg	1670	1290	1370	77	82	38-120	7	30	
Nitrobenzene	ug/kg	1670	1170	1270	70	76	37-120	8	30	
Pentachlorophenol	ug/kg	8330	2540	2900	30	35	10-120	13	30	
Phenanthrene	ug/kg	1670	1400	1460	84	88	62-120	4	30	
Phenol	ug/kg	1670	1300	1390	78	83	37-120	7	30	
Pyrene	ug/kg	1670	1550	1660	93	100	63-120	7	30	
2,4,6-Tribromophenol (S)	%				87	91	27-110			
2-Fluorobiphenyl (S)	%				81	83	30-110			
2-Fluorophenol (S)	%				76	79	13-110			
Nitrobenzene-d5 (S)	%				72	78	23-110			
Phenol-d6 (S)	%				76	80	22-110			
Terphenyl-d14 (S)	%				85	89	28-110			

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: PMST/8625
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92278244001

SAMPLE DUPLICATE: 1619682

Parameter	Units	92278022001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.5	14.3	2	25	

SAMPLE DUPLICATE: 1619683

Parameter	Units	92278340002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	46.8	47.6	2	25	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: TAMP/7944
QC Batch Method: EPA 8315
Analysis Method: EPA 8315
Analysis Description: 8315 HPLC Solid
Associated Lab Samples: 92278244001

METHOD BLANK: 1413392
Matrix: Solid
Associated Lab Samples: 92278244001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Formaldehyde	ug/kg	ND	2000	702	12/09/15 18:45	N2

LABORATORY CONTROL SAMPLE: 1413393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Formaldehyde	ug/kg	5000	3980	79.5	70-130	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1413394 1413395

Parameter	Units	92278244001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Formaldehyde	ug/kg	88100	9310	9310	85200	94100	-31.6	63.6	70-130	9.9	40	M6,N2

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: WET/41791
QC Batch Method: EPA 9045
Analysis Method: EPA 9045
Analysis Description: 9045 pH
Associated Lab Samples: 92278244001

SAMPLE DUPLICATE: 1621148

Parameter	Units	92278226001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.2	8.2	1	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: WETA/25688
QC Batch Method: EPA 350.1
Analysis Method: EPA 350.1
Analysis Description: 350.1 Ammonia
Associated Lab Samples: 92278244001

METHOD BLANK: 1623354
Matrix: Solid
Associated Lab Samples: 92278244001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/kg	ND	10.0	10.0	12/10/15 07:35	

LABORATORY CONTROL SAMPLE: 1623355

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/kg	500	488	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623356 1623357

Parameter	Units	92278244001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/kg	9290	895	895	8520	8440	-87	-95	90-110	1	10	M1,M6

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: WETA/52854
QC Batch Method: EPA 365.4
Analysis Method: EPA 365.4
Analysis Description: 365.4 Total Phosphorus
Associated Lab Samples: 92278244001

METHOD BLANK: 1415069
Matrix: Solid
Associated Lab Samples: 92278244001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus, Total (as P)	mg/kg	ND	6.7	3.4	12/10/15 15:25	

LABORATORY CONTROL SAMPLE: 1415070

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P)	mg/kg	358	360	101	90-110	

MATRIX SPIKE SAMPLE: 1415072

Parameter	Units	35219805001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P)	mg/kg	0.0014 % (w/w)	161	163	93	80-120	

SAMPLE DUPLICATE: 1415071

Parameter	Units	35219805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P)	mg/kg	0.0014 % (w/w)	14.2	3	20	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: WETA/52818
QC Batch Method: EPA 9012
Analysis Method: EPA 9012
Analysis Description: 9012 Cyanide
Associated Lab Samples: 92278244001

METHOD BLANK: 1414366
Matrix: Solid
Associated Lab Samples: 92278244001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	mg/kg	ND	0.27	0.13	12/09/15 14:58	

LABORATORY CONTROL SAMPLE: 1414367

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/kg	.63	0.61	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1414368 1414369

Parameter	Units	35219932001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/kg	0.15U	.61	.76	0.68	0.73	100	87	80-120	7	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: WETA/52702 | Analysis Method: EPA 9056
QC Batch Method: EPA 9056 | Analysis Description: 9056 IC Anions
Associated Lab Samples: 92278244001

METHOD BLANK: 1409798 | Matrix: Solid
Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/kg	ND	50.0	25.0	12/04/15 11:40	
Fluoride	mg/kg	ND	5.0	2.5	12/04/15 11:40	
Sulfate	mg/kg	ND	50.0	25.0	12/04/15 11:40	

LABORATORY CONTROL SAMPLE: 1409799

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/kg	501	481	96	80-120	
Fluoride	mg/kg	50.1	50.6	101	80-120	
Sulfate	mg/kg	501	484	97	80-120	

MATRIX SPIKE SAMPLE: 1409801

Parameter	Units	92277748001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/kg	ND	825	740	71	80-120	M1
Fluoride	mg/kg	ND	82.5	34.8J	37	80-120	M1
Sulfate	mg/kg	ND	825	790	96	80-120	

SAMPLE DUPLICATE: 1409800

Parameter	Units	92277748001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/kg	ND	ND		20	
Fluoride	mg/kg	ND	ND		20	
Sulfate	mg/kg	ND	ND		20	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: WETA/52703 | Analysis Method: EPA 9056
QC Batch Method: EPA 9056 | Analysis Description: 9056 IC Anions
Associated Lab Samples: 92278244001

METHOD BLANK: 1409804 | Matrix: Solid
Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate as N	mg/kg	ND	5.0	2.5	12/04/15 11:40	
Nitrite as N	mg/kg	ND	5.0	2.5	12/04/15 11:40	
Orthophosphate as P	mg/kg	ND	10.0	5.0	12/04/15 11:40	

LABORATORY CONTROL SAMPLE: 1409805

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/kg	50.1	51.1	102	80-120	
Nitrite as N	mg/kg	50.1	48.6	97	80-120	
Orthophosphate as P	mg/kg	100	99.8	100	80-120	

MATRIX SPIKE SAMPLE: 1409807

Parameter	Units	92277748001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/kg	ND	82.5	78.1	95	80-120	H3
Nitrite as N	mg/kg	ND	82.5	75.0	91	80-120	H3
Orthophosphate as P	mg/kg	ND	165	93.8	57	80-120	H3,M1

SAMPLE DUPLICATE: 1409806

Parameter	Units	92277748001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate as N	mg/kg	ND	ND		20	H3
Nitrite as N	mg/kg	ND	ND		20	H3
Orthophosphate as P	mg/kg	ND	ND		20	H3

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278244

Sample: HAB-1 3-5 FT. **Lab ID: 92278244001** Collected: 12/02/15 14:15 Received: 12/02/15 17:33 Matrix: Solid
PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**12.5 ± 6.50 (10.3)** **C:NA T:NA**	pCi/g	12/18/15 10:24	12587-46-1	N2
Gross Beta	EPA 900.0	**11.2 ± 3.87 (5.20)** **C:NA T:NA**	pCi/g	12/18/15 10:24	12587-47-2	N2
Radium-226	EPA 901.1	**2.809 ± 0.502 (0.343)** **C:NA T:NA**	pCi/g	01/05/16 08:42	13982-63-3	
Radium-228	EPA 901.1	**1.643 ± 0.474 (0.381)** **C:NA T:NA**	pCi/g	01/05/16 08:42	15262-20-1	
Uranium-234	HSL-300	**1.82 ± 0.454 (0.154)** **C:NA T:85%**	pCi/g	12/22/15 09:39	13966-29-5	N2
Uranium-235	HSL-300	**0.229 ± 0.147 (0.062)** **C:NA T:85%**	pCi/g	12/22/15 09:39	15117-96-1	N2
Uranium-238	HSL-300	**1.35 ± 0.369 (0.104)** **C:NA T:85%**	pCi/g	12/22/15 09:39		N2

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: RADC/27248 | Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0 | Analysis Description: 900.0 Gross Alpha/Beta
Associated Lab Samples: 92278244001

METHOD BLANK: 998776 | Matrix: Solid
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.077 ± 0.102 (0.282) C:NA T:NA	pCi/g	12/18/15 10:46	N2
Gross Beta	-0.058 ± 0.100 (0.250) C:NA T:NA	pCi/g	12/18/15 10:46	N2

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: RADC/27288 | Analysis Method: HSL-300
QC Batch Method: HSL-300 | Analysis Description: HSL300(AS) Actinides
Associated Lab Samples: 92278244001

METHOD BLANK: 999573 | Matrix: Solid
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Uranium-234	0.073 ± 0.074 (0.114) C:NA T:89%	pCi/g	12/22/15 09:39	N2
Uranium-235	-0.008 ± 0.070 (0.110) C:NA T:89%	pCi/g	12/22/15 09:39	N2
Uranium-238	0.011 ± 0.053 (0.074) C:NA T:89%	pCi/g	12/22/15 09:39	N2

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278244

QC Batch: RADC/27436 | Analysis Method: EPA 901.1
QC Batch Method: EPA 901.1 | Analysis Description: 901.1 Gamma Spec Ingrowth
Associated Lab Samples: 92278244001

METHOD BLANK: 1006035 | Matrix: Solid
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.018 ± 0.174 (0.215) C:NA T:NA	pCi/g	01/04/16 13:12	
Radium-228	0.072 ± 0.221 (0.297) C:NA T:NA	pCi/g	01/04/16 13:12	

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QUALIFIERS

Project: Wright Chemical Site
Pace Project No.: 92278244

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.

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, Styrene, and Vinyl chloride.

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte
PASI-O	Pace Analytical Services - Ormond Beach
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
IO	The internal standard response was outside the laboratory acceptance limits confirmed by reanalysis. The results reported are from the most QC compliant analysis.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

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QUALIFIERS

Project: Wright Chemical Site
Pace Project No.: 92278244

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N	Tentatively identified compound (TIC) based on mass spectral library search. Result is estimated.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Wright Chemical Site
Pace Project No.: 92278244

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92278244001	**HAB-1 3-5 FT.**	EPA 3546	OEXT/39459	EPA 8081	GCSV/23437
92278244001	**HAB-1 3-5 FT.**	EPA 3050	MPRP/20178	EPA 6010	ICP/18198
92278244001	**HAB-1 3-5 FT.**	EPA 7471	MERP/8726	EPA 7471	MERC/8377
92278244001	**HAB-1 3-5 FT.**	EPA 3546	OEXT/39483	EPA 8270	MSSV/11606
92278244001	**HAB-1 3-5 FT.**	EPA 8260	MSV/34587		
92278244001	**HAB-1 3-5 FT.**	EPA 8260	MSV/35093		
92278244001	**HAB-1 3-5 FT.**	ASTM D2974-87	PMST/8625		
92278244001	**HAB-1 3-5 FT.**	EPA 900.0	RADC/27248		
92278244001	**HAB-1 3-5 FT.**	EPA 901.1	RADC/27436		
92278244001	**HAB-1 3-5 FT.**	HSL-300	RADC/27288		
92278244001	**HAB-1 3-5 FT.**	EPA 8315	TAMP/7944	EPA 8315	TAMP/8013
92278244001	**HAB-1 3-5 FT.**	EPA 9045	WET/41791		
92278244001	**HAB-1 3-5 FT.**	EPA 350.1	WETA/25688		
92278244001	**HAB-1 3-5 FT.**	EPA 365.4	WETA/52854	EPA 365.4	WETA/52887
92278244001	**HAB-1 3-5 FT.**	EPA 9012	WETA/52818	EPA 9012	WETA/52852
92278244001	**HAB-1 3-5 FT.**	EPA 9056	WETA/52702		
92278244001	**HAB-1 3-5 FT.**	EPA 9056	WETA/52703		

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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 2

Section A — Required Client Information:

Company: Shield Engineering
Address: 4301 TAGGART CREEK RD CHARLOTTE, NC 28208
Email To: dwallace@shieldengineering.com
Phone: 704-394-6242 Fax:
Requested Due Date: Standard

Section B — Required Project Information:

Report To: DAVE WALLACE
Copy To:
Purchase Order #:
Project Name: Wright Chemical Site
Project Number: 1100044-05

Section C — Invoice Information:

Attention:
Company Name:
Address:
Pace Quote:
Pace Project Manager: Nicole Gasiorowski
Pace Profile #:

Regulatory Agency:

State / Location: NC

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): TCL VOCs + TICs	TCL SVOCs + TICs	TCL Pesticides	TAL Metals	pH/CN/NH3/PO4	Cl/No2/NO3/Ortho-P	Fluoride/Sulfate	RAD	Formaldehyde				Residual Chlorine (Y/N)	
1	HAB-1 3-5 Ft.	SL	G	12/2		12/2	1415		3	3							5	X	X	X	X	X	X	X	X	X					9227-8244
2																															001
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

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)
	[signature] / SHIELD	12/2/15	17:35	J. Dixon / Pace	12-2	1733				
				[signature]	12-3-15	10:15	2.3	✓	✓	✓

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: DANNY HEFNER

SIGNATURE of SAMPLER: [signature]

DATE Signed: ~~12/2/15~~ 12/2/15

WO# : 92278244

92278244

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 04, 2016

Mr. Mike Armour
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

RE: Project: Wright Chemical Site
Pace Project No.: 92278503

Dear Mr. Armour:
Enclosed are the analytical results for sample(s) received by the laboratory on December 03, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Nicole Gasiorowski

Nicole Gasiorowski
nicole.gasiorowski@pacelabs.com
Project Manager

Enclosures

cc: Dave Stoner
Dave Wallace

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CERTIFICATIONS

Project: Wright Chemical Site
Pace Project No.: 92278503

Pennsylvania Certification IDs

Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
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
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

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
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: Wright Chemical Site
Pace Project No.: 92278503

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92278503001	**HAB-RINSE BLANK**	Water	12/03/15 16:20	12/03/15 17:55

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SAMPLE ANALYTE COUNT

Project: Wright Chemical Site
Pace Project No.: 92278503

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92278503001	**HAB-RINSE BLANK**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8270	BPJ	73	PASI-C
		EPA 8260	NB	57	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	SER	1	PASI-A

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 8081**
Description: 8081 Organochlorine Pesticides
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 8081. 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 3510 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: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 6010. 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 3010A 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.

QC Batch: MPRP/20188

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278413001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1621513)
  - Aluminum
- MSD (Lab ID: 1621514)
  - Aluminum

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 7470**
Description: 7470 Mercury
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 7470. 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 7470 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: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 8270. 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 3510 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.

QC Batch: OEXT/39571

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278503001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1623579)
  - 2,3,4,6-Tetrachlorophenol
  - 2-Chloronaphthalene
  - Benzaldehyde
  - Butylbenzylphthalate
  - Caprolactam
  - Di-n-butylphthalate
  - bis(2-Ethylhexyl)phthalate
- MSD (Lab ID: 1623580)
  - 2,3,4,6-Tetrachlorophenol

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Shield
Date: January 04, 2016

QC Batch: OEXT/39571

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278503001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Benzaldehyde
- Butylbenzylphthalate
- Caprolactam
- Di-n-butylphthalate
- bis(2-Ethylhexyl)phthalate

R1: RPD value was outside control limits.

- MSD (Lab ID: 1623580)
  - 2-Chloronaphthalene

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 8260. 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.

QC Batch: MSV/34548

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278445004,92278445005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1620720)
  - 1,1,2-Trichlorotrifluoroethane
  - Bromochloromethane
  - Cyclohexane
  - Dichlorodifluoromethane
  - Methyl acetate
  - Trichlorofluoromethane
  - Vinyl chloride
  - trans-1,2-Dichloroethene
- MS (Lab ID: 1620723)
  - 1,1,2-Trichlorotrifluoroethane
  - 1,1-Dichloroethane
  - Bromochloromethane

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: Shield
Date: January 04, 2016

QC Batch: MSV/34548

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278445004,92278445005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Cyclohexane
- Dichlorodifluoromethane
- Methyl acetate
- Trichlorofluoromethane
- Vinyl chloride
- cis-1,2-Dichloroethene
- trans-1,2-Dichloroethene

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

Additional Comments:

Analyte Comments:

QC Batch: MSV/34548

C9: Common Laboratory Contaminant.

- HAB-RINSE BLANK (Lab ID: 92278503001)
  - Methylene Chloride

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 900.0**
Description: 900.0 Gross Alpha/Beta
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 900.0. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 903.1. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 904.0. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **ASTM D5174-97**
Description: D517497 Total Uranium KPA
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for ASTM D5174-97. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 9040**
Description: 9040 pH
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 9040. 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.

H6: Analysis initiated outside of the 15 minute EPA recommended holding time.
- HAB-RINSE BLANK (Lab ID: 92278503001)

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: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 300.0. 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.

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: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 350.1**
Description: 350.1 Ammonia
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 350.1. 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.

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: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 353.2. 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.

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: Wright Chemical Site
Pace Project No.: 92278503

Method: **EPA 365.1**
Description: 365.1 Phosphorus, Total
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for EPA 365.1. 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.

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: Wright Chemical Site
Pace Project No.: 92278503

Method: **SM 4500-Cl-E**
Description: 4500 Chloride
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for SM 4500-Cl-E. 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.

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: WETA/25719

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92277791001,92278045001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1625626)
  - Chloride
- MSD (Lab ID: 1625627)
  - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **SM 4500-CN-E**
Description: 4500CNE Cyanide, Total
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for SM 4500-CN-E. 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.

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: WETA/25694

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278292002,92278577001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1623961)
  - Cyanide
- MS (Lab ID: 1623996)
  - Cyanide
- MSD (Lab ID: 1623962)
  - Cyanide
- MSD (Lab ID: 1623997)
  - Cyanide

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278503

Method: **SM 4500-P E**
Description: SM4500P-E, Phosphate, Ortho
Client: Shield
Date: January 04, 2016

General Information:
1 sample was analyzed for SM 4500-P E. 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.

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: WETA/25643

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278500001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1620990)
  - Orthophosphate as P
- MSD (Lab ID: 1620991)
  - Orthophosphate as P

Additional Comments:

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

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278503

Sample: HAB-RINSE BLANK **Lab ID: 92278503001** Collected: 12/03/15 16:20 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	12/08/15 12:15	12/12/15 01:17	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	12/08/15 12:15	12/12/15 01:17	1024-57-3	
Methoxychlor	ND	ug/L	0.15	0.15	1	12/08/15 12:15	12/12/15 01:17	72-43-5	
Toxaphene	ND	ug/L	0.20	0.20	1	12/08/15 12:15	12/12/15 01:17	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	78	%	20-130		1	12/08/15 12:15	12/12/15 01:17	877-09-8	
Decachlorobiphenyl (S)	60	%	20-130		1	12/08/15 12:15	12/12/15 01:17	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	ND	ug/L	100	50.0	1	12/07/15 16:00	12/08/15 18:16	7429-90-5	
Antimony	ND	ug/L	5.0	3.9	1	12/07/15 16:00	12/08/15 18:16	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	12/07/15 16:00	12/08/15 18:16	7440-38-2	
Barium	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:16	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/07/15 16:00	12/08/15 18:16	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/07/15 16:00	12/08/15 18:16	7440-43-9	
Calcium	**350**	ug/L	100	50.0	1	12/07/15 16:00	12/08/15 18:16	7440-70-2	
Chromium	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:16	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:16	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:16	7440-50-8	
Iron	ND	ug/L	50.0	25.0	1	12/07/15 16:00	12/08/15 18:16	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:16	7439-92-1	
Magnesium	ND	ug/L	100	50.0	1	12/07/15 16:00	12/08/15 18:16	7439-95-4	
Manganese	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:16	7439-96-5	
Nickel	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:16	7440-02-0	
Potassium	ND	ug/L	5000	2500	1	12/07/15 16:00	12/08/15 18:16	7440-09-7	
Selenium	ND	ug/L	10.0	5.0	1	12/07/15 16:00	12/08/15 18:16	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:16	7440-22-4	
Sodium	ND	ug/L	5000	2500	1	12/07/15 16:00	12/08/15 18:16	7440-23-5	
Thallium	ND	ug/L	10.0	5.0	1	12/07/15 16:00	12/09/15 17:33	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	12/07/15 16:00	12/08/15 18:16	7440-62-2	

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278503

Sample: HAB-RINSE BLANK **Lab ID: 92278503001** Collected: 12/03/15 16:20 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	**9.4J**	ug/L	10.0	5.0	1	12/07/15 16:00	12/08/15 18:16	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	ND	ug/L	0.20	0.10	1	12/08/15 10:00	12/09/15 11:42	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	12/09/15 11:00	12/09/15 18:42	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	12/09/15 11:00	12/09/15 18:42	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	12/09/15 11:00	12/09/15 18:42	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	12/09/15 11:00	12/09/15 18:42	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	12/09/15 11:00	12/09/15 18:42	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	12/09/15 11:00	12/09/15 18:42	100-52-7	M1
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	12/09/15 11:00	12/09/15 18:42	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	12/09/15 11:00	12/09/15 18:42	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	12/09/15 11:00	12/09/15 18:42	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	12/09/15 11:00	12/09/15 18:42	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	12/09/15 11:00	12/09/15 18:42	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	12/09/15 11:00	12/09/15 18:42	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	12/09/15 11:00	12/09/15 18:42	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	12/09/15 11:00	12/09/15 18:42	85-68-7	M1
Caprolactam	ND	ug/L	10.0	1.8	1	12/09/15 11:00	12/09/15 18:42	105-60-2	M1
Carbazole	ND	ug/L	10.0	0.73	1	12/09/15 11:00	12/09/15 18:42	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	12/09/15 11:00	12/09/15 18:42	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	12/09/15 11:00	12/09/15 18:42	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	12/09/15 11:00	12/09/15 18:42	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	12/09/15 11:00	12/09/15 18:42	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	12/09/15 11:00	12/09/15 18:42	91-58-7	M1,R1
2-Chlorophenol	ND	ug/L	10.0	1.5	1	12/09/15 11:00	12/09/15 18:42	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	12/09/15 11:00	12/09/15 18:42	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	12/09/15 11:00	12/09/15 18:42	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	12/09/15 11:00	12/09/15 18:42	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	12/09/15 11:00	12/09/15 18:42	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	12/09/15 11:00	12/09/15 18:42	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	12/09/15 11:00	12/09/15 18:42	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	12/09/15 11:00	12/09/15 18:42	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	12/09/15 11:00	12/09/15 18:42	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	12/09/15 11:00	12/09/15 18:42	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	12/09/15 11:00	12/09/15 18:42	84-74-2	M1
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	12/09/15 11:00	12/09/15 18:42	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	12/09/15 11:00	12/09/15 18:42	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	12/09/15 11:00	12/09/15 18:42	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	12/09/15 11:00	12/09/15 18:42	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	12/09/15 11:00	12/09/15 18:42	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	12/09/15 11:00	12/09/15 18:42	117-81-7	M1
Fluoranthene	ND	ug/L	10.0	0.21	1	12/09/15 11:00	12/09/15 18:42	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	12/09/15 11:00	12/09/15 18:42	86-73-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278503

Sample: HAB-RINSE BLANK **Lab ID: 92278503001** Collected: 12/03/15 16:20 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	12/09/15 11:00	12/09/15 18:42	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	12/09/15 11:00	12/09/15 18:42	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	12/09/15 11:00	12/09/15 18:42	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	12/09/15 11:00	12/09/15 18:42	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	12/09/15 11:00	12/09/15 18:42	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	12/09/15 11:00	12/09/15 18:42	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	12/09/15 11:00	12/09/15 18:42	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	12/09/15 11:00	12/09/15 18:42	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	12/09/15 11:00	12/09/15 18:42		
Naphthalene	ND	ug/L	10.0	0.34	1	12/09/15 11:00	12/09/15 18:42	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	12/09/15 11:00	12/09/15 18:42	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	12/09/15 11:00	12/09/15 18:42	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	12/09/15 11:00	12/09/15 18:42	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	12/09/15 11:00	12/09/15 18:42	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	12/09/15 11:00	12/09/15 18:42	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	12/09/15 11:00	12/09/15 18:42	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	12/09/15 11:00	12/09/15 18:42	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	12/09/15 11:00	12/09/15 18:42	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	12/09/15 11:00	12/09/15 18:42	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	12/09/15 11:00	12/09/15 18:42	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	12/09/15 11:00	12/09/15 18:42	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	12/09/15 11:00	12/09/15 18:42	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	12/09/15 11:00	12/09/15 18:42	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	12/09/15 11:00	12/09/15 18:42	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	12/09/15 11:00	12/09/15 18:42	58-90-2	M1
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	12/09/15 11:00	12/09/15 18:42	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	12/09/15 11:00	12/09/15 18:42	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	69	%	21-110		1	12/09/15 11:00	12/09/15 18:42	4165-60-0	
2-Fluorobiphenyl (S)	71	%	27-110		1	12/09/15 11:00	12/09/15 18:42	321-60-8	
Terphenyl-d14 (S)	96	%	31-107		1	12/09/15 11:00	12/09/15 18:42	1718-51-0	
Phenol-d6 (S)	21	%	10-110		1	12/09/15 11:00	12/09/15 18:42	13127-88-3	
2-Fluorophenol (S)	32	%	12-110		1	12/09/15 11:00	12/09/15 18:42	367-12-4	
2,4,6-Tribromophenol (S)	77	%	27-110		1	12/09/15 11:00	12/09/15 18:42	118-79-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		12/05/15 00:03	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		12/05/15 00:03	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		12/05/15 00:03	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/15 00:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		12/05/15 00:03	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		12/05/15 00:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		12/05/15 00:03	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		12/05/15 00:03	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/15 00:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		12/05/15 00:03	108-90-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278503

Sample: HAB-RINSE BLANK **Lab ID: 92278503001** Collected: 12/03/15 16:20 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Chloroethane	ND	ug/L	1.0	0.54	1		12/05/15 00:03	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		12/05/15 00:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/15 00:03	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		12/05/15 00:03	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		12/05/15 00:03	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		12/05/15 00:03	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/15 00:03	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		12/05/15 00:03	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		12/05/15 00:03	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/05/15 00:03	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		12/05/15 00:03	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		12/05/15 00:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		12/05/15 00:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		12/05/15 00:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		12/05/15 00:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		12/05/15 00:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/15 00:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/15 00:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/15 00:03	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		12/05/15 00:03	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/15 00:03	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		12/05/15 00:03	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		12/05/15 00:03	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		12/05/15 00:03	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		12/05/15 00:03	108-87-2	
Methylene Chloride	**2.5**	ug/L	2.0	0.97	1		12/05/15 00:03	75-09-2	C9
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		12/05/15 00:03	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		12/05/15 00:03	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		12/05/15 00:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		12/05/15 00:03	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/15 00:03	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/15 00:03	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		12/05/15 00:03	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		12/05/15 00:03	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/15 00:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/15 00:03	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/05/15 00:03	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/15 00:03	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		12/05/15 00:03	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/15 00:03	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		12/05/15 00:03	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		12/05/15 00:03	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		12/05/15 00:03	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		12/05/15 00:03	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		12/05/15 00:03	2037-26-5	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278503

Sample: HAB-RINSE BLANK **Lab ID: 92278503001** Collected: 12/03/15 16:20 Received: 12/03/15 17:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Tentatively Identified Compounds									
Unknown	**13.3**	ug/L			1		12/05/15 00:03		N
Cyclotetrasiloxane, octa	**121**	ug/L			1		12/05/15 00:03	556-67-2	N
9040 pH	Analytical Method: EPA 9040								
pH	**5.6**	Std. Units	0.10	0.10	1		12/08/15 12:55		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.50	0.25	1		12/09/15 15:01	16984-48-8	
Sulfate	ND	mg/L	2.0	1.0	1		12/09/15 15:01	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.10	0.050	1		12/08/15 02:09	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.058**	mg/L	0.020	0.010	1		12/05/15 01:22		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		12/05/15 01:22		
Nitrogen, NO2 plus NO3	**0.058**	mg/L	0.020	0.010	1		12/05/15 01:22		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**0.074**	mg/L	0.050	0.025	1		12/10/15 09:25	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	ND	mg/L	1.0	0.50	1		12/10/15 18:16	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0080	0.0040	1		12/10/15 16:29	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	ND	mg/L	0.050	0.025	1		12/05/15 01:40		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: MERP/8735
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92278503001

METHOD BLANK: 1621535
Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.10	12/09/15 11:14	

LABORATORY CONTROL SAMPLE: 1621536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.6	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621537 1621538

Parameter	Units	92278176004 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	2.6	2.7	104	105	75-125	1	25	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: MPRP/20188
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 92278503001

METHOD BLANK: 1621511
Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	50.0	12/08/15 16:47	
Antimony	ug/L	ND	5.0	3.9	12/08/15 16:47	
Arsenic	ug/L	ND	10.0	5.0	12/08/15 16:47	
Barium	ug/L	ND	5.0	2.5	12/08/15 16:47	
Beryllium	ug/L	ND	1.0	0.50	12/08/15 16:47	
Cadmium	ug/L	ND	1.0	0.50	12/08/15 16:47	
Calcium	ug/L	ND	100	50.0	12/08/15 16:47	
Chromium	ug/L	ND	5.0	2.5	12/08/15 16:47	
Cobalt	ug/L	ND	5.0	2.5	12/08/15 16:47	
Copper	ug/L	ND	5.0	2.5	12/08/15 16:47	
Iron	ug/L	ND	50.0	25.0	12/08/15 16:47	
Lead	ug/L	ND	5.0	2.5	12/08/15 16:47	
Magnesium	ug/L	ND	100	50.0	12/08/15 16:47	
Manganese	ug/L	ND	5.0	2.5	12/08/15 16:47	
Nickel	ug/L	ND	5.0	2.5	12/08/15 16:47	
Potassium	ug/L	ND	5000	2500	12/08/15 16:47	
Selenium	ug/L	ND	10.0	5.0	12/08/15 16:47	
Silver	ug/L	ND	5.0	2.5	12/08/15 16:47	
Sodium	ug/L	ND	5000	2500	12/08/15 16:47	
Thallium	ug/L	ND	10.0	5.0	12/09/15 17:05	
Vanadium	ug/L	ND	5.0	2.5	12/08/15 16:47	
Zinc	ug/L	ND	10.0	5.0	12/08/15 16:47	

LABORATORY CONTROL SAMPLE: 1621512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	4980	100	80-120	
Antimony	ug/L	500	513	103	80-120	
Arsenic	ug/L	500	498	100	80-120	
Barium	ug/L	500	510	102	80-120	
Beryllium	ug/L	500	511	102	80-120	
Cadmium	ug/L	500	513	103	80-120	
Calcium	ug/L	5000	4910	98	80-120	
Chromium	ug/L	500	510	102	80-120	
Cobalt	ug/L	500	512	102	80-120	
Copper	ug/L	500	518	104	80-120	
Iron	ug/L	5000	4970	99	80-120	
Lead	ug/L	500	506	101	80-120	
Magnesium	ug/L	5000	4880	98	80-120	
Manganese	ug/L	500	502	100	80-120	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

LABORATORY CONTROL SAMPLE: 1621512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel	ug/L	500	512	102	80-120	
Potassium	ug/L	5000	4910J	98	80-120	
Selenium	ug/L	500	504	101	80-120	
Silver	ug/L	250	249	100	80-120	
Sodium	ug/L	5000	4970J	99	80-120	
Thallium	ug/L	500	494	99	80-120	
Vanadium	ug/L	500	511	102	80-120	
Zinc	ug/L	500	504	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621513 1621514

Parameter	Units	92278413001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	3540	5000	5000	14600	15600	222	241	75-125	7	20	M1
Antimony	ug/L	ND	500	500	469	499	94	100	75-125	6	20	
Arsenic	ug/L	5.5J	500	500	461	490	91	97	75-125	6	20	
Barium	ug/L	60.6	500	500	548	581	98	104	75-125	6	20	
Beryllium	ug/L	ND	500	500	475	503	95	101	75-125	6	20	
Cadmium	ug/L	ND	500	500	475	503	95	101	75-125	6	20	
Calcium	ug/L	3850	5000	5000	8550	8930	94	102	75-125	4	20	
Chromium	ug/L	5.4	500	500	477	510	94	101	75-125	7	20	
Cobalt	ug/L	ND	500	500	473	502	94	100	75-125	6	20	
Copper	ug/L	4.7J	500	500	486	521	96	103	75-125	7	20	
Iron	ug/L	3180	5000	5000	7980	8650	96	109	75-125	8	20	
Lead	ug/L	8.1	500	500	478	509	94	100	75-125	6	20	
Magnesium	ug/L	595	5000	5000	5140	5460	91	97	75-125	6	20	
Manganese	ug/L	31.4	500	500	497	529	93	99	75-125	6	20	
Nickel	ug/L	ND	500	500	475	503	95	100	75-125	6	20	
Potassium	ug/L	ND	5000	5000	5400	5670	93	98	75-125	5	20	
Selenium	ug/L	ND	500	500	461	488	92	98	75-125	6	20	
Silver	ug/L	ND	250	250	230	245	92	98	75-125	6	20	
Sodium	ug/L	ND	5000	5000	7180	7550	94	102	75-125	5	20	
Thallium	ug/L	ND	500	500	446	489	89	98	75-125	9	20	
Vanadium	ug/L	10.9	500	500	484	516	95	101	75-125	6	20	
Zinc	ug/L	26.1	500	500	496	522	94	99	75-125	5	20	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: MSV/34548
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92278503001

METHOD BLANK: 1620718
Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	12/04/15 23:12	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	12/04/15 23:12	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	12/04/15 23:12	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	12/04/15 23:12	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	12/04/15 23:12	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	12/04/15 23:12	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	12/04/15 23:12	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	12/04/15 23:12	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	12/04/15 23:12	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	12/04/15 23:12	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	12/04/15 23:12	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	12/04/15 23:12	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	12/04/15 23:12	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	12/04/15 23:12	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	12/04/15 23:12	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	12/04/15 23:12	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	12/04/15 23:12	
2-Hexanone	ug/L	ND	5.0	0.46	12/04/15 23:12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	12/04/15 23:12	
Acetone	ug/L	ND	25.0	10.0	12/04/15 23:12	
Benzene	ug/L	ND	1.0	0.25	12/04/15 23:12	
Bromochloromethane	ug/L	ND	1.0	0.17	12/04/15 23:12	
Bromodichloromethane	ug/L	ND	1.0	0.18	12/04/15 23:12	
Bromoform	ug/L	ND	1.0	0.26	12/04/15 23:12	
Bromomethane	ug/L	ND	2.0	0.29	12/04/15 23:12	
Carbon disulfide	ug/L	ND	2.0	1.2	12/04/15 23:12	
Carbon tetrachloride	ug/L	ND	1.0	0.25	12/04/15 23:12	
Chlorobenzene	ug/L	ND	1.0	0.23	12/04/15 23:12	
Chloroethane	ug/L	ND	1.0	0.54	12/04/15 23:12	
Chloroform	ug/L	ND	1.0	0.14	12/04/15 23:12	
Chloromethane	ug/L	ND	1.0	0.11	12/04/15 23:12	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	12/04/15 23:12	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	12/04/15 23:12	
Cyclohexane	ug/L	ND	1.0	0.36	12/04/15 23:12	
Dibromochloromethane	ug/L	ND	1.0	0.21	12/04/15 23:12	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	12/04/15 23:12	
Ethylbenzene	ug/L	ND	1.0	0.30	12/04/15 23:12	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	12/04/15 23:12	
m&p-Xylene	ug/L	ND	2.0	0.66	12/04/15 23:12	
Methyl acetate	ug/L	ND	10.0	0.82	12/04/15 23:12	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	12/04/15 23:12	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

METHOD BLANK: 1620718 Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	12/04/15 23:12	
Methylene Chloride	ug/L	ND	2.0	0.97	12/04/15 23:12	
o-Xylene	ug/L	ND	1.0	0.23	12/04/15 23:12	
Styrene	ug/L	ND	1.0	0.26	12/04/15 23:12	
Tetrachloroethene	ug/L	ND	1.0	0.46	12/04/15 23:12	
Toluene	ug/L	ND	1.0	0.26	12/04/15 23:12	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	12/04/15 23:12	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	12/04/15 23:12	
Trichloroethene	ug/L	ND	1.0	0.47	12/04/15 23:12	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	12/04/15 23:12	
Vinyl chloride	ug/L	ND	1.0	0.62	12/04/15 23:12	
1,2-Dichloroethane-d4 (S)	%	103	70-130		12/04/15 23:12	
4-Bromofluorobenzene (S)	%	106	70-130		12/04/15 23:12	
Toluene-d8 (S)	%	102	70-130		12/04/15 23:12	

LABORATORY CONTROL SAMPLE: 1620719

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.2	106	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	42.2	84	70-130	
1,1,2-Trichloroethane	ug/L	50	45.2	90	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	55.5	111	70-130	
1,1-Dichloroethane	ug/L	50	54.2	108	70-130	
1,1-Dichloroethene	ug/L	50	56.5	113	70-132	
1,2,3-Trichlorobenzene	ug/L	50	42.2	84	70-135	
1,2,4-Trichlorobenzene	ug/L	50	41.8	84	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	37.3	75	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	44.5	89	70-130	
1,2-Dichlorobenzene	ug/L	50	46.4	93	70-130	
1,2-Dichloroethane	ug/L	50	50.5	101	70-130	
1,2-Dichloropropane	ug/L	50	48.3	97	70-130	
1,3-Dichlorobenzene	ug/L	50	45.7	91	70-130	
1,4-Dichlorobenzene	ug/L	50	45.8	92	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	844	84	71-125	
2-Butanone (MEK)	ug/L	100	105	105	70-145	
2-Hexanone	ug/L	100	82.2	82	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	70-140	
Acetone	ug/L	100	101	101	50-175	
Benzene	ug/L	50	52.6	105	70-130	
Bromochloromethane	ug/L	50	56.5	113	70-130	
Bromodichloromethane	ug/L	50	46.6	93	70-130	
Bromoform	ug/L	50	36.2	72	70-130	
Bromomethane	ug/L	50	37.3	75	54-130	
Carbon disulfide	ug/L	50	51.5	103	70-131	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

LABORATORY CONTROL SAMPLE: 1620719

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	50.1	100	70-132	
Chlorobenzene	ug/L	50	43.7	87	70-130	
Chloroethane	ug/L	50	49.0	98	64-134	
Chloroform	ug/L	50	54.4	109	70-130	
Chloromethane	ug/L	50	44.3	89	64-130	
cis-1,2-Dichloroethene	ug/L	50	56.2	112	70-131	
cis-1,3-Dichloropropene	ug/L	50	48.2	96	70-130	
Cyclohexane	ug/L	50	55.7	111	70-130	
Dibromochloromethane	ug/L	50	39.6	79	70-130	
Dichlorodifluoromethane	ug/L	50	59.7	119	56-130	
Ethylbenzene	ug/L	50	43.8	88	70-130	
Isopropylbenzene (Cumene)	ug/L	50	47.0	94	70-130	
m&p-Xylene	ug/L	100	86.9	87	70-130	
Methyl acetate	ug/L	50	60.1	120	70-130	
Methyl-tert-butyl ether	ug/L	50	54.2	108	70-130	
Methylcyclohexane	ug/L	50	48.4	97	70-130	
Methylene Chloride	ug/L	50	52.0	104	63-130	
o-Xylene	ug/L	50	43.6	87	70-130	
Styrene	ug/L	50	45.2	90	70-130	
Tetrachloroethene	ug/L	50	45.8	92	70-130	
Toluene	ug/L	50	50.8	102	70-130	
trans-1,2-Dichloroethene	ug/L	50	57.9	116	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.3	95	70-132	
Trichloroethene	ug/L	50	48.3	97	70-130	
Trichlorofluoromethane	ug/L	50	58.4	117	62-133	
Vinyl chloride	ug/L	50	58.5	117	50-150	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			107	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 1620720

Parameter	Units	92278445004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	200	250	125	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	200	182	91	70-130	
1,1,2-Trichloroethane	ug/L	ND	200	202	101	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	1400	200	1760	180	70-130	M1
1,1-Dichloroethane	ug/L	ND	200	263	129	70-130	
1,1-Dichloroethene	ug/L	286	200	602	158	70-166	
1,2,3-Trichlorobenzene	ug/L	ND	200	160	80	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	200	165	82	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	200	157	79	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	200	191	95	70-130	
1,2-Dichlorobenzene	ug/L	ND	200	199	100	70-130	
1,2-Dichloroethane	ug/L	ND	200	235	116	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

MATRIX SPIKE SAMPLE: 1620720

Parameter	Units	92278445004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	ug/L	ND	200	217	109	70-130	
1,3-Dichlorobenzene	ug/L	ND	200	195	97	70-130	
1,4-Dichlorobenzene	ug/L	ND	200	192	96	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	ND	4000	3070	77	70-130	
2-Butanone (MEK)	ug/L	ND	400	493	123	70-130	
2-Hexanone	ug/L	ND	400	373	93	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	400	457	114	70-130	
Acetone	ug/L	ND	400	516	124	70-130	
Benzene	ug/L	ND	200	242	121	70-148	
Bromochloromethane	ug/L	ND	200	262	131	70-130	M1
Bromodichloromethane	ug/L	ND	200	204	102	70-130	
Bromoform	ug/L	ND	200	147	73	70-130	
Bromomethane	ug/L	ND	200	143	72	70-130	
Carbon disulfide	ug/L	ND	200	236	118	70-130	
Carbon tetrachloride	ug/L	ND	200	236	118	70-130	
Chlorobenzene	ug/L	ND	200	198	99	70-146	
Chloroethane	ug/L	ND	200	239	120	70-130	
Chloroform	ug/L	ND	200	251	126	70-130	
Chloromethane	ug/L	ND	200	216	108	70-130	
cis-1,2-Dichloroethene	ug/L	ND	200	257	129	70-130	
cis-1,3-Dichloropropene	ug/L	ND	200	208	104	70-130	
Cyclohexane	ug/L	ND	200	263	131	70-130	M1
Dibromochloromethane	ug/L	ND	200	165	83	70-130	
Dichlorodifluoromethane	ug/L	ND	200	289	144	70-130	M1
Ethylbenzene	ug/L	ND	200	193	97	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	200	212	106	70-130	
m&p-Xylene	ug/L	ND	400	384	96	70-130	
Methyl acetate	ug/L	ND	200	276	138	70-130	M1
Methyl-tert-butyl ether	ug/L	ND	200	238	119	70-130	
Methylcyclohexane	ug/L	ND	200	218	109	70-130	
Methylene Chloride	ug/L	ND	200	245	114	70-130	
o-Xylene	ug/L	ND	200	193	97	70-130	
Styrene	ug/L	ND	200	191	95	70-130	
Tetrachloroethene	ug/L	ND	200	206	103	70-130	
Toluene	ug/L	ND	200	227	114	70-155	
trans-1,2-Dichloroethene	ug/L	ND	200	264	132	70-130	M1
trans-1,3-Dichloropropene	ug/L	ND	200	196	98	70-130	
Trichloroethene	ug/L	ND	200	230	115	69-151	
Trichlorofluoromethane	ug/L	ND	200	287	143	70-130	M1
Vinyl chloride	ug/L	ND	200	281	141	70-130	M1
1,2-Dichloroethane-d4 (S)	%				105	70-130	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				100	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

MATRIX SPIKE SAMPLE: 1620723

Parameter	Units	92278445005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	500	643	129	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	500	465	93	70-130	
1,1,2-Trichloroethane	ug/L	ND	500	527	105	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	2690	500	3500	161	70-130	M1
1,1-Dichloroethane	ug/L	ND	500	676	133	70-130	M1
1,1-Dichloroethene	ug/L	469	500	1210	149	70-166	
1,2,3-Trichlorobenzene	ug/L	ND	500	437	87	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	500	441	88	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	500	412	82	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	500	509	102	70-130	
1,2-Dichlorobenzene	ug/L	ND	500	498	100	70-130	
1,2-Dichloroethane	ug/L	ND	500	614	122	70-130	
1,2-Dichloropropane	ug/L	ND	500	571	114	70-130	
1,3-Dichlorobenzene	ug/L	ND	500	519	104	70-130	
1,4-Dichlorobenzene	ug/L	ND	500	499	100	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	ND	10000	8820	88	70-130	
2-Butanone (MEK)	ug/L	ND	1000	1280	128	70-130	
2-Hexanone	ug/L	ND	1000	960	96	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	1000	1190	119	70-130	
Acetone	ug/L	ND	1000	1280	128	70-130	
Benzene	ug/L	ND	500	617	123	70-148	
Bromochloromethane	ug/L	ND	500	667	133	70-130	M1
Bromodichloromethane	ug/L	ND	500	537	107	70-130	
Bromoform	ug/L	ND	500	390	78	70-130	
Bromomethane	ug/L	ND	500	382	76	70-130	
Carbon disulfide	ug/L	ND	500	631	126	70-130	
Carbon tetrachloride	ug/L	ND	500	588	118	70-130	
Chlorobenzene	ug/L	ND	500	493	99	70-146	
Chloroethane	ug/L	ND	500	611	122	70-130	
Chloroform	ug/L	ND	500	637	127	70-130	
Chloromethane	ug/L	ND	500	565	113	70-130	
cis-1,2-Dichloroethene	ug/L	ND	500	686	137	70-130	M1
cis-1,3-Dichloropropene	ug/L	ND	500	527	105	70-130	
Cyclohexane	ug/L	ND	500	709	142	70-130	M1
Dibromochloromethane	ug/L	ND	500	435	87	70-130	
Dichlorodifluoromethane	ug/L	ND	500	735	147	70-130	M1
Ethylbenzene	ug/L	ND	500	513	103	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	500	537	107	70-130	
m&p-Xylene	ug/L	ND	1000	997	100	70-130	
Methyl acetate	ug/L	ND	500	711	142	70-130	M1
Methyl-tert-butyl ether	ug/L	ND	500	635	127	70-130	
Methylcyclohexane	ug/L	ND	500	577	115	70-130	
Methylene Chloride	ug/L	ND	500	634	119	70-130	
o-Xylene	ug/L	ND	500	495	99	70-130	
Styrene	ug/L	ND	500	498	100	70-130	
Tetrachloroethene	ug/L	ND	500	517	103	70-130	
Toluene	ug/L	ND	500	588	118	70-155	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

MATRIX SPIKE SAMPLE: 1620723

Parameter	Units	92278445005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	500	700	140	70-130	M1
trans-1,3-Dichloropropene	ug/L	ND	500	527	105	70-130	
Trichloroethene	ug/L	ND	500	578	116	69-151	
Trichlorofluoromethane	ug/L	ND	500	749	150	70-130	M1
Vinyl chloride	ug/L	ND	500	740	148	70-130	M1
1,2-Dichloroethane-d4 (S)	%				107	70-130	
4-Bromofluorobenzene (S)	%				105	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 1620721

Parameter	Units	92278445007 Result	Dup Result	RPD	Max RPD	Qualifiers
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	
1,1,2-Trichlorotrifluoroethane	ug/L	2740	2830	3	30	
1,1-Dichloroethane	ug/L	ND	11.3J		30	
1,1-Dichloroethene	ug/L	603	615	2	30	
1,2,3-Trichlorobenzene	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	
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	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	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	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

SAMPLE DUPLICATE: 1620721

Parameter	Units	92278445007 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyclohexane	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl acetate	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylcyclohexane	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	34.6J		30	
o-Xylene	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	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	106	103	3		
4-Bromofluorobenzene (S)	%	107	104	3		
Toluene-d8 (S)	%	102	101	0		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: OEXT/39578
QC Batch Method: EPA 3510
Analysis Method: EPA 8081
Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 92278503001

METHOD BLANK: 1623835
Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	0.050	12/11/15 05:32	
4,4'-DDE	ug/L	ND	0.050	0.050	12/11/15 05:32	
4,4'-DDT	ug/L	ND	0.050	0.050	12/11/15 05:32	
Aldrin	ug/L	ND	0.050	0.050	12/11/15 05:32	
alpha-BHC	ug/L	ND	0.050	0.050	12/11/15 05:32	
beta-BHC	ug/L	ND	0.050	0.050	12/11/15 05:32	
Chlordane (Technical)	ug/L	ND	0.20	0.20	12/11/15 05:32	
delta-BHC	ug/L	ND	0.050	0.050	12/11/15 05:32	
Dieldrin	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endosulfan I	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endosulfan II	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endosulfan sulfate	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endrin	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endrin aldehyde	ug/L	ND	0.050	0.050	12/11/15 05:32	
Endrin ketone	ug/L	ND	0.050	0.050	12/11/15 05:32	
gamma-BHC (Lindane)	ug/L	ND	0.050	0.050	12/11/15 05:32	
Heptachlor	ug/L	ND	0.050	0.050	12/11/15 05:32	
Heptachlor epoxide	ug/L	ND	0.050	0.050	12/11/15 05:32	
Methoxychlor	ug/L	ND	0.15	0.15	12/11/15 05:32	
Toxaphene	ug/L	ND	0.20	0.20	12/11/15 05:32	
Decachlorobiphenyl (S)	%	74	20-130		12/11/15 05:32	
Tetrachloro-m-xylene (S)	%	74	20-130		12/11/15 05:32	

LABORATORY CONTROL SAMPLE: 1623836

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	.25	0.23	95	20-150	
4,4'-DDE	ug/L	.25	0.22	90	20-150	
4,4'-DDT	ug/L	.25	0.22	91	20-150	
Aldrin	ug/L	.25	0.20	80	20-150	
alpha-BHC	ug/L	.25	0.21	87	20-150	
beta-BHC	ug/L	.25	0.23	92	20-150	
delta-BHC	ug/L	.25	0.23	91	20-150	
Dieldrin	ug/L	.25	0.22	89	20-150	
Endosulfan I	ug/L	.25	0.22	90	20-150	
Endosulfan II	ug/L	.25	0.24	95	20-150	
Endosulfan sulfate	ug/L	.25	0.24	95	20-150	
Endrin	ug/L	.25	0.23	95	20-150	
Endrin aldehyde	ug/L	.25	0.22	88	20-150	
Endrin ketone	ug/L	.25	0.21	86	20-150	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

LABORATORY CONTROL SAMPLE: 1623836

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
gamma-BHC (Lindane)	ug/L	.25	0.22	88	20-150	
Heptachlor	ug/L	.25	0.20	79	20-150	
Heptachlor epoxide	ug/L	.25	0.21	85	20-150	
Methoxychlor	ug/L	.74	0.70	95	20-150	
Decachlorobiphenyl (S)	%			63	20-130	
Tetrachloro-m-xylene (S)	%			85	20-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623837 1623838

Parameter	Units	92278506003 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	.5	.5	0.40	0.38	80	76	20-150	5	30	
4,4'-DDE	ug/L	ND	.5	.5	0.36	0.35	74	71	20-150	4	30	
4,4'-DDT	ug/L	ND	.5	.5	0.37	0.38	76	77	20-150	1	30	
Aldrin	ug/L	ND	.5	.5	0.28	0.25	57	50	20-150	13	30	
alpha-BHC	ug/L	ND	.5	.5	0.35	0.35	70	71	20-150	1	30	
beta-BHC	ug/L	ND	.5	.5	0.35	0.36	70	73	20-150	4	30	
delta-BHC	ug/L	ND	.5	.5	0.40	0.41	80	83	20-150	3	30	
Dieldrin	ug/L	ND	.5	.5	0.37	0.34	76	68	20-150	11	30	
Endosulfan I	ug/L	ND	.5	.5	0.36	0.34	74	68	20-150	7	30	
Endosulfan II	ug/L	ND	.5	.5	0.40	0.37	80	74	20-150	8	30	
Endosulfan sulfate	ug/L	ND	.5	.5	0.42	0.41	86	84	20-150	2	30	
Endrin	ug/L	ND	.5	.5	0.41	0.39	82	79	20-150	4	30	
Endrin aldehyde	ug/L	ND	.5	.5	0.34	0.37	70	74	20-150	7	30	
Endrin ketone	ug/L	ND	.5	.5	0.38	0.37	77	74	20-150	3	30	
gamma-BHC (Lindane)	ug/L	ND	.5	.5	0.35	0.36	71	73	20-150	2	30	
Heptachlor	ug/L	ND	.5	.5	0.29	0.24	59	49	20-150	18	30	
Heptachlor epoxide	ug/L	ND	.5	.5	0.35	0.31	71	63	20-150	12	30	
Methoxychlor	ug/L	ND	1.5	1.5	1.2	1.1	80	76	20-150	5	30	
Decachlorobiphenyl (S)	%						62	66	20-130			
Tetrachloro-m-xylene (S)	%						67	58	20-130			

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: OEXT/39571
QC Batch Method: EPA 3510
Analysis Method: EPA 8270
Analysis Description: 8270 Water MSSV
Associated Lab Samples: 92278503001

METHOD BLANK: 1623577
Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	1.7	12/09/15 17:04	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	1.6	12/09/15 17:04	
2,3,4,6-Tetrachlorophenol	ug/L	ND	10.0	2.3	12/09/15 17:04	
2,4,5-Trichlorophenol	ug/L	ND	10.0	2.2	12/09/15 17:04	
2,4,6-Trichlorophenol	ug/L	ND	10.0	1.9	12/09/15 17:04	
2,4-Dichlorophenol	ug/L	ND	10.0	1.7	12/09/15 17:04	
2,4-Dimethylphenol	ug/L	ND	10.0	2.2	12/09/15 17:04	
2,4-Dinitrophenol	ug/L	ND	50.0	6.5	12/09/15 17:04	
2,4-Dinitrotoluene	ug/L	ND	10.0	1.2	12/09/15 17:04	
2,6-Dinitrotoluene	ug/L	ND	10.0	1.7	12/09/15 17:04	
2-Chloronaphthalene	ug/L	ND	10.0	2.2	12/09/15 17:04	
2-Chlorophenol	ug/L	ND	10.0	1.5	12/09/15 17:04	
2-Methylnaphthalene	ug/L	ND	10.0	0.28	12/09/15 17:04	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	1.7	12/09/15 17:04	
2-Nitroaniline	ug/L	ND	50.0	2.8	12/09/15 17:04	
2-Nitrophenol	ug/L	ND	10.0	1.7	12/09/15 17:04	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	1.7	12/09/15 17:04	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	1.4	12/09/15 17:04	
3-Nitroaniline	ug/L	ND	50.0	2.4	12/09/15 17:04	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	1.7	12/09/15 17:04	
4-Bromophenylphenyl ether	ug/L	ND	10.0	1.3	12/09/15 17:04	
4-Chloro-3-methylphenol	ug/L	ND	20.0	4.2	12/09/15 17:04	
4-Chloroaniline	ug/L	ND	20.0	3.4	12/09/15 17:04	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	2.1	12/09/15 17:04	
4-Nitroaniline	ug/L	ND	20.0	2.5	12/09/15 17:04	
4-Nitrophenol	ug/L	ND	50.0	5.8	12/09/15 17:04	
Acenaphthene	ug/L	ND	10.0	0.25	12/09/15 17:04	
Acenaphthylene	ug/L	ND	10.0	0.21	12/09/15 17:04	
Acetophenone	ug/L	ND	10.0	2.0	12/09/15 17:04	
Anthracene	ug/L	ND	10.0	0.14	12/09/15 17:04	
Atrazine	ug/L	ND	20.0	1.7	12/09/15 17:04	
Benzaldehyde	ug/L	ND	20.0	4.7	12/09/15 17:04	
Benzo(a)anthracene	ug/L	ND	10.0	0.33	12/09/15 17:04	
Benzo(a)pyrene	ug/L	ND	10.0	0.30	12/09/15 17:04	
Benzo(b)fluoranthene	ug/L	ND	10.0	0.28	12/09/15 17:04	
Benzo(g,h,i)perylene	ug/L	ND	10.0	0.38	12/09/15 17:04	
Benzo(k)fluoranthene	ug/L	ND	10.0	0.43	12/09/15 17:04	
Biphenyl (Diphenyl)	ug/L	ND	10.0	1.9	12/09/15 17:04	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	1.7	12/09/15 17:04	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	1.5	12/09/15 17:04	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	0.85	12/09/15 17:04	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

METHOD BLANK: 1623577 Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Butylbenzylphthalate	ug/L	ND	10.0	0.75	12/09/15 17:04	
Caprolactam	ug/L	ND	10.0	1.8	12/09/15 17:04	
Carbazole	ug/L	ND	10.0	0.73	12/09/15 17:04	
Chrysene	ug/L	ND	10.0	0.21	12/09/15 17:04	
Di-n-butylphthalate	ug/L	ND	10.0	1.1	12/09/15 17:04	
Di-n-octylphthalate	ug/L	ND	10.0	0.86	12/09/15 17:04	
Dibenz(a,h)anthracene	ug/L	ND	10.0	0.55	12/09/15 17:04	
Dibenzofuran	ug/L	ND	10.0	1.8	12/09/15 17:04	
Diethylphthalate	ug/L	ND	10.0	1.3	12/09/15 17:04	
Dimethylphthalate	ug/L	ND	10.0	1.5	12/09/15 17:04	
Fluoranthene	ug/L	ND	10.0	0.21	12/09/15 17:04	
Fluorene	ug/L	ND	10.0	0.21	12/09/15 17:04	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	1.8	12/09/15 17:04	
Hexachlorobenzene	ug/L	ND	10.0	1.1	12/09/15 17:04	
Hexachlorocyclopentadiene	ug/L	ND	10.0	1.8	12/09/15 17:04	
Hexachloroethane	ug/L	ND	10.0	1.5	12/09/15 17:04	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	0.29	12/09/15 17:04	
Isophorone	ug/L	ND	10.0	1.8	12/09/15 17:04	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	2.1	12/09/15 17:04	
N-Nitrosodiphenylamine	ug/L	ND	10.0	1.3	12/09/15 17:04	
Naphthalene	ug/L	ND	10.0	0.34	12/09/15 17:04	
Nitrobenzene	ug/L	ND	10.0	1.7	12/09/15 17:04	
Pentachlorophenol	ug/L	ND	25.0	2.3	12/09/15 17:04	
Phenanthrene	ug/L	ND	10.0	0.22	12/09/15 17:04	
Phenol	ug/L	ND	10.0	1.7	12/09/15 17:04	
Pyrene	ug/L	ND	10.0	0.19	12/09/15 17:04	
2,4,6-Tribromophenol (S)	%	79	27-110		12/09/15 17:04	
2-Fluorobiphenyl (S)	%	72	27-110		12/09/15 17:04	
2-Fluorophenol (S)	%	36	12-110		12/09/15 17:04	
Nitrobenzene-d5 (S)	%	71	21-110		12/09/15 17:04	
Phenol-d6 (S)	%	23	10-110		12/09/15 17:04	
Terphenyl-d14 (S)	%	92	31-107		12/09/15 17:04	

LABORATORY CONTROL SAMPLE: 1623578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	37.6	75	16-129	
2,2'-Oxybis(1-chloropropane)	ug/L	50	28.1	56	18-120	
2,3,4,6-Tetrachlorophenol	ug/L	50	90.7	181	54-276	
2,4,5-Trichlorophenol	ug/L	50	45.8	92	43-113	
2,4,6-Trichlorophenol	ug/L	50	42.2	84	42-120	
2,4-Dichlorophenol	ug/L	50	40.2	80	30-120	
2,4-Dimethylphenol	ug/L	50	36.0	72	29-111	
2,4-Dinitrophenol	ug/L	250	225	90	19-132	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

LABORATORY CONTROL SAMPLE: 1623578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/L	50	48.6	97	58-128	
2,6-Dinitrotoluene	ug/L	50	48.5	97	54-129	
2-Chloronaphthalene	ug/L	50	46.7	93	43-117	
2-Chlorophenol	ug/L	50	33.4	67	37-120	
2-Methylnaphthalene	ug/L	50	36.7	73	33-120	
2-Methylphenol(o-Cresol)	ug/L	50	33.4	67	31-120	
2-Nitroaniline	ug/L	100	78.2	78	48-121	
2-Nitrophenol	ug/L	50	42.0	84	25-116	
3&4-Methylphenol(m&p Cresol)	ug/L	50	25.9	52	23-120	
3,3'-Dichlorobenzidine	ug/L	250	81.6	33	10-154	
3-Nitroaniline	ug/L	100	84.2	84	43-115	
4,6-Dinitro-2-methylphenol	ug/L	100	92.3	92	44-124	
4-Bromophenylphenyl ether	ug/L	50	42.7	85	34-113	
4-Chloro-3-methylphenol	ug/L	100	78.7	79	31-110	
4-Chloroaniline	ug/L	100	65.9	66	20-120	
4-Chlorophenylphenyl ether	ug/L	50	38.6	77	34-116	
4-Nitroaniline	ug/L	100	93.6	94	46-128	
4-Nitrophenol	ug/L	250	103	41	11-120	
Acenaphthene	ug/L	50	43.7	87	48-114	
Acenaphthylene	ug/L	50	45.8	92	48-112	
Acetophenone	ug/L	50	35.8	72	24-120	
Anthracene	ug/L	50	48.7	97	57-118	
Atrazine	ug/L	50	53.0	106	33-160	
Benzaldehyde	ug/L	50	10J	20	10-120	
Benzo(a)anthracene	ug/L	50	47.5	95	56-121	
Benzo(a)pyrene	ug/L	50	40.8	82	55-127	
Benzo(b)fluoranthene	ug/L	50	44.2	88	53-128	
Benzo(g,h,i)perylene	ug/L	50	34.6	69	54-125	
Benzo(k)fluoranthene	ug/L	50	49.4	99	51-123	
Biphenyl (Diphenyl)	ug/L	50	39.6	79	38-120	
bis(2-Chloroethoxy)methane	ug/L	50	35.3	71	32-120	
bis(2-Chloroethyl) ether	ug/L	50	33.2	66	33-111	
bis(2-Ethylhexyl)phthalate	ug/L	50	58.0	116	50-145	
Butylbenzylphthalate	ug/L	50	60.7	121	54-138	
Caprolactam	ug/L	50	13.4	27	10-115	
Carbazole	ug/L	50	46.9	94	59-119	
Chrysene	ug/L	50	48.2	96	58-127	
Di-n-butylphthalate	ug/L	50	55.5	111	56-125	
Di-n-octylphthalate	ug/L	50	47.2	94	50-134	
Dibenz(a,h)anthracene	ug/L	50	36.2	72	53-129	
Dibenzofuran	ug/L	50	42.3	85	45-120	
Diethylphthalate	ug/L	50	46.2	92	53-120	
Dimethylphthalate	ug/L	50	44.3	89	55-116	
Fluoranthene	ug/L	50	49.5	99	57-125	
Fluorene	ug/L	50	46.1	92	53-118	
Hexachloro-1,3-butadiene	ug/L	50	31.4	63	23-120	
Hexachlorobenzene	ug/L	50	47.4	95	49-116	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

LABORATORY CONTROL SAMPLE: 1623578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachlorocyclopentadiene	ug/L	50	31.0	62	26-158	
Hexachloroethane	ug/L	50	33.4	67	30-114	
Indeno(1,2,3-cd)pyrene	ug/L	50	36.0	72	55-128	
Isophorone	ug/L	50	37.2	74	31-118	
N-Nitroso-di-n-propylamine	ug/L	50	34.6	69	32-119	
N-Nitrosodiphenylamine	ug/L	50	43.9	88	43-120	
Naphthalene	ug/L	50	36.7	73	32-120	
Nitrobenzene	ug/L	50	36.5	73	33-110	
Pentachlorophenol	ug/L	250	84.5	34	10-137	
Phenanthrene	ug/L	50	44.1	88	57-117	
Phenol	ug/L	50	16.2	32	10-120	
Pyrene	ug/L	50	54.9	110	55-122	
2,4,6-Tribromophenol (S)	%			92	27-110	
2-Fluorobiphenyl (S)	%			81	27-110	
2-Fluorophenol (S)	%			42	12-110	
Nitrobenzene-d5 (S)	%			77	21-110	
Phenol-d6 (S)	%			28	10-110	
Terphenyl-d14 (S)	%			98	31-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623579 1623580

Parameter	Units	92278503001 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	100	100	69.8	73.6	70	74	50-150	5	30	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	100	100	51.8	53.0	52	53	50-150	2	30	
2,3,4,6-Tetrachlorophenol	ug/L	ND	100	100	185	185	185	185	50-150	0	30	M1
2,4,5-Trichlorophenol	ug/L	ND	100	100	90.9	92.6	91	93	19-105	2	30	
2,4,6-Trichlorophenol	ug/L	ND	100	100	82.5	83.1	82	83	13-108	1	30	
2,4-Dichlorophenol	ug/L	ND	100	100	76.2	77.4	76	77	29-111	2	30	
2,4-Dimethylphenol	ug/L	ND	100	100	70.2	71.3	70	71	21-103	2	30	
2,4-Dinitrophenol	ug/L	ND	500	500	496	487	99	97	10-109	2	30	
2,4-Dinitrotoluene	ug/L	ND	100	100	99.7	101	100	101	27-104	1	30	
2,6-Dinitrotoluene	ug/L	ND	100	100	99.0	98.7	99	99	28-101	0	30	
2-Chloronaphthalene	ug/L	ND	100	100	157	93.3	157	93	14-102	51	30	M1,R1
2-Chlorophenol	ug/L	ND	100	100	67.2	67.2	67	67	16-110	0	30	
2-Methylnaphthalene	ug/L	ND	100	100	70.6	73.0	71	73	13-110	3	30	
2-Methylphenol(o-Cresol)	ug/L	ND	100	100	71.5	68.8	71	69	19-110	4	30	
2-Nitroaniline	ug/L	ND	200	200	155	157	77	78	26-103	1	30	
2-Nitrophenol	ug/L	ND	100	100	78.0	81.4	78	81	20-110	4	30	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	100	59.2	55.5	59	56	20-110	6	30	
3,3'-Dichlorobenzidine	ug/L	ND	500	500	171	179	34	36	25-112	5	30	
3-Nitroaniline	ug/L	ND	200	200	175	175	88	87	29-110	0	30	
4,6-Dinitro-2-methylphenol	ug/L	ND	200	200	193	197	97	99	10-117	2	30	
4-Bromophenylphenyl ether	ug/L	ND	100	100	82.4	83.9	82	84	20-105	2	30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623579 1623580

Parameter	Units	92278503001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4-Chloro-3-methylphenol	ug/L	ND	200	200	165	161	83	80	22-110	3	30	
4-Chloroaniline	ug/L	ND	200	200	125	129	63	64	20-100	3	30	
4-Chlorophenylphenyl ether	ug/L	ND	100	100	75.5	78.0	75	78	19-102	3	30	
4-Nitroaniline	ug/L	ND	200	200	190	198	95	99	29-110	4	30	
4-Nitrophenol	ug/L	ND	500	500	325	287	65	57	10-110	12	30	
Acenaphthene	ug/L	ND	100	100	84.7	87.0	85	87	17-100	3	30	
Acenaphthylene	ug/L	ND	100	100	89.1	90.7	89	91	21-100	2	30	
Acetophenone	ug/L	ND	100	100	68.1	69.1	68	69	50-150	1	30	
Anthracene	ug/L	ND	100	100	95.8	99.0	96	99	24-109	3	30	
Atrazine	ug/L	ND	100	100	92.9	105	93	105	50-150	12	30	
Benzaldehyde	ug/L	ND	100	100	ND	ND	7	7	50-150		30	M1
Benzo(a)anthracene	ug/L	ND	100	100	95.2	96.5	95	96	22-117	1	30	
Benzo(a)pyrene	ug/L	ND	100	100	82.7	85.2	83	85	23-104	3	30	
Benzo(b)fluoranthene	ug/L	ND	100	100	87.7	91.4	88	91	23-103	4	30	
Benzo(g,h,i)perylene	ug/L	ND	100	100	70.2	71.7	70	72	18-111	2	30	
Benzo(k)fluoranthene	ug/L	ND	100	100	101	104	101	104	22-113	3	30	
Biphenyl (Diphenyl)	ug/L	ND	100	100	75.7	78.1	76	78	50-150	3	30	
bis(2-Chloroethoxy)methane	ug/L	ND	100	100	64.9	68.0	65	68	22-110	5	30	
bis(2-Chloroethyl) ether	ug/L	ND	100	100	61.6	63.1	62	63	16-110	2	30	
bis(2-Ethylhexyl)phthalate	ug/L	ND	100	100	114	113	114	113	23-102	0	30	M1
Butylbenzylphthalate	ug/L	ND	100	100	117	118	117	118	25-110	1	30	M1
Caprolactam	ug/L	ND	100	100	49.4	40.2	49	40	50-150	21	30	M1
Carbazole	ug/L	ND	100	100	94.9	99.0	95	99	50-150	4	30	
Chrysene	ug/L	ND	100	100	95.0	95.7	95	96	23-115	1	30	
Di-n-butylphthalate	ug/L	ND	100	100	112	116	112	116	26-110	4	30	M1
Di-n-octylphthalate	ug/L	ND	100	100	98.9	99.4	99	99	22-110	0	30	
Dibenz(a,h)anthracene	ug/L	ND	100	100	72.4	74.3	72	74	21-112	3	30	
Dibenzofuran	ug/L	ND	100	100	82.9	85.0	83	85	19-102	2	30	
Diethylphthalate	ug/L	ND	100	100	95.0	95.5	95	96	29-110	1	30	
Dimethylphthalate	ug/L	ND	100	100	89.2	90.8	89	91	27-110	2	30	
Fluoranthene	ug/L	ND	100	100	100	104	100	104	23-112	4	30	
Fluorene	ug/L	ND	100	100	91.5	93.2	91	93	22-104	2	30	
Hexachloro-1,3-butadiene	ug/L	ND	100	100	68.1	68.9	68	69	10-110	1	30	
Hexachlorobenzene	ug/L	ND	100	100	92.0	94.4	92	94	21-116	3	30	
Hexachlorocyclopentadiene	ug/L	ND	100	100	63.0	65.1	63	65	10-110	3	30	
Hexachloroethane	ug/L	ND	100	100	73.3	74.1	73	74	10-110	1	30	
Indeno(1,2,3-cd)pyrene	ug/L	ND	100	100	72.6	74.8	73	75	20-113	3	30	
Isophorone	ug/L	ND	100	100	69.6	72.4	70	72	50-150	4	30	
N-Nitroso-di-n-propylamine	ug/L	ND	100	100	66.3	66.6	66	67	21-105	0	30	
N-Nitrosodiphenylamine	ug/L	ND	100	100	85.7	87.4	86	87	23-107	2	30	
Naphthalene	ug/L	ND	100	100	72.1	74.6	72	75	10-110	3	30	
Nitrobenzene	ug/L	ND	100	100	67.1	70.1	67	70	20-110	4	30	
Pentachlorophenol	ug/L	ND	500	500	179	179	36	36	10-118	0	30	
Phenanthrene	ug/L	ND	100	100	87.5	90.0	87	90	24-106	3	30	
Phenol	ug/L	ND	100	100	46.0	39.9	46	40	12-110	14	30	
Pyrene	ug/L	ND	100	100	106	106	106	106	24-114	0	30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623579 1623580

Parameter	Units	92278503001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4,6-Tribromophenol (S)	%						87	90	27-110			
2-Fluorobiphenyl (S)	%						73	77	27-110			
2-Fluorophenol (S)	%						49	46	12-110			
Nitrobenzene-d5 (S)	%						68	71	21-110			
Phenol-d6 (S)	%						40	35	10-110			
Terphenyl-d14 (S)	%						87	91	31-107			

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: WET/41811
QC Batch Method: EPA 9040
Analysis Method: EPA 9040
Analysis Description: 9040 pH
Associated Lab Samples: 92278503001

SAMPLE DUPLICATE: 1622127

Parameter	Units	92278455001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	8.1	8.1	0	9	H6

SAMPLE DUPLICATE: 1622128

Parameter	Units	92278377002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	6.8	6.8	0	9	H6

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: WETA/25672
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92278503001

METHOD BLANK: 1622490
Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.50	0.25	12/09/15 13:03	
Sulfate	mg/L	ND	2.0	1.0	12/09/15 13:03	

LABORATORY CONTROL SAMPLE: 1622491

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	20	21.1	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1622492 1622493

Parameter	Units	92278500001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.47J	2.5	2.5	2.9	2.9	98	96	90-110	1	10	
Sulfate	mg/L	4.9	20	20	26.1	26.2	106	107	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: WETA/25652 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 92278503001

METHOD BLANK: 1621391 | Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.050	12/08/15 01:53	

LABORATORY CONTROL SAMPLE: 1621392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621393 1621394

Parameter	Units	92278367001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	49.5	5	5	54.7	54.6	104	102	90-110	0	7	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621395 1621396

Parameter	Units	92277931002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	0.66	5	5	6.0	6.0	108	107	90-110	0	7	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: WETA/25641
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92278503001

METHOD BLANK: 1620972
Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	0.010	12/05/15 01:12	
Nitrogen, Nitrite	mg/L	ND	0.020	0.010	12/05/15 01:12	
Nitrogen, NO2 plus NO3	mg/L	ND	0.020	0.010	12/05/15 01:12	

LABORATORY CONTROL SAMPLE: 1620973

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.5	100	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	103	90-110	
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620974 1620975

Parameter	Units	92278556001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	0.24	2.5	2.5	2.8	2.8	103	103	90-110	0	10	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	100	101	90-110	0	10	
Nitrogen, NO2 plus NO3	mg/L	0.24	2.5	2.5	2.8	2.8	103	103	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620976 1620977

Parameter	Units	92278556002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	2.5	2.5	2.6	2.7	105	107	90-110	2	10	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	103	103	90-110	0	10	
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.5	2.6	2.7	105	107	90-110	2	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: WETA/25674
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Phosphorus, Total
Associated Lab Samples: 92278503001

METHOD BLANK: 1622568
Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	0.025	12/10/15 09:17	

LABORATORY CONTROL SAMPLE: 1622569

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.7	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1622570 1622571

Parameter	Units	92278500001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	7.1	2.5	2.5	9.5	9.6	96	98	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1622572 1622573

Parameter	Units	92278122001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	0.54	2.5	2.5	3.2	3.1	105	103	90-110	1	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: WETA/25719
QC Batch Method: SM 4500-Cl-E
Analysis Method: SM 4500-Cl-E
Analysis Description: 4500 Chloride
Associated Lab Samples: 92278503001

METHOD BLANK: 1625622
Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	12/10/15 17:58	

LABORATORY CONTROL SAMPLE: 1625623

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.2	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1625624 1625625

Parameter	Units	92277791001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	19.0	100	100	121	121	102	102	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1625626 1625627

Parameter	Units	92278045001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	33.2	20	20	57.6	58.0	122	124	90-110	1	10	M1

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: WETA/25694
QC Batch Method: SM 4500-CN-E
Analysis Method: SM 4500-CN-E
Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92278503001

METHOD BLANK: 1623959
Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0080	0.0040	12/10/15 16:18	

LABORATORY CONTROL SAMPLE: 1623960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.11	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623961 1623962

Parameter	Units	92278292002 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	.1	.1	0.13	0.13	126	126	75-125	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623996 1623997

Parameter	Units	92278577001 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	.1	.1	0.020	0.018	17	15	75-125	9	10	M1

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: WETA/25643
QC Batch Method: SM 4500-P E
Analysis Method: SM 4500-P E
Analysis Description: SM4500P-E Phosphorus, Ortho
Associated Lab Samples: 92278503001

METHOD BLANK: 1620988
Matrix: Water
Associated Lab Samples: 92278503001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.050	0.025	12/05/15 01:40	

LABORATORY CONTROL SAMPLE: 1620989

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.25	0.24	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1620990 1620991

Parameter	Units	92278500001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	2.1	2.5	2.5	4.2	4.1	86	81	90-110	3	10	M6

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278503

Sample: HAB-RINSE BLANK **Lab ID: 92278503001** Collected: 12/03/15 16:20 Received: 12/03/15 17:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**0.203 ± 0.683 (1.69)** **C:NA T:NA**	pCi/L	12/17/15 07:38	12587-46-1	
Gross Beta	EPA 900.0	**0.237 ± 0.736 (1.73)** **C:NA T:NA**	pCi/L	12/17/15 07:38	12587-47-2	
Radium-226	EPA 903.1	**0.167 ± 0.507 (0.908)** **C:NA T:91%**	pCi/L	12/17/15 11:25	13982-63-3	
Radium-228	EPA 904.0	**-0.0853 ± 0.313 (0.749)** **C:81% T:74%**	pCi/L	12/18/15 11:40	15262-20-1	
Total Uranium	ASTM D5174-97	**0.039 ± 0.001 (0.193)** **C:NA T:NA**	ug/L	12/24/15 11:38	7440-61-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: RADC/27163 | Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 | Analysis Description: 904.0 Radium 228
Associated Lab Samples: 92278503001

METHOD BLANK: 995085 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.0148 ± 0.270 (0.631) C:85% T:87%	pCi/L	12/18/15 11:39	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: RADC/27222
QC Batch Method: ASTM D5174-97
Analysis Method: ASTM D5174-97
Analysis Description: D5174.97 Total Uranium KPA
Associated Lab Samples: 92278503001

METHOD BLANK: 997052
Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Total Uranium	0.094 ± 0.003 (0.193) C:NA T:NA	ug/L	12/23/15 11:50	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: RADC/27159 | Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 | Analysis Description: 903.1 Radium-226
Associated Lab Samples: 92278503001

METHOD BLANK: 995081 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.341 ± 0.446 (0.735) C:NA T:86%	pCi/L	12/17/15 10:47	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278503

QC Batch: RADC/27220 | Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0 | Analysis Description: 900.0 Gross Alpha/Beta
Associated Lab Samples: 92278503001

METHOD BLANK: 997048 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.231 ± 0.313 (0.633) C:NA T:NA	pCi/L	12/16/15 21:35	
Gross Beta	0.301 ± 0.511 (1.08) C:NA T:NA	pCi/L	12/16/15 21:35	

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QUALIFIERS

Project: Wright Chemical Site
Pace Project No.: 92278503

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.

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, Styrene, and Vinyl chloride.

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

C9	Common Laboratory Contaminant.
H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N	Tentatively identified compound (TIC) based on mass spectral library search. Result is estimated.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Wright Chemical Site
Pace Project No.: 92278503

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92278503001	**HAB-RINSE BLANK**	EPA 3510	OEXT/39578	EPA 8081	GCSV/23507
92278503001	**HAB-RINSE BLANK**	EPA 3010A	MPRP/20188	EPA 6010	ICP/18217
92278503001	**HAB-RINSE BLANK**	EPA 7470	MERP/8735	EPA 7470	MERC/8390
92278503001	**HAB-RINSE BLANK**	EPA 3510	OEXT/39571	EPA 8270	MSSV/11622
92278503001	**HAB-RINSE BLANK**	EPA 8260	MSV/34548		
92278503001	**HAB-RINSE BLANK**	EPA 8260	MSV/35030		
92278503001	**HAB-RINSE BLANK**	EPA 900.0	RADC/27220		
92278503001	**HAB-RINSE BLANK**	EPA 903.1	RADC/27159		
92278503001	**HAB-RINSE BLANK**	EPA 904.0	RADC/27163		
92278503001	**HAB-RINSE BLANK**	ASTM D5174-97	RADC/27222		
92278503001	**HAB-RINSE BLANK**	EPA 9040	WET/41811		
92278503001	**HAB-RINSE BLANK**	EPA 300.0	WETA/25672		
92278503001	**HAB-RINSE BLANK**	EPA 350.1	WETA/25652		
92278503001	**HAB-RINSE BLANK**	EPA 353.2	WETA/25641		
92278503001	**HAB-RINSE BLANK**	EPA 365.1	WETA/25674		
92278503001	**HAB-RINSE BLANK**	SM 4500-Cl-E	WETA/25719		
92278503001	**HAB-RINSE BLANK**	SM 4500-CN-E	WETA/25694		
92278503001	**HAB-RINSE BLANK**	SM 4500-P E	WETA/25643		

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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 : 2 Of 2

Section A — Required Client Information:

Company: SHIELD ENGINEERING
Address: 4301 TAGGART CREEK RD CHARLOTTE NC 28269
Email To: dwallace@shieldengineering.com
Phone: 704-394-6913 Fax
Requested Due Date: STANDARD

Section B — Required Project Information:

Report To: DAVE WALLACE
Copy To:
Purchase Order #:
Project Name: WRIGHT CHEMICAL SITE
Project Number: 110044-05

Section C — Invoice Information:

Attention:
Company Name: SHIELD ENGINEERING
Address:
Pace Quote:
Pace Project Manager: NICOLE GASIOROWSKI
Pace Profile #: 7724 -4

Regulatory Agency:
State / Location: NC

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	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N) TCL VOCs + TICs	TCL SVOCs + TICs	TCL Pesticides	TAL Metals	Cyanide	NH3/PO4	NO2/NO3/Ortho-P	pH/Cl/F/SO4	RAD	Formaldehyde			Residual Chlorine (Y/N)	92278503
1	HAB-RINSE BLANK	WT	G			12/3/15	16:20		17	8	1	4	3	1				X	X	X	X	X	X	X	X	X				001
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Matrix codes: 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			
Note: TICs include chloropicrin, hexamine, methanol, mercaptans,	Danny Hefner / SHIELD	12/3/15	17:55	J. Dixon / Pace	12-3	1753-				
and silanes				~~[illegible]~~ / Pace AC 12/8/15	~~12/4/15~~ 12/4/15	1755	3.6	Y	N	Y
SVOCs includes 1,1-biphenyl										

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: DANNY HEFNER

SIGNATURE of SAMPLER: Danny Hefner

DATE Signed: 12/3/15

WO# : 92278503

92278503

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

December 22, 2015

Nicole Gasiorowski
Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville NC 28078

TEL: (704) 875-9092
FAX: (704) 875-9091

RE: 92278503

Dear Nicole Gasiorowski: Order No: 1512509

Analytical Environmental Services, Inc. received 1 samples on 12/5/2015 9:35:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/15-06/30/16.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Dorothy J deBruyn

Dorothy deBruyn
Project Manager

Revision 12/22/2015

1512509

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 92278503 **Workorder Name:** Wright Chemical Site **Results Requested** 12/14/2015

Report / Invoice To

Nicole Gasiorowski
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
Phone (704)875-9092
Email: nicole.gasiorowski@pacelabs.com

Subcontract To

AES

P.O. NMG 14592

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved						Requested Analysis: Formaldehyde											LAB USE ONLY
1	HAB-RINSE BLANK	12/3/2015 16:20	92278503001	Water	2						X											
2																						
3																						
4																						
5																						

Transfers	Released By	Date/Time	Received By	Date/Time
1	M Gasiorowski · PACE	12/4/15 17:00	FEDEX	
2			[illegible] (FEDEX)	~~12/5/15 9:35~~ 12/5/15 9:35
3				

Comments

Cooler Temperature on Receipt ____ °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.

Client: Pace Analytical Services, Inc.
Project: 92278503
Lab ID: 1512509

Case Narrative

Samples went out of hold over the weekend, as samples were received on Saturday, 12/5/15. Proceed with analysis per Nicole G. via email on 12/7/15.

Analytical Environmental Services, Inc

Date: 22-Dec-15

Client:	Pace Analytical Services, Inc.	**Client Sample ID:**	HAB-RINSE BLANK
Project Name:	92278503	**Collection Date:**	12/3/2015 4:20:00 PM
Lab ID:	1512509-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbonyl Compounds by HPLC SW8315A								
Formaldehyde	BRL	50	H	ug/L	216846	1	12/09/2015 21:00	RF

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Pace Analytical Work Order Number 1512509

Checklist completed by [signature] 12/5/15
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.4 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by [signature]

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

Analytical Environmental Services, Inc

Date: 14-Dec-15

Client: Pace Analytical Services, Inc.
Project Name: 92278503
Lab Order: 1512509

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1512509-001A	HAB-RINSE BLANK	12/3/2015 4:20:00PM	Aqueous	Carbonyl Compounds by HPLC SW8315		12/9/2015 11:00:00AM	12/09/2015

Client: Pace Analytical Services, Inc.
Project Name: 92278503
Workorder: 1512509

ANALYTICAL QC SUMMARY REPORT

BatchID: **216846**

Sample ID: **MB-216846** Client ID: Units: **ug/L** Prep Date: **12/09/2015** Run No: **306040**
SampleType: **MBLK** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **216846** Analysis Date: **12/09/2015** Seq No: **6560021**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	BRL	50									

Sample ID: **LCS-216846** Client ID: Units: **ug/L** Prep Date: **12/09/2015** Run No: **306040**
SampleType: **LCS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **216846** Analysis Date: **12/09/2015** Seq No: **6560022**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1154	50	1000		115	70	130				

Sample ID: **1512687-002BMS** Client ID: Units: **ug/L** Prep Date: **12/09/2015** Run No: **306040**
SampleType: **MS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **216846** Analysis Date: **12/09/2015** Seq No: **6560028**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1299	50	1000	56.72	124	42.9	130				

Sample ID: **1512687-002BMSD** Client ID: Units: **ug/L** Prep Date: **12/09/2015** Run No: **306040**
SampleType: **MSD** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **216846** Analysis Date: **12/09/2015** Seq No: **6560029**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1151	50	1000	56.72	109	42.9	130	1299	12.1	30.4	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 08, 2016

Mr. Mike Armour
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

RE: Project: Wright Chemical Site
Pace Project No.: 92278504

Dear Mr. Armour:
Enclosed are the analytical results for sample(s) received by the laboratory on December 03, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Nicole Gasiorowski

Nicole Gasiorowski
nicole.gasiorowski@pacelabs.com
Project Manager

Enclosures

cc: Dave Stoner
Dave Wallace

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Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: Wright Chemical Site
Pace Project No.: 92278504

Pennsylvania Certification IDs

Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Tampa Certification IDs

5460 Beaumont Center Blvd, Ste 520, Tampa, FL 33634
Florida Certification #: E84809

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
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
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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9800 Kincey Ave. Suite 100
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(704)875-9092

CERTIFICATIONS

Project:	Wright Chemical Site
Pace Project No.:	92278504

Asheville Certification IDs
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
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: Wright Chemical Site
Pace Project No.: 92278504

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92278504001	**HAB-2 3-5FT**	Solid	12/03/15 11:20	12/03/15 17:55
92278504002	**HAB-2 8-10FT**	Solid	12/03/15 12:30	12/03/15 17:55
92278504003	**HAB-3 3-5FT**	Solid	12/03/15 14:30	12/03/15 17:55

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SAMPLE ANALYTE COUNT

Project: Wright Chemical Site
Pace Project No.: 92278504

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92278504001	**HAB-2 3-5FT**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7471	HVK	1	PASI-A
		EPA 8270	BPJ	81	PASI-C
		EPA 8260	DLK	61	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
		EPA 901.1	MAH	10	PASI-PA
		EPA 9310	LAL	2	PASI-PA
		HSL-300	LAL	3	PASI-PA
		EPA 8315	JH1	1	
		EPA 9045	MLS	1	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 365.4	KHC	1	PASI-O
		EPA 9012	AIS	1	PASI-O
		EPA 9056	KEK	3	PASI-O
		EPA 9056	KEK	3	PASI-O
92278504002	**HAB-2 8-10FT**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7471	HVK	1	PASI-A
		EPA 8270	BPJ	77	PASI-C
		EPA 8260	DLK	58	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
		EPA 901.1	MAH	10	PASI-PA
		EPA 9310	LAL	2	PASI-PA
		HSL-300	LAL	3	PASI-PA
		EPA 8315	JH1	1	
		EPA 9045	MLS	1	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 365.4	KHC	1	PASI-O
		EPA 9012	AIS	1	PASI-O
		EPA 9056	KEK	3	PASI-O
		EPA 9056	KEK	3	PASI-O
92278504003	**HAB-3 3-5FT**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7471	HVK	1	PASI-A
		EPA 8270	BPJ	82	PASI-C
		EPA 8260	DLK	62	PASI-C

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SAMPLE ANALYTE COUNT

Project: Wright Chemical Site
Pace Project No.: 92278504

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		ASTM D2974-87	CLW	1	PASI-C
		EPA 901.1	MAH	10	PASI-PA
		EPA 9310	LAL	2	PASI-PA
		HSL-300	LAL	3	PASI-PA
		EPA 8315	JH1	1	
		EPA 9045	MLS	1	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 365.4	KHC	1	PASI-O
		EPA 9012	AIS	1	PASI-O
		EPA 9056	KEK	3	PASI-O
		EPA 9056	KEK	3	PASI-O

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 8081**
Description: 8081 GCS Pesticides
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 8081. 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 3546 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.

QC Batch: OEXT/39497

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- DUP (Lab ID: 1621172)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- HAB-2 3-5FT (Lab ID: 92278504001)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- HAB-2 8-10FT (Lab ID: 92278504002)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- HAB-3 3-5FT (Lab ID: 92278504003)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- MS (Lab ID: 1621171)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (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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Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 8081**
Description: 8081 GCS Pesticides
Client: Shield
Date: January 08, 2016

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

QC Batch: OEXT/39497

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278504001

M3: Matrix spike recovery was outside laboratory control limits due to matrix interferences.

- MS (Lab ID: 1621171)
  - Heptachlor epoxide

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1621171)
  - 4,4'-DDD
  - 4,4'-DDE
  - 4,4'-DDT
  - Aldrin
  - Dieldrin
  - Endosulfan I
  - Endosulfan II
  - Endosulfan sulfate
  - Endrin
  - Endrin aldehyde
  - Endrin ketone
  - Heptachlor
  - Heptachlor epoxide
  - alpha-BHC
  - beta-BHC
  - delta-BHC
  - gamma-BHC (Lindane)

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

Additional Comments:

Analyte Comments:

QC Batch: OEXT/39497

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- DUP (Lab ID: 1621172)
  - Tetrachloro-m-xylene (S)
- HAB-2 3-5FT (Lab ID: 92278504001)
  - Tetrachloro-m-xylene (S)
- HAB-2 8-10FT (Lab ID: 92278504002)
  - Tetrachloro-m-xylene (S)
- HAB-3 3-5FT (Lab ID: 92278504003)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 8081**
Description: 8081 GCS Pesticides
Client: Shield
Date: January 08, 2016

Analyte Comments:

QC Batch: OEXT/39497

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- MS (Lab ID: 1621171)
  - Tetrachloro-m-xylene (S)

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Huntersville, NC 28078
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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 6010. 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 3050 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.

QC Batch: MPRP/20201

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278504001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1622645)
  - Aluminum
  - Calcium
  - Vanadium
- MSD (Lab ID: 1622646)
  - Aluminum
  - Calcium
  - Iron
  - Lead
  - Manganese
  - Vanadium

R1: RPD value was outside control limits.

- MSD (Lab ID: 1622646)
  - Calcium
  - Lead
  - Manganese

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Shield
Date: January 08, 2016

Additional Comments:

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 7471**
Description: 7471 Mercury
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 7471. 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 7471 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: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 8270**
Description: 8270 MSSV Microwave
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 8270. 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 3546 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: OEXT/39483

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1620739)
  - Benzaldehyde
- LCSD (Lab ID: 1620740)
  - Benzaldehyde

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: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 8260. 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.

QC Batch: MSV/34587

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278215005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1623560)
  - 1,2,3-Trichlorobenzene
  - 1,2,4-Trichlorobenzene
  - 2-Hexanone
  - 4-Methyl-2-pentanone (MIBK)
  - Acetone

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: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Shield
Date: January 08, 2016

Analyte Comments:

QC Batch: MSV/34587

C9: Common Laboratory Contaminant.

- HAB-2 3-5FT (Lab ID: 92278504001)
  - Methylene Chloride
- HAB-2 8-10FT (Lab ID: 92278504002)
  - Methylene Chloride

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- HAB-2 3-5FT (Lab ID: 92278504001)
  - Acetone
- MS (Lab ID: 1623560)
  - Acetone

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 901.1**
Description: 901.1 Gamma Spec INGROWTH
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 901.1. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 9310**
Description: 9310 Gross Alpha/Beta
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 9310. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **HSL-300**
Description: HSL300(AS) Actinides
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for HSL-300. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 8315**
Description: 8315 HPLC
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 8315. 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 8315 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.

QC Batch: TAMP/7944

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278244001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1413394)
  - Formaldehyde
- MSD (Lab ID: 1413395)
  - Formaldehyde

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 9045**
Description: 9045 pH Soil
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 9045. 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: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 350.1**
Description: 350.1 Ammonia
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 350.1. 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.

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: WETA/25688

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92278244001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 1623357)
  - Nitrogen, Ammonia

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1623356)
  - Nitrogen, Ammonia

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 365.4**
Description: 365.4 Phosphorus, Total
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 365.4. 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 365.4 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.

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: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 9012**
Description: 9012 Cyanide, Total
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 9012. 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 9012 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: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 9056**
Description: 9056 IC Anions
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 9056. 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.

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:

Analyte Comments:

QC Batch: WETA/52759

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- HAB-2 3-5FT (Lab ID: 92278504001)
  - Sulfate
- HAB-2 8-10FT (Lab ID: 92278504002)
  - Sulfate
- HAB-3 3-5FT (Lab ID: 92278504003)
  - Sulfate

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92278504

Method: **EPA 9056**
Description: 9056 IC Anions 48hr
Client: Shield
Date: January 08, 2016

General Information:
3 samples were analyzed for EPA 9056. 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.

H1: Analysis conducted outside the EPA method holding time.
- HAB-2 3-5FT (Lab ID: 92278504001)

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:

Analyte Comments:

QC Batch: WETA/52760

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- HAB-2 3-5FT (Lab ID: 92278504001)
  - Nitrite as N
  - Nitrate as N
  - Orthophosphate as P
- HAB-2 8-10FT (Lab ID: 92278504002)
  - Nitrite as N
  - Nitrate as N
  - Orthophosphate as P
- HAB-3 3-5FT (Lab ID: 92278504003)
  - Nitrite as N
  - Nitrate as N
  - Orthophosphate as P

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

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 3-5FT **Lab ID: 92278504001** Collected: 12/03/15 11:20 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3546								
Aldrin	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	309-00-2	M6
alpha-BHC	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	319-84-6	M6
beta-BHC	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	319-85-7	M6
delta-BHC	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	319-86-8	M6
gamma-BHC (Lindane)	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	58-89-9	M6
Chlordane (Technical)	ND	ug/kg	96.3	96.3	10	12/07/15 08:35	12/11/15 18:42	57-74-9	
4,4'-DDD	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	72-54-8	M6
4,4'-DDE	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	72-55-9	M6
4,4'-DDT	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	50-29-3	M6
Dieldrin	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	60-57-1	M6
Endosulfan I	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	959-98-8	M6
Endosulfan II	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	33213-65-9	M6
Endosulfan sulfate	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	1031-07-8	M6
Endrin	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	72-20-8	M6
Endrin aldehyde	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	7421-93-4	M6
Endrin ketone	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	53494-70-5	M6
Heptachlor	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	76-44-8	M6
Heptachlor epoxide	ND	ug/kg	27.5	27.5	10	12/07/15 08:35	12/11/15 18:42	1024-57-3	M6
Methoxychlor	ND	ug/kg	68.8	68.8	10	12/07/15 08:35	12/11/15 18:42	72-43-5	
Toxaphene	ND	ug/kg	96.3	96.3	10	12/07/15 08:35	12/11/15 18:42	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	0	%	29-103		10	12/07/15 08:35	12/11/15 18:42	877-09-8	D3,S4
Decachlorobiphenyl (S)	0	%	25-145		10	12/07/15 08:35	12/11/15 18:42	2051-24-3	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Aluminum	**5660**	mg/kg	9.2	4.6	1	12/08/15 19:15	12/09/15 16:15	7429-90-5	M1
Antimony	**0.38J**	mg/kg	0.46	0.36	1	12/08/15 19:15	12/11/15 11:12	7440-36-0	
Arsenic	**2.2**	mg/kg	0.92	0.46	1	12/08/15 19:15	12/09/15 16:15	7440-38-2	
Barium	**12.1**	mg/kg	0.46	0.23	1	12/08/15 19:15	12/09/15 16:15	7440-39-3	
Beryllium	**0.16**	mg/kg	0.092	0.046	1	12/08/15 19:15	12/09/15 16:15	7440-41-7	
Cadmium	ND	mg/kg	0.092	0.046	1	12/08/15 19:15	12/09/15 16:15	7440-43-9	
Calcium	**3170**	mg/kg	9.2	4.6	1	12/08/15 19:15	12/09/15 16:15	7440-70-2	M1,R1
Chromium	**6.8**	mg/kg	0.46	0.23	1	12/08/15 19:15	12/09/15 16:15	7440-47-3	
Cobalt	**0.57**	mg/kg	0.46	0.23	1	12/08/15 19:15	12/09/15 16:15	7440-48-4	
Copper	**5.5**	mg/kg	0.46	0.23	1	12/08/15 19:15	12/09/15 16:15	7440-50-8	
Iron	**5010**	mg/kg	9.2	4.6	1	12/08/15 19:15	12/09/15 16:15	7439-89-6	M1
Lead	**10.9**	mg/kg	0.46	0.23	1	12/08/15 19:15	12/11/15 11:12	7439-92-1	M1,R1
Magnesium	**132**	mg/kg	9.2	0.23	1	12/08/15 19:15	12/09/15 16:15	7439-95-4	
Manganese	**68.1**	mg/kg	0.46	0.23	1	12/08/15 19:15	12/09/15 16:15	7439-96-5	M1,R1
Nickel	**2.3**	mg/kg	0.46	0.23	1	12/08/15 19:15	12/09/15 16:15	7440-02-0	
Potassium	ND	mg/kg	459	459	1	12/08/15 19:15	12/09/15 16:15	7440-09-7	
Selenium	**0.51J**	mg/kg	0.92	0.46	1	12/08/15 19:15	12/09/15 16:15	7782-49-2	
Silver	ND	mg/kg	0.46	0.23	1	12/08/15 19:15	12/09/15 16:15	7440-22-4	
Sodium	ND	mg/kg	459	229	1	12/08/15 19:15	12/09/15 16:15	7440-23-5	
Thallium	ND	mg/kg	0.92	0.46	1	12/08/15 19:15	12/09/15 16:15	7440-28-0	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 3-5FT **Lab ID: 92278504001** Collected: 12/03/15 11:20 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Vanadium	**21.9**	mg/kg	0.46	0.23	1	12/08/15 19:15	12/09/15 16:15	7440-62-2	M1
Zinc	**17.8**	mg/kg	0.92	0.46	1	12/08/15 19:15	12/09/15 16:15	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.024**	mg/kg	0.0040	0.000081	1	12/07/15 16:05	12/10/15 15:26	7439-97-6	
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	454	105	1	12/05/15 16:51	12/08/15 13:07	83-32-9	
Acenaphthylene	ND	ug/kg	454	107	1	12/05/15 16:51	12/08/15 13:07	208-96-8	
Acetophenone	ND	ug/kg	454	234	1	12/05/15 16:51	12/08/15 13:07	98-86-2	
Anthracene	ND	ug/kg	454	102	1	12/05/15 16:51	12/08/15 13:07	120-12-7	
Atrazine	ND	ug/kg	908	179	1	12/05/15 16:51	12/07/15 17:44	1912-24-9	
Benzaldehyde	ND	ug/kg	908	454	1	12/05/15 16:51	12/07/15 17:44	100-52-7	L2
Benzo(a)anthracene	ND	ug/kg	454	83.9	1	12/05/15 16:51	12/08/15 13:07	56-55-3	
Benzo(a)pyrene	ND	ug/kg	454	86.7	1	12/05/15 16:51	12/08/15 13:07	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	454	78.4	1	12/05/15 16:51	12/08/15 13:07	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	454	116	1	12/05/15 16:51	12/08/15 13:07	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	454	89.4	1	12/05/15 16:51	12/08/15 13:07	207-08-9	
Biphenyl (Diphenyl)	ND	ug/kg	454	143	1	12/05/15 16:51	12/08/15 13:07	92-52-4	
4-Bromophenylphenyl ether	ND	ug/kg	454	82.5	1	12/05/15 16:51	12/08/15 13:07	101-55-3	
Butylbenzylphthalate	ND	ug/kg	454	96.3	1	12/05/15 16:51	12/08/15 13:07	85-68-7	
Caprolactam	ND	ug/kg	454	78.4	1	12/05/15 16:51	12/07/15 17:44	105-60-2	
Carbazole	ND	ug/kg	454	86.7	1	12/05/15 16:51	12/08/15 13:07	86-74-8	
4-Chloro-3-methylphenol	ND	ug/kg	908	93.6	1	12/05/15 16:51	12/08/15 13:07	59-50-7	
4-Chloroaniline	ND	ug/kg	2270	127	1	12/05/15 16:51	12/08/15 13:07	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	454	106	1	12/05/15 16:51	12/08/15 13:07	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	454	116	1	12/05/15 16:51	12/08/15 13:07	111-44-4	
2-Chloronaphthalene	ND	ug/kg	454	89.4	1	12/05/15 16:51	12/08/15 13:07	91-58-7	
2-Chlorophenol	ND	ug/kg	454	124	1	12/05/15 16:51	12/08/15 13:07	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	454	93.6	1	12/05/15 16:51	12/08/15 13:07	7005-72-3	
Chrysene	ND	ug/kg	454	60.5	1	12/05/15 16:51	12/08/15 13:07	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	454	96.3	1	12/05/15 16:51	12/08/15 13:07	53-70-3	
Dibenzofuran	ND	ug/kg	454	74.3	1	12/05/15 16:51	12/08/15 13:07	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/kg	2270	99.1	1	12/05/15 16:51	12/08/15 13:07	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	454	99.1	1	12/05/15 16:51	12/08/15 13:07	120-83-2	
Diethylphthalate	ND	ug/kg	454	70.2	1	12/05/15 16:51	12/08/15 13:07	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	454	179	1	12/05/15 16:51	12/08/15 13:07	105-67-9	
Dimethylphthalate	ND	ug/kg	454	92.2	1	12/05/15 16:51	12/08/15 13:07	131-11-3	
Di-n-butylphthalate	ND	ug/kg	454	74.3	1	12/05/15 16:51	12/08/15 13:07	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	908	90.8	1	12/05/15 16:51	12/08/15 13:07	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2270	74.3	1	12/05/15 16:51	12/08/15 13:07	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	454	85.3	1	12/05/15 16:51	12/08/15 13:07	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	454	94.9	1	12/05/15 16:51	12/08/15 13:07	606-20-2	
Di-n-octylphthalate	ND	ug/kg	454	94.9	1	12/05/15 16:51	12/08/15 13:07	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	454	124	1	12/05/15 16:51	12/08/15 13:07	117-81-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 3-5FT **Lab ID: 92278504001** Collected: 12/03/15 11:20 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Fluoranthene	ND	ug/kg	454	66.0	1	12/05/15 16:51	12/08/15 13:07	206-44-0	
Fluorene	ND	ug/kg	454	93.6	1	12/05/15 16:51	12/08/15 13:07	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	454	78.4	1	12/05/15 16:51	12/08/15 13:07	87-68-3	
Hexachlorobenzene	ND	ug/kg	454	57.8	1	12/05/15 16:51	12/08/15 13:07	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	454	83.9	1	12/05/15 16:51	12/08/15 13:07	77-47-4	
Hexachloroethane	ND	ug/kg	454	120	1	12/05/15 16:51	12/08/15 13:07	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	454	93.6	1	12/05/15 16:51	12/08/15 13:07	193-39-5	
Isophorone	ND	ug/kg	454	102	1	12/05/15 16:51	12/08/15 13:07	78-59-1	
2-Methylnaphthalene	ND	ug/kg	454	97.7	1	12/05/15 16:51	12/08/15 13:07	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	454	138	1	12/05/15 16:51	12/08/15 13:07	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	454	179	1	12/05/15 16:51	12/08/15 13:07		
Naphthalene	ND	ug/kg	454	111	1	12/05/15 16:51	12/08/15 13:07	91-20-3	
2-Nitroaniline	ND	ug/kg	2270	140	1	12/05/15 16:51	12/08/15 13:07	88-74-4	
3-Nitroaniline	ND	ug/kg	2270	124	1	12/05/15 16:51	12/08/15 13:07	99-09-2	
4-Nitroaniline	ND	ug/kg	908	128	1	12/05/15 16:51	12/08/15 13:07	100-01-6	
Nitrobenzene	ND	ug/kg	454	124	1	12/05/15 16:51	12/08/15 13:07	98-95-3	
2-Nitrophenol	ND	ug/kg	454	110	1	12/05/15 16:51	12/08/15 13:07	88-75-5	
4-Nitrophenol	ND	ug/kg	2270	81.2	1	12/05/15 16:51	12/08/15 13:07	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/kg	454	86.7	1	12/05/15 16:51	12/08/15 13:07	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	454	135	1	12/05/15 16:51	12/08/15 13:07	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	454	121	1	12/05/15 16:51	12/08/15 13:07	108-60-1	
Pentachlorophenol	ND	ug/kg	2270	82.5	1	12/05/15 16:51	12/08/15 13:07	87-86-5	
Phenanthrene	ND	ug/kg	454	75.7	1	12/05/15 16:51	12/08/15 13:07	85-01-8	
Phenol	ND	ug/kg	454	136	1	12/05/15 16:51	12/08/15 13:07	108-95-2	
Pyrene	ND	ug/kg	454	77.0	1	12/05/15 16:51	12/08/15 13:07	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/kg	454	165	1	12/05/15 16:51	12/07/15 17:44	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/kg	454	179	1	12/05/15 16:51	12/08/15 13:07	58-90-2	
2,4,5-Trichlorophenol	ND	ug/kg	454	140	1	12/05/15 16:51	12/08/15 13:07	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	454	100	1	12/05/15 16:51	12/08/15 13:07	88-06-2	
Surrogates									
2-Fluorobiphenyl (S)	67	%	30-110		1	12/05/15 16:51	12/08/15 13:07	321-60-8	
Terphenyl-d14 (S)	83	%	28-110		1	12/05/15 16:51	12/08/15 13:07	1718-51-0	
Phenol-d6 (S)	61	%	22-110		1	12/05/15 16:51	12/08/15 13:07	13127-88-3	
2-Fluorophenol (S)	60	%	13-110		1	12/05/15 16:51	12/08/15 13:07	367-12-4	
2,4,6-Tribromophenol (S)	77	%	27-110		1	12/05/15 16:51	12/08/15 13:07	118-79-6	
Nitrobenzene-d5 (S)	67	%	23-110		1	12/05/15 16:51	12/08/15 13:07	4165-60-0	
Tentatively Identified Compounds									
Unknown	**469**	ug/kg			1	12/05/15 16:51	12/08/15 13:07		N
Unknown	**250**	ug/kg			1	12/05/15 16:51	12/08/15 13:07		N
Unknown	**428**	ug/kg			1	12/05/15 16:51	12/08/15 13:07		N
Unknown	**1070**	ug/kg			1	12/05/15 16:51	12/08/15 13:07		N
Unknown	**269**	ug/kg			1	12/05/15 16:51	12/08/15 13:07		N
Unknown	**501**	ug/kg			1	12/05/15 16:51	12/08/15 13:07		N
Unknown	**319**	ug/kg			1	12/05/15 16:51	12/08/15 13:07		N
1,3,5-Trithiane	**239**	ug/kg			1	12/05/15 16:51	12/08/15 13:07	291-21-4	N

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 3-5FT **Lab ID: 92278504001** Collected: 12/03/15 11:20 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	**440**	ug/kg	129	12.9	1		12/08/15 13:53	67-64-1	E
Benzene	ND	ug/kg	6.4	2.1	1		12/08/15 13:53	71-43-2	
Bromochloromethane	ND	ug/kg	6.4	2.2	1		12/08/15 13:53	74-97-5	
Bromodichloromethane	ND	ug/kg	6.4	2.4	1		12/08/15 13:53	75-27-4	
Bromoform	ND	ug/kg	6.4	3.0	1		12/08/15 13:53	75-25-2	
Bromomethane	ND	ug/kg	12.9	3.2	1		12/08/15 13:53	74-83-9	
2-Butanone (MEK)	ND	ug/kg	129	3.7	1		12/08/15 13:53	78-93-3	
Carbon disulfide	ND	ug/kg	12.9	3.9	1		12/08/15 13:53	75-15-0	
Carbon tetrachloride	ND	ug/kg	6.4	3.3	1		12/08/15 13:53	56-23-5	
Chlorobenzene	ND	ug/kg	6.4	2.4	1		12/08/15 13:53	108-90-7	
Chloroethane	ND	ug/kg	12.9	3.1	1		12/08/15 13:53	75-00-3	
Chloroform	ND	ug/kg	6.4	2.1	1		12/08/15 13:53	67-66-3	
Chloromethane	ND	ug/kg	12.9	3.1	1		12/08/15 13:53	74-87-3	
Cyclohexane	ND	ug/kg	6.4	2.1	1		12/08/15 13:53	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.4	4.6	1		12/08/15 13:53	96-12-8	
Dibromochloromethane	ND	ug/kg	6.4	2.3	1		12/08/15 13:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.4	2.3	1		12/08/15 13:53	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	6.4	2.4	1		12/08/15 13:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.4	2.6	1		12/08/15 13:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.4	2.2	1		12/08/15 13:53	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.9	4.6	1		12/08/15 13:53	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.4	1.9	1		12/08/15 13:53	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.4	2.8	1		12/08/15 13:53	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.4	2.3	1		12/08/15 13:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.4	1.8	1		12/08/15 13:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.4	2.4	1		12/08/15 13:53	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.4	2.2	1		12/08/15 13:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	6.4	2.3	1		12/08/15 13:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.4	1.9	1		12/08/15 13:53	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	193	154	1		12/08/15 13:53	123-91-1	
Ethylbenzene	**3.4J**	ug/kg	6.4	2.3	1		12/08/15 13:53	100-41-4	
2-Hexanone	ND	ug/kg	64.3	5.0	1		12/08/15 13:53	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.4	2.4	1		12/08/15 13:53	98-82-8	
Methyl acetate	ND	ug/kg	12.9	1.8	1		12/08/15 13:53	79-20-9	
Methylcyclohexane	ND	ug/kg	12.9	1.9	1		12/08/15 13:53	108-87-2	
Methylene Chloride	**61.1**	ug/kg	25.7	3.9	1		12/08/15 13:53	75-09-2	C9
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	64.3	4.8	1		12/08/15 13:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.4	1.9	1		12/08/15 13:53	1634-04-4	
Styrene	ND	ug/kg	6.4	2.3	1		12/08/15 13:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.4	2.4	1		12/08/15 13:53	79-34-5	
Tetrachloroethene	ND	ug/kg	6.4	2.2	1		12/08/15 13:53	127-18-4	
Toluene	**4.8J**	ug/kg	6.4	2.3	1		12/08/15 13:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.4	2.8	1		12/08/15 13:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.4	2.1	1		12/08/15 13:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.4	2.3	1		12/08/15 13:53	71-55-6	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 3-5FT **Lab ID: 92278504001** Collected: 12/03/15 11:20 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
1,1,2-Trichloroethane	ND	ug/kg	6.4	2.7	1		12/08/15 13:53	79-00-5	
Trichloroethene	ND	ug/kg	6.4	2.7	1		12/08/15 13:53	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.4	2.8	1		12/08/15 13:53	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	6.4	2.4	1		12/08/15 13:53	76-13-1	
Vinyl chloride	ND	ug/kg	12.9	2.3	1		12/08/15 13:53	75-01-4	
m&p-Xylene	ND	ug/kg	12.9	4.6	1		12/08/15 13:53	179601-23-1	
o-Xylene	ND	ug/kg	6.4	2.4	1		12/08/15 13:53	95-47-6	
Surrogates									
Toluene-d8 (S)	98	%	70-130		1		12/08/15 13:53	2037-26-5	IO
4-Bromofluorobenzene (S)	79	%	70-130		1		12/08/15 13:53	460-00-4	
1,2-Dichloroethane-d4 (S)	125	%	70-132		1		12/08/15 13:53	17060-07-0	
Tentatively Identified Compounds									
2-Butanone, 3-methyl-	**43.5**	ug/kg			1		12/08/15 13:53	563-80-4	N
Benzene, 1-methyl-4-(1-m	**39.7**	ug/kg			1		12/08/15 13:53	99-87-6	N
Benzene, 1-methyl-2-(1-m	**28.4**	ug/kg			1		12/08/15 13:53	97664-19-2	N
Benzene, (2-methyl-1-but	**28.3**	ug/kg			1		12/08/15 13:53	56253-64-6	N
Biphenyl	**371**	ug/kg			1		12/08/15 13:53	92-52-4	N
Diphenyl ether	**807**	ug/kg			1		12/08/15 13:53	101-84-8	N
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**27.3**	%	0.10	0.10	1		12/07/15 06:39		
8315 HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	**55900**	ug/kg	27500	9660	10	12/08/15 17:00	12/10/15 13:17	50-00-0	N2
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	**8.8**	Std. Units	0.10	0.10	1		12/07/15 16:15		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**3060**	mg/kg	67.4	67.4	5		12/10/15 08:34	7664-41-7	
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4								
Phosphorus, Total (as P)	**736**	mg/kg	131	65.6	20	12/09/15 12:00	12/10/15 15:29	7723-14-0	
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012								
Cyanide	ND	mg/kg	0.36	0.18	1	12/09/15 10:30	12/09/15 15:10	57-12-5	
9056 IC Anions	Analytical Method: EPA 9056								
Chloride	**182J**	mg/kg	345	173	5		12/05/15 12:50	16887-00-6	
Fluoride	ND	mg/kg	34.5	17.3	5		12/05/15 12:50	16984-48-8	
Sulfate	ND	mg/kg	345	173	5		12/05/15 12:50	14808-79-8	D3
9056 IC Anions 48hr	Analytical Method: EPA 9056								
Nitrate as N	ND	mg/kg	34.5	17.3	5		12/05/15 12:50	14797-55-8	D3,H1

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 3-5FT **Lab ID: 92278504001** Collected: 12/03/15 11:20 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr	Analytical Method: EPA 9056								
Nitrite as N	ND	mg/kg	34.5	17.3	5		12/05/15 12:50	14797-65-0	D3,H1
Orthophosphate as P	ND	mg/kg	69.1	34.5	5		12/05/15 12:50		D3,H1, M1

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 8-10FT **Lab ID: 92278504002** Collected: 12/03/15 12:30 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3546								
Aldrin	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	309-00-2	
alpha-BHC	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	319-84-6	
beta-BHC	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	319-85-7	
delta-BHC	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	319-86-8	
gamma-BHC (Lindane)	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	58-89-9	
Chlordane (Technical)	ND	ug/kg	94.1	94.1	10	12/07/15 08:35	12/11/15 19:18	57-74-9	
4,4'-DDD	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	72-54-8	
4,4'-DDE	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	72-55-9	
4,4'-DDT	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	50-29-3	
Dieldrin	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	60-57-1	
Endosulfan I	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	959-98-8	
Endosulfan II	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	33213-65-9	
Endosulfan sulfate	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	1031-07-8	
Endrin	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	72-20-8	
Endrin aldehyde	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	7421-93-4	
Endrin ketone	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	53494-70-5	
Heptachlor	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	76-44-8	
Heptachlor epoxide	ND	ug/kg	26.9	26.9	10	12/07/15 08:35	12/11/15 19:18	1024-57-3	
Methoxychlor	ND	ug/kg	67.2	67.2	10	12/07/15 08:35	12/11/15 19:18	72-43-5	
Toxaphene	ND	ug/kg	94.1	94.1	10	12/07/15 08:35	12/11/15 19:18	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	0	%	29-103		10	12/07/15 08:35	12/11/15 19:18	877-09-8	D3,S4
Decachlorobiphenyl (S)	0	%	25-145		10	12/07/15 08:35	12/11/15 19:18	2051-24-3	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Aluminum	**7120**	mg/kg	10.3	5.2	1	12/08/15 19:15	12/09/15 16:24	7429-90-5	
Antimony	**1.8**	mg/kg	0.52	0.40	1	12/08/15 19:15	12/11/15 11:21	7440-36-0	
Arsenic	**3.6**	mg/kg	1.0	0.52	1	12/08/15 19:15	12/09/15 16:24	7440-38-2	
Barium	**15.4**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:24	7440-39-3	
Beryllium	**0.27**	mg/kg	0.10	0.052	1	12/08/15 19:15	12/09/15 16:24	7440-41-7	
Cadmium	**0.16**	mg/kg	0.10	0.052	1	12/08/15 19:15	12/09/15 16:24	7440-43-9	
Calcium	**2600**	mg/kg	10.3	5.2	1	12/08/15 19:15	12/09/15 16:24	7440-70-2	
Chromium	**17.9**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:24	7440-47-3	
Cobalt	**1.7**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:24	7440-48-4	
Copper	**25.9**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:24	7440-50-8	
Iron	**8560**	mg/kg	10.3	5.2	1	12/08/15 19:15	12/09/15 16:24	7439-89-6	
Lead	**83.6**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/11/15 11:21	7439-92-1	
Magnesium	**181**	mg/kg	10.3	0.26	1	12/08/15 19:15	12/09/15 16:24	7439-95-4	
Manganese	**44.4**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:24	7439-96-5	
Nickel	**7.3**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:24	7440-02-0	
Potassium	ND	mg/kg	517	517	1	12/08/15 19:15	12/09/15 16:24	7440-09-7	
Selenium	**1.6**	mg/kg	1.0	0.52	1	12/08/15 19:15	12/09/15 16:24	7782-49-2	
Silver	ND	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:24	7440-22-4	
Sodium	**279J**	mg/kg	517	259	1	12/08/15 19:15	12/09/15 16:24	7440-23-5	
Thallium	ND	mg/kg	1.0	0.52	1	12/08/15 19:15	12/09/15 16:24	7440-28-0	

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 8-10FT **Lab ID: 92278504002** Collected: 12/03/15 12:30 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Vanadium	**30.2**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:24	7440-62-2	
Zinc	**65.8**	mg/kg	1.0	0.52	1	12/08/15 19:15	12/09/15 16:24	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.071**	mg/kg	0.0056	0.00011	1	12/07/15 16:05	12/10/15 15:28	7439-97-6	
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	444	102	1	12/05/15 16:51	12/07/15 18:12	83-32-9	
Acenaphthylene	ND	ug/kg	444	105	1	12/05/15 16:51	12/07/15 18:12	208-96-8	
Acetophenone	ND	ug/kg	444	229	1	12/05/15 16:51	12/07/15 18:12	98-86-2	
Anthracene	ND	ug/kg	444	99.5	1	12/05/15 16:51	12/07/15 18:12	120-12-7	
Atrazine	ND	ug/kg	887	175	1	12/05/15 16:51	12/07/15 18:12	1912-24-9	
Benzaldehyde	ND	ug/kg	887	444	1	12/05/15 16:51	12/07/15 18:12	100-52-7	L2
Benzo(a)anthracene	ND	ug/kg	444	82.0	1	12/05/15 16:51	12/07/15 18:12	56-55-3	
Benzo(a)pyrene	ND	ug/kg	444	84.7	1	12/05/15 16:51	12/07/15 18:12	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	444	76.6	1	12/05/15 16:51	12/07/15 18:12	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	444	113	1	12/05/15 16:51	12/07/15 18:12	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	444	87.4	1	12/05/15 16:51	12/07/15 18:12	207-08-9	
Biphenyl (Diphenyl)	**172J**	ug/kg	444	140	1	12/05/15 16:51	12/07/15 18:12	92-52-4	
4-Bromophenylphenyl ether	ND	ug/kg	444	80.7	1	12/05/15 16:51	12/07/15 18:12	101-55-3	
Butylbenzylphthalate	ND	ug/kg	444	94.1	1	12/05/15 16:51	12/07/15 18:12	85-68-7	
Caprolactam	ND	ug/kg	444	76.6	1	12/05/15 16:51	12/07/15 18:12	105-60-2	
Carbazole	ND	ug/kg	444	84.7	1	12/05/15 16:51	12/07/15 18:12	86-74-8	
4-Chloro-3-methylphenol	ND	ug/kg	887	91.4	1	12/05/15 16:51	12/07/15 18:12	59-50-7	
4-Chloroaniline	ND	ug/kg	2220	124	1	12/05/15 16:51	12/07/15 18:12	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	444	104	1	12/05/15 16:51	12/07/15 18:12	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	444	113	1	12/05/15 16:51	12/07/15 18:12	111-44-4	
2-Chloronaphthalene	ND	ug/kg	444	87.4	1	12/05/15 16:51	12/07/15 18:12	91-58-7	
2-Chlorophenol	ND	ug/kg	444	121	1	12/05/15 16:51	12/07/15 18:12	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	444	91.4	1	12/05/15 16:51	12/07/15 18:12	7005-72-3	
Chrysene	ND	ug/kg	444	59.2	1	12/05/15 16:51	12/07/15 18:12	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	444	94.1	1	12/05/15 16:51	12/07/15 18:12	53-70-3	
Dibenzofuran	ND	ug/kg	444	72.6	1	12/05/15 16:51	12/07/15 18:12	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/kg	2220	96.8	1	12/05/15 16:51	12/07/15 18:12	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	444	96.8	1	12/05/15 16:51	12/07/15 18:12	120-83-2	
Diethylphthalate	ND	ug/kg	444	68.6	1	12/05/15 16:51	12/07/15 18:12	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	444	175	1	12/05/15 16:51	12/07/15 18:12	105-67-9	
Dimethylphthalate	ND	ug/kg	444	90.1	1	12/05/15 16:51	12/07/15 18:12	131-11-3	
Di-n-butylphthalate	ND	ug/kg	444	72.6	1	12/05/15 16:51	12/07/15 18:12	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	887	88.7	1	12/05/15 16:51	12/07/15 18:12	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2220	72.6	1	12/05/15 16:51	12/07/15 18:12	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	444	83.4	1	12/05/15 16:51	12/07/15 18:12	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	444	92.8	1	12/05/15 16:51	12/07/15 18:12	606-20-2	
Di-n-octylphthalate	ND	ug/kg	444	92.8	1	12/05/15 16:51	12/07/15 18:12	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	444	121	1	12/05/15 16:51	12/07/15 18:12	117-81-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 8-10FT **Lab ID: 92278504002** Collected: 12/03/15 12:30 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Fluoranthene	ND	ug/kg	444	64.5	1	12/05/15 16:51	12/07/15 18:12	206-44-0	
Fluorene	ND	ug/kg	444	91.4	1	12/05/15 16:51	12/07/15 18:12	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	444	76.6	1	12/05/15 16:51	12/07/15 18:12	87-68-3	
Hexachlorobenzene	ND	ug/kg	444	56.5	1	12/05/15 16:51	12/07/15 18:12	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	444	82.0	1	12/05/15 16:51	12/07/15 18:12	77-47-4	
Hexachloroethane	ND	ug/kg	444	117	1	12/05/15 16:51	12/07/15 18:12	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	444	91.4	1	12/05/15 16:51	12/07/15 18:12	193-39-5	
Isophorone	ND	ug/kg	444	99.5	1	12/05/15 16:51	12/07/15 18:12	78-59-1	
2-Methylnaphthalene	ND	ug/kg	444	95.5	1	12/05/15 16:51	12/07/15 18:12	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	444	134	1	12/05/15 16:51	12/07/15 18:12	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	444	175	1	12/05/15 16:51	12/07/15 18:12		
Naphthalene	ND	ug/kg	444	109	1	12/05/15 16:51	12/07/15 18:12	91-20-3	
2-Nitroaniline	ND	ug/kg	2220	137	1	12/05/15 16:51	12/07/15 18:12	88-74-4	
3-Nitroaniline	ND	ug/kg	2220	121	1	12/05/15 16:51	12/07/15 18:12	99-09-2	
4-Nitroaniline	ND	ug/kg	887	125	1	12/05/15 16:51	12/07/15 18:12	100-01-6	
Nitrobenzene	ND	ug/kg	444	121	1	12/05/15 16:51	12/07/15 18:12	98-95-3	
2-Nitrophenol	ND	ug/kg	444	108	1	12/05/15 16:51	12/07/15 18:12	88-75-5	
4-Nitrophenol	ND	ug/kg	2220	79.3	1	12/05/15 16:51	12/07/15 18:12	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/kg	444	84.7	1	12/05/15 16:51	12/07/15 18:12	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	444	132	1	12/05/15 16:51	12/07/15 18:12	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	444	118	1	12/05/15 16:51	12/07/15 18:12	108-60-1	
Pentachlorophenol	ND	ug/kg	2220	80.7	1	12/05/15 16:51	12/07/15 18:12	87-86-5	
Phenanthrene	ND	ug/kg	444	74.0	1	12/05/15 16:51	12/07/15 18:12	85-01-8	
Phenol	ND	ug/kg	444	133	1	12/05/15 16:51	12/07/15 18:12	108-95-2	
Pyrene	ND	ug/kg	444	75.3	1	12/05/15 16:51	12/07/15 18:12	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/kg	444	161	1	12/05/15 16:51	12/07/15 18:12	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/kg	444	175	1	12/05/15 16:51	12/07/15 18:12	58-90-2	
2,4,5-Trichlorophenol	ND	ug/kg	444	137	1	12/05/15 16:51	12/07/15 18:12	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	444	98.2	1	12/05/15 16:51	12/07/15 18:12	88-06-2	
Surrogates									
2-Fluorobiphenyl (S)	68	%	30-110		1	12/05/15 16:51	12/07/15 18:12	321-60-8	
Terphenyl-d14 (S)	85	%	28-110		1	12/05/15 16:51	12/07/15 18:12	1718-51-0	
Phenol-d6 (S)	59	%	22-110		1	12/05/15 16:51	12/07/15 18:12	13127-88-3	
2-Fluorophenol (S)	60	%	13-110		1	12/05/15 16:51	12/07/15 18:12	367-12-4	
2,4,6-Tribromophenol (S)	81	%	27-110		1	12/05/15 16:51	12/07/15 18:12	118-79-6	
Nitrobenzene-d5 (S)	67	%	23-110		1	12/05/15 16:51	12/07/15 18:12	4165-60-0	
Tentatively Identified Compounds									
Unknown	**312**	ug/kg			1	12/05/15 16:51	12/07/15 18:12		N
Unknown	**528**	ug/kg			1	12/05/15 16:51	12/07/15 18:12		N
Unknown	**633**	ug/kg			1	12/05/15 16:51	12/07/15 18:12		N
Unknown	**239**	ug/kg			1	12/05/15 16:51	12/07/15 18:12		N
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	**188**	ug/kg	116	11.6	1		12/08/15 14:13	67-64-1	
Benzene	ND	ug/kg	5.8	1.9	1		12/08/15 14:13	71-43-2	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 8-10FT **Lab ID: 92278504002** Collected: 12/03/15 12:30 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Bromochloromethane	ND	ug/kg	5.8	2.0	1		12/08/15 14:13	74-97-5	
Bromodichloromethane	ND	ug/kg	5.8	2.2	1		12/08/15 14:13	75-27-4	
Bromoform	ND	ug/kg	5.8	2.7	1		12/08/15 14:13	75-25-2	
Bromomethane	ND	ug/kg	11.6	2.9	1		12/08/15 14:13	74-83-9	
2-Butanone (MEK)	**140**	ug/kg	116	3.4	1		12/08/15 14:13	78-93-3	
Carbon disulfide	**40.7**	ug/kg	11.6	3.5	1		12/08/15 14:13	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.8	3.0	1		12/08/15 14:13	56-23-5	
Chlorobenzene	ND	ug/kg	5.8	2.2	1		12/08/15 14:13	108-90-7	
Chloroethane	ND	ug/kg	11.6	2.8	1		12/08/15 14:13	75-00-3	
Chloroform	ND	ug/kg	5.8	1.9	1		12/08/15 14:13	67-66-3	
Chloromethane	ND	ug/kg	11.6	2.8	1		12/08/15 14:13	74-87-3	
Cyclohexane	ND	ug/kg	5.8	1.9	1		12/08/15 14:13	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.8	4.2	1		12/08/15 14:13	96-12-8	
Dibromochloromethane	ND	ug/kg	5.8	2.1	1		12/08/15 14:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.8	2.1	1		12/08/15 14:13	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	5.8	2.2	1		12/08/15 14:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.8	2.3	1		12/08/15 14:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.8	2.0	1		12/08/15 14:13	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.6	4.2	1		12/08/15 14:13	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.8	1.7	1		12/08/15 14:13	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.8	2.6	1		12/08/15 14:13	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.8	2.1	1		12/08/15 14:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.8	1.6	1		12/08/15 14:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.8	2.2	1		12/08/15 14:13	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.8	2.0	1		12/08/15 14:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	5.8	2.1	1		12/08/15 14:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.8	1.7	1		12/08/15 14:13	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	174	140	1		12/08/15 14:13	123-91-1	
Ethylbenzene	ND	ug/kg	5.8	2.1	1		12/08/15 14:13	100-41-4	
2-Hexanone	ND	ug/kg	58.2	4.5	1		12/08/15 14:13	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.8	2.2	1		12/08/15 14:13	98-82-8	
Methyl acetate	ND	ug/kg	11.6	1.6	1		12/08/15 14:13	79-20-9	
Methylcyclohexane	ND	ug/kg	11.6	1.7	1		12/08/15 14:13	108-87-2	
Methylene Chloride	**32.9**	ug/kg	23.3	3.5	1		12/08/15 14:13	75-09-2	C9
4-Methyl-2-pentanone (MIBK)	**5.9J**	ug/kg	58.2	4.3	1		12/08/15 14:13	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.8	1.7	1		12/08/15 14:13	1634-04-4	
Styrene	ND	ug/kg	5.8	2.1	1		12/08/15 14:13	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.8	2.2	1		12/08/15 14:13	79-34-5	
Tetrachloroethene	ND	ug/kg	5.8	2.0	1		12/08/15 14:13	127-18-4	
Toluene	ND	ug/kg	5.8	2.1	1		12/08/15 14:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.8	2.6	1		12/08/15 14:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.8	1.9	1		12/08/15 14:13	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.8	2.1	1		12/08/15 14:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.8	2.4	1		12/08/15 14:13	79-00-5	
Trichloroethene	ND	ug/kg	5.8	2.4	1		12/08/15 14:13	79-01-6	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 8-10FT **Lab ID: 92278504002** Collected: 12/03/15 12:30 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Trichlorofluoromethane	ND	ug/kg	5.8	2.6	1		12/08/15 14:13	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.8	2.2	1		12/08/15 14:13	76-13-1	
Vinyl chloride	ND	ug/kg	11.6	2.1	1		12/08/15 14:13	75-01-4	
m&p-Xylene	ND	ug/kg	11.6	4.2	1		12/08/15 14:13	179601-23-1	
o-Xylene	ND	ug/kg	5.8	2.2	1		12/08/15 14:13	95-47-6	
Surrogates									
Toluene-d8 (S)	97	%	70-130		1		12/08/15 14:13	2037-26-5	
4-Bromofluorobenzene (S)	96	%	70-130		1		12/08/15 14:13	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-132		1		12/08/15 14:13	17060-07-0	
Tentatively Identified Compounds									
Hexane	**17.2**	ug/kg			1		12/08/15 14:13	110-54-3	N
Biphenyl	**30.1**	ug/kg			1		12/08/15 14:13	92-52-4	N
Diphenyl ether	**96.5**	ug/kg			1		12/08/15 14:13	101-84-8	N
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**25.6**	%	0.10	0.10	1		12/07/15 06:39		
8315 HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	**83200**	ug/kg	26900	9440	10	12/08/15 17:00	12/10/15 13:37	50-00-0	N2
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	**8.8**	Std. Units	0.10	0.10	1		12/07/15 16:15		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**4740**	mg/kg	65.9	65.9	5		12/10/15 08:37	7664-41-7	
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4								
Phosphorus, Total (as P)	**278**	mg/kg	14.7	7.3	1	12/09/15 12:00	12/10/15 14:22	7723-14-0	
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012								
Cyanide	ND	mg/kg	0.38	0.19	1	12/09/15 10:30	12/09/15 15:11	57-12-5	
9056 IC Anions	Analytical Method: EPA 9056								
Chloride	**200J**	mg/kg	336	168	5		12/05/15 12:07	16887-00-6	
Fluoride	**17.4J**	mg/kg	33.6	16.8	5		12/05/15 12:07	16984-48-8	
Sulfate	ND	mg/kg	336	168	5		12/05/15 12:07	14808-79-8	D3
9056 IC Anions 48hr	Analytical Method: EPA 9056								
Nitrate as N	ND	mg/kg	33.6	16.8	5		12/05/15 12:07	14797-55-8	D3
Nitrite as N	ND	mg/kg	33.6	16.8	5		12/05/15 12:07	14797-65-0	D3
Orthophosphate as P	**61.7J**	mg/kg	67.1	33.6	5		12/05/15 12:07		D3

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-3 3-5FT **Lab ID: 92278504003** Collected: 12/03/15 14:30 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3546								
Aldrin	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	309-00-2	
alpha-BHC	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	319-84-6	
beta-BHC	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	319-85-7	
delta-BHC	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	319-86-8	
gamma-BHC (Lindane)	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	58-89-9	
Chlordane (Technical)	ND	ug/kg	99.7	99.7	10	12/07/15 08:35	12/11/15 19:54	57-74-9	
4,4'-DDD	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	72-54-8	
4,4'-DDE	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	72-55-9	
4,4'-DDT	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	50-29-3	
Dieldrin	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	60-57-1	
Endosulfan I	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	959-98-8	
Endosulfan II	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	33213-65-9	
Endosulfan sulfate	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	1031-07-8	
Endrin	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	72-20-8	
Endrin aldehyde	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	7421-93-4	
Endrin ketone	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	53494-70-5	
Heptachlor	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	76-44-8	
Heptachlor epoxide	ND	ug/kg	28.5	28.5	10	12/07/15 08:35	12/11/15 19:54	1024-57-3	
Methoxychlor	ND	ug/kg	71.2	71.2	10	12/07/15 08:35	12/11/15 19:54	72-43-5	
Toxaphene	ND	ug/kg	99.7	99.7	10	12/07/15 08:35	12/11/15 19:54	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	0	%	29-103		10	12/07/15 08:35	12/11/15 19:54	877-09-8	D3,S4
Decachlorobiphenyl (S)	0	%	25-145		10	12/07/15 08:35	12/11/15 19:54	2051-24-3	D3,S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Aluminum	**9940**	mg/kg	10.5	5.2	1	12/08/15 19:15	12/09/15 16:27	7429-90-5	
Antimony	**0.44J**	mg/kg	0.52	0.41	1	12/08/15 19:15	12/11/15 11:24	7440-36-0	
Arsenic	**1.8**	mg/kg	1.0	0.52	1	12/08/15 19:15	12/09/15 16:27	7440-38-2	
Barium	**7.6**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:27	7440-39-3	
Beryllium	**0.20**	mg/kg	0.10	0.052	1	12/08/15 19:15	12/09/15 16:27	7440-41-7	
Cadmium	ND	mg/kg	0.10	0.052	1	12/08/15 19:15	12/09/15 16:27	7440-43-9	
Calcium	**1310**	mg/kg	10.5	5.2	1	12/08/15 19:15	12/09/15 16:27	7440-70-2	
Chromium	**10.3**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:27	7440-47-3	
Cobalt	**0.87**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:27	7440-48-4	
Copper	**8.2**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:27	7440-50-8	
Iron	**7170**	mg/kg	10.5	5.2	1	12/08/15 19:15	12/09/15 16:27	7439-89-6	
Lead	**13.4**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/11/15 11:24	7439-92-1	
Magnesium	**159**	mg/kg	10.5	0.26	1	12/08/15 19:15	12/09/15 16:27	7439-95-4	
Manganese	**45.0**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:27	7439-96-5	
Nickel	**2.9**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:27	7440-02-0	
Potassium	ND	mg/kg	524	524	1	12/08/15 19:15	12/09/15 16:27	7440-09-7	
Selenium	**0.84J**	mg/kg	1.0	0.52	1	12/08/15 19:15	12/09/15 16:27	7782-49-2	
Silver	ND	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:27	7440-22-4	
Sodium	ND	mg/kg	524	262	1	12/08/15 19:15	12/09/15 16:27	7440-23-5	
Thallium	ND	mg/kg	1.0	0.52	1	12/08/15 19:15	12/09/15 16:27	7440-28-0	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-3 3-5FT **Lab ID: 92278504003** Collected: 12/03/15 14:30 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Vanadium	**22.0**	mg/kg	0.52	0.26	1	12/08/15 19:15	12/09/15 16:27	7440-62-2	
Zinc	**25.8**	mg/kg	1.0	0.52	1	12/08/15 19:15	12/09/15 16:27	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.045**	mg/kg	0.0062	0.00012	1	12/07/15 16:05	12/10/15 15:31	7439-97-6	
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	470	108	1	12/05/15 16:51	12/07/15 18:40	83-32-9	
Acenaphthylene	ND	ug/kg	470	111	1	12/05/15 16:51	12/07/15 18:40	208-96-8	
Acetophenone	ND	ug/kg	470	242	1	12/05/15 16:51	12/07/15 18:40	98-86-2	
Anthracene	ND	ug/kg	470	105	1	12/05/15 16:51	12/07/15 18:40	120-12-7	
Atrazine	ND	ug/kg	940	185	1	12/05/15 16:51	12/07/15 18:40	1912-24-9	
Benzaldehyde	ND	ug/kg	940	470	1	12/05/15 16:51	12/07/15 18:40	100-52-7	L2
Benzo(a)anthracene	ND	ug/kg	470	86.9	1	12/05/15 16:51	12/07/15 18:40	56-55-3	
Benzo(a)pyrene	ND	ug/kg	470	89.7	1	12/05/15 16:51	12/07/15 18:40	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	470	81.2	1	12/05/15 16:51	12/07/15 18:40	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	470	120	1	12/05/15 16:51	12/07/15 18:40	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	470	92.6	1	12/05/15 16:51	12/07/15 18:40	207-08-9	
Biphenyl (Diphenyl)	ND	ug/kg	470	148	1	12/05/15 16:51	12/07/15 18:40	92-52-4	
4-Bromophenylphenyl ether	ND	ug/kg	470	85.4	1	12/05/15 16:51	12/07/15 18:40	101-55-3	
Butylbenzylphthalate	ND	ug/kg	470	99.7	1	12/05/15 16:51	12/07/15 18:40	85-68-7	
Caprolactam	ND	ug/kg	470	81.2	1	12/05/15 16:51	12/07/15 18:40	105-60-2	
Carbazole	ND	ug/kg	470	89.7	1	12/05/15 16:51	12/07/15 18:40	86-74-8	
4-Chloro-3-methylphenol	ND	ug/kg	940	96.8	1	12/05/15 16:51	12/07/15 18:40	59-50-7	
4-Chloroaniline	ND	ug/kg	2350	131	1	12/05/15 16:51	12/07/15 18:40	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	470	110	1	12/05/15 16:51	12/07/15 18:40	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	470	120	1	12/05/15 16:51	12/07/15 18:40	111-44-4	
2-Chloronaphthalene	ND	ug/kg	470	92.6	1	12/05/15 16:51	12/07/15 18:40	91-58-7	
2-Chlorophenol	ND	ug/kg	470	128	1	12/05/15 16:51	12/07/15 18:40	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	470	96.8	1	12/05/15 16:51	12/07/15 18:40	7005-72-3	
Chrysene	ND	ug/kg	470	62.7	1	12/05/15 16:51	12/07/15 18:40	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	470	99.7	1	12/05/15 16:51	12/07/15 18:40	53-70-3	
Dibenzofuran	ND	ug/kg	470	76.9	1	12/05/15 16:51	12/07/15 18:40	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/kg	2350	103	1	12/05/15 16:51	12/07/15 18:40	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	470	103	1	12/05/15 16:51	12/07/15 18:40	120-83-2	
Diethylphthalate	ND	ug/kg	470	72.6	1	12/05/15 16:51	12/07/15 18:40	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	470	185	1	12/05/15 16:51	12/07/15 18:40	105-67-9	
Dimethylphthalate	ND	ug/kg	470	95.4	1	12/05/15 16:51	12/07/15 18:40	131-11-3	
Di-n-butylphthalate	ND	ug/kg	470	76.9	1	12/05/15 16:51	12/07/15 18:40	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	940	94.0	1	12/05/15 16:51	12/07/15 18:40	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2350	76.9	1	12/05/15 16:51	12/07/15 18:40	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	470	88.3	1	12/05/15 16:51	12/07/15 18:40	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	470	98.3	1	12/05/15 16:51	12/07/15 18:40	606-20-2	
Di-n-octylphthalate	ND	ug/kg	470	98.3	1	12/05/15 16:51	12/07/15 18:40	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	470	128	1	12/05/15 16:51	12/07/15 18:40	117-81-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-3 3-5FT **Lab ID: 92278504003** Collected: 12/03/15 14:30 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Fluoranthene	ND	ug/kg	470	68.4	1	12/05/15 16:51	12/07/15 18:40	206-44-0	
Fluorene	ND	ug/kg	470	96.8	1	12/05/15 16:51	12/07/15 18:40	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	470	81.2	1	12/05/15 16:51	12/07/15 18:40	87-68-3	
Hexachlorobenzene	ND	ug/kg	470	59.8	1	12/05/15 16:51	12/07/15 18:40	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	470	86.9	1	12/05/15 16:51	12/07/15 18:40	77-47-4	
Hexachloroethane	ND	ug/kg	470	124	1	12/05/15 16:51	12/07/15 18:40	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	470	96.8	1	12/05/15 16:51	12/07/15 18:40	193-39-5	
Isophorone	ND	ug/kg	470	105	1	12/05/15 16:51	12/07/15 18:40	78-59-1	
2-Methylnaphthalene	ND	ug/kg	470	101	1	12/05/15 16:51	12/07/15 18:40	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	470	142	1	12/05/15 16:51	12/07/15 18:40	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	470	185	1	12/05/15 16:51	12/07/15 18:40		
Naphthalene	ND	ug/kg	470	115	1	12/05/15 16:51	12/07/15 18:40	91-20-3	
2-Nitroaniline	ND	ug/kg	2350	145	1	12/05/15 16:51	12/07/15 18:40	88-74-4	
3-Nitroaniline	ND	ug/kg	2350	128	1	12/05/15 16:51	12/07/15 18:40	99-09-2	
4-Nitroaniline	ND	ug/kg	940	132	1	12/05/15 16:51	12/07/15 18:40	100-01-6	
Nitrobenzene	ND	ug/kg	470	128	1	12/05/15 16:51	12/07/15 18:40	98-95-3	
2-Nitrophenol	ND	ug/kg	470	114	1	12/05/15 16:51	12/07/15 18:40	88-75-5	
4-Nitrophenol	ND	ug/kg	2350	84.0	1	12/05/15 16:51	12/07/15 18:40	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/kg	470	89.7	1	12/05/15 16:51	12/07/15 18:40	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	470	140	1	12/05/15 16:51	12/07/15 18:40	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	470	125	1	12/05/15 16:51	12/07/15 18:40	108-60-1	
Pentachlorophenol	ND	ug/kg	2350	85.4	1	12/05/15 16:51	12/07/15 18:40	87-86-5	
Phenanthrene	ND	ug/kg	470	78.3	1	12/05/15 16:51	12/07/15 18:40	85-01-8	
Phenol	ND	ug/kg	470	141	1	12/05/15 16:51	12/07/15 18:40	108-95-2	
Pyrene	ND	ug/kg	470	79.7	1	12/05/15 16:51	12/07/15 18:40	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/kg	470	171	1	12/05/15 16:51	12/07/15 18:40	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/kg	470	185	1	12/05/15 16:51	12/07/15 18:40	58-90-2	
2,4,5-Trichlorophenol	ND	ug/kg	470	145	1	12/05/15 16:51	12/07/15 18:40	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	470	104	1	12/05/15 16:51	12/07/15 18:40	88-06-2	
Surrogates									
2-Fluorobiphenyl (S)	62	%	30-110		1	12/05/15 16:51	12/07/15 18:40	321-60-8	
Terphenyl-d14 (S)	82	%	28-110		1	12/05/15 16:51	12/07/15 18:40	1718-51-0	
Phenol-d6 (S)	63	%	22-110		1	12/05/15 16:51	12/07/15 18:40	13127-88-3	
2-Fluorophenol (S)	63	%	13-110		1	12/05/15 16:51	12/07/15 18:40	367-12-4	
2,4,6-Tribromophenol (S)	81	%	27-110		1	12/05/15 16:51	12/07/15 18:40	118-79-6	
Nitrobenzene-d5 (S)	69	%	23-110		1	12/05/15 16:51	12/07/15 18:40	4165-60-0	
Tentatively Identified Compounds									
Unknown	**537**	ug/kg			1	12/05/15 16:51	12/07/15 18:40		N
Unknown	**278**	ug/kg			1	12/05/15 16:51	12/07/15 18:40		N
Unknown	**524**	ug/kg			1	12/05/15 16:51	12/07/15 18:40		N
Unknown	**420**	ug/kg			1	12/05/15 16:51	12/07/15 18:40		N
Unknown	**286**	ug/kg			1	12/05/15 16:51	12/07/15 18:40		N
Unknown	**544**	ug/kg			1	12/05/15 16:51	12/07/15 18:40		N
Unknown	**252**	ug/kg			1	12/05/15 16:51	12/07/15 18:40		N
Unknown	**454**	ug/kg			1	12/05/15 16:51	12/07/15 18:40		N

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-3 3-5FT **Lab ID: 92278504003** Collected: 12/03/15 14:30 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Tentatively Identified Compounds									
Hexadecanoic acid	**359**	ug/kg			1	12/05/15 16:51	12/07/15 18:40	57-10-3	N
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	3930	393	25		12/07/15 19:57	67-64-1	
Benzene	ND	ug/kg	7.0	2.3	1		12/07/15 20:17	71-43-2	
Bromochloromethane	ND	ug/kg	7.0	2.4	1		12/07/15 20:17	74-97-5	
Bromodichloromethane	ND	ug/kg	7.0	2.7	1		12/07/15 20:17	75-27-4	
Bromoform	ND	ug/kg	7.0	3.2	1		12/07/15 20:17	75-25-2	
Bromomethane	ND	ug/kg	14.1	3.5	1		12/07/15 20:17	74-83-9	
2-Butanone (MEK)	**167**	ug/kg	141	4.1	1		12/07/15 20:17	78-93-3	
Carbon disulfide	**19.9**	ug/kg	14.1	4.2	1		12/07/15 20:17	75-15-0	
Carbon tetrachloride	ND	ug/kg	7.0	3.7	1		12/07/15 20:17	56-23-5	
Chlorobenzene	ND	ug/kg	7.0	2.7	1		12/07/15 20:17	108-90-7	
Chloroethane	ND	ug/kg	14.1	3.4	1		12/07/15 20:17	75-00-3	
Chloroform	ND	ug/kg	7.0	2.3	1		12/07/15 20:17	67-66-3	
Chloromethane	ND	ug/kg	14.1	3.4	1		12/07/15 20:17	74-87-3	
Cyclohexane	ND	ug/kg	7.0	2.3	1		12/07/15 20:17	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	7.0	5.1	1		12/07/15 20:17	96-12-8	
Dibromochloromethane	ND	ug/kg	7.0	2.5	1		12/07/15 20:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	7.0	2.5	1		12/07/15 20:17	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	7.0	2.7	1		12/07/15 20:17	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	7.0	2.8	1		12/07/15 20:17	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	7.0	2.4	1		12/07/15 20:17	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	14.1	5.1	1		12/07/15 20:17	75-71-8	
1,1-Dichloroethane	ND	ug/kg	7.0	2.1	1		12/07/15 20:17	75-34-3	
1,2-Dichloroethane	ND	ug/kg	7.0	3.1	1		12/07/15 20:17	107-06-2	
1,1-Dichloroethene	ND	ug/kg	7.0	2.5	1		12/07/15 20:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	7.0	2.0	1		12/07/15 20:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	7.0	2.7	1		12/07/15 20:17	156-60-5	
1,2-Dichloropropane	ND	ug/kg	7.0	2.4	1		12/07/15 20:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	7.0	2.5	1		12/07/15 20:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	7.0	2.1	1		12/07/15 20:17	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	211	169	1		12/07/15 20:17	123-91-1	
Ethylbenzene	ND	ug/kg	7.0	2.5	1		12/07/15 20:17	100-41-4	
2-Hexanone	**16.3J**	ug/kg	70.4	5.5	1		12/07/15 20:17	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	7.0	2.7	1		12/07/15 20:17	98-82-8	
Methyl acetate	ND	ug/kg	14.1	2.0	1		12/07/15 20:17	79-20-9	
Methylcyclohexane	ND	ug/kg	14.1	2.1	1		12/07/15 20:17	108-87-2	
Methylene Chloride	ND	ug/kg	28.1	4.2	1		12/07/15 20:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	**11.9J**	ug/kg	70.4	5.2	1		12/07/15 20:17	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	7.0	2.1	1		12/07/15 20:17	1634-04-4	
Styrene	ND	ug/kg	7.0	2.5	1		12/07/15 20:17	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	7.0	2.7	1		12/07/15 20:17	79-34-5	
Tetrachloroethene	ND	ug/kg	7.0	2.4	1		12/07/15 20:17	127-18-4	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-3 3-5FT **Lab ID: 92278504003** Collected: 12/03/15 14:30 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Toluene	**5.7J**	ug/kg	7.0	2.5	1		12/07/15 20:17	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	7.0	3.1	1		12/07/15 20:17	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	7.0	2.3	1		12/07/15 20:17	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	7.0	2.5	1		12/07/15 20:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	7.0	3.0	1		12/07/15 20:17	79-00-5	
Trichloroethene	ND	ug/kg	7.0	3.0	1		12/07/15 20:17	79-01-6	
Trichlorofluoromethane	ND	ug/kg	7.0	3.1	1		12/07/15 20:17	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	7.0	2.7	1		12/07/15 20:17	76-13-1	
Vinyl chloride	ND	ug/kg	14.1	2.5	1		12/07/15 20:17	75-01-4	
m&p-Xylene	ND	ug/kg	14.1	5.1	1		12/07/15 20:17	179601-23-1	
o-Xylene	ND	ug/kg	7.0	2.7	1		12/07/15 20:17	95-47-6	
Surrogates									
Toluene-d8 (S)	97	%	70-130		1		12/07/15 20:17	2037-26-5	
4-Bromofluorobenzene (S)	87	%	70-130		1		12/07/15 20:17	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-132		1		12/07/15 20:17	17060-07-0	
Tentatively Identified Compounds									
1R-.alpha.-Pinene	**189**	ug/kg			1		12/07/15 20:17	7785-70-8	N
Camphene	**37.8**	ug/kg			1		12/07/15 20:17	79-92-5	N
Cyclohexane, 1-methyl-4-	**377**	ug/kg			1		12/07/15 20:17	6069-98-3	N
C-10 or larger alkane	**18.9**	ug/kg			1		12/07/15 20:17		N
Limonene	**24.6**	ug/kg			1		12/07/15 20:17	138-86-3	N
Naphthalene, 2-ethenyl-	**28.0**	ug/kg			1		12/07/15 20:17	827-54-3	N
Diphenyl ether	**72.2**	ug/kg			1		12/07/15 20:17	101-84-8	N
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**29.8**	%	0.10	0.10	1		12/07/15 06:40		
8315 HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	**97100**	ug/kg	28500	10000	10	12/08/15 17:00	12/10/15 13:57	50-00-0	N2
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	**8.3**	Std. Units	0.10	0.10	1		12/07/15 16:15		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**4280**	mg/kg	71.2	71.2	5		12/10/15 08:40	7664-41-7	
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4								
Phosphorus, Total (as P)	**505**	mg/kg	198	99.1	20	12/09/15 12:00	12/10/15 15:32	7723-14-0	
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012								
Cyanide	ND	mg/kg	0.36	0.18	1	12/09/15 10:30	12/09/15 15:14	57-12-5	
9056 IC Anions	Analytical Method: EPA 9056								
Chloride	ND	mg/kg	354	177	5		12/05/15 12:29	16887-00-6	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-3 3-5FT **Lab ID: 92278504003** Collected: 12/03/15 14:30 Received: 12/03/15 17:55 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
Fluoride	**21.0J**	mg/kg	35.4	17.7	5		12/05/15 12:29	16984-48-8	
Sulfate	ND	mg/kg	354	177	5		12/05/15 12:29	14808-79-8	D3
9056 IC Anions 48hr	Analytical Method: EPA 9056								
Nitrate as N	ND	mg/kg	35.4	17.7	5		12/05/15 12:29	14797-55-8	D3
Nitrite as N	ND	mg/kg	35.4	17.7	5		12/05/15 12:29	14797-65-0	D3
Orthophosphate as P	ND	mg/kg	70.8	35.4	5		12/05/15 12:29		D3

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: MERP/8737 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 1621544 Matrix: Solid
Associated Lab Samples: 92278504001, 92278504002, 92278504003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	0.00030J	0.0062	0.00012	12/10/15 14:50	

LABORATORY CONTROL SAMPLE: 1621545

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.083	0.087	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621546 1621547

Parameter	Units	92278453001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	.056	.057	0.046	0.048	82	84	75-125	4	20	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: MPRP/20201 | Analysis Method: EPA 6010
QC Batch Method: EPA 3050 | Analysis Description: 6010 MET
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 1622643 | Matrix: Solid
Associated Lab Samples: 92278504001, 92278504002, 92278504003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/kg	ND	10.0	5.0	12/09/15 16:09	
Antimony	mg/kg	ND	0.50	0.39	12/11/15 11:06	
Arsenic	mg/kg	ND	1.0	0.50	12/09/15 16:09	
Barium	mg/kg	ND	0.50	0.25	12/09/15 16:09	
Beryllium	mg/kg	ND	0.10	0.050	12/09/15 16:09	
Cadmium	mg/kg	ND	0.10	0.050	12/09/15 16:09	
Calcium	mg/kg	ND	10.0	5.0	12/09/15 16:09	
Chromium	mg/kg	ND	0.50	0.25	12/09/15 16:09	
Cobalt	mg/kg	ND	0.50	0.25	12/09/15 16:09	
Copper	mg/kg	ND	0.50	0.25	12/09/15 16:09	
Iron	mg/kg	ND	10.0	5.0	12/09/15 16:09	
Lead	mg/kg	ND	0.50	0.25	12/11/15 11:06	
Magnesium	mg/kg	0.32J	10.0	0.25	12/09/15 16:09	
Manganese	mg/kg	ND	0.50	0.25	12/09/15 16:09	
Nickel	mg/kg	ND	0.50	0.25	12/09/15 16:09	
Potassium	mg/kg	ND	500	500	12/09/15 16:09	
Selenium	mg/kg	ND	1.0	0.50	12/09/15 16:09	
Silver	mg/kg	ND	0.50	0.25	12/09/15 16:09	
Sodium	mg/kg	ND	500	250	12/09/15 16:09	
Thallium	mg/kg	ND	1.0	0.50	12/09/15 16:09	
Vanadium	mg/kg	ND	0.50	0.25	12/09/15 16:09	
Zinc	mg/kg	ND	1.0	0.50	12/09/15 16:09	

LABORATORY CONTROL SAMPLE: 1622644

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/kg	500	491	98	80-120	
Antimony	mg/kg	50	56.1	112	80-120	
Arsenic	mg/kg	50	49.1	98	80-120	
Barium	mg/kg	50	50.3	101	80-120	
Beryllium	mg/kg	50	50.4	101	80-120	
Cadmium	mg/kg	50	50.0	100	80-120	
Calcium	mg/kg	500	484	97	80-120	
Chromium	mg/kg	50	50.6	101	80-120	
Cobalt	mg/kg	50	49.8	100	80-120	
Copper	mg/kg	50	50.4	101	80-120	
Iron	mg/kg	500	489	98	80-120	
Lead	mg/kg	50	50.7	101	80-120	
Magnesium	mg/kg	500	477	95	80-120	
Manganese	mg/kg	50	49.0	98	80-120	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

LABORATORY CONTROL SAMPLE: 1622644

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel	mg/kg	50	50.1	100	80-120	
Potassium	mg/kg	500	ND	98	80-120	
Selenium	mg/kg	50	49.3	99	80-120	
Silver	mg/kg	25	24.4	98	80-120	
Sodium	mg/kg	500	486J	97	80-120	
Thallium	mg/kg	50	48.2	96	80-120	
Vanadium	mg/kg	50	49.6	99	80-120	
Zinc	mg/kg	50	49.6	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1622645 1622646

Parameter	Units	92278504001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	mg/kg	5660	453	465	7450	7820	396	465	75-125	5	20	M1
Antimony	mg/kg	0.38J	45.3	46.5	40.2	38.8	88	83	75-125	4	20	
Arsenic	mg/kg	2.2	45.3	46.5	39.5	37.7	82	76	75-125	5	20	
Barium	mg/kg	12.1	45.3	46.5	51.3	53.7	87	90	75-125	5	20	
Beryllium	mg/kg	0.16	45.3	46.5	41.9	40.1	92	86	75-125	4	20	
Cadmium	mg/kg	ND	45.3	46.5	40.5	38.8	89	83	75-125	4	20	
Calcium	mg/kg	3170	453	465	1780	3440	-309	58	75-125	64	20	M1,R1
Chromium	mg/kg	6.8	45.3	46.5	48.2	46.3	92	85	75-125	4	20	
Cobalt	mg/kg	0.57	45.3	46.5	40.0	38.3	87	81	75-125	4	20	
Copper	mg/kg	5.5	45.3	46.5	48.5	47.3	95	90	75-125	2	20	
Iron	mg/kg	5010	453	465	5560	6740	123	372	75-125	19	20	M1
Lead	mg/kg	10.9	45.3	46.5	52.8	74.8	93	137	75-125	34	20	M1,R1
Magnesium	mg/kg	132	453	465	558	555	94	91	75-125	1	20	
Manganese	mg/kg	68.1	45.3	46.5	103	223	78	332	75-125	73	20	M1,R1
Nickel	mg/kg	2.3	45.3	46.5	42.0	40.1	88	81	75-125	5	20	
Potassium	mg/kg	ND	453	465	545	527	94	88	75-125	3	20	
Selenium	mg/kg	0.51J	45.3	46.5	38.9	37.2	85	79	75-125	4	20	
Silver	mg/kg	ND	22.6	23.3	20.0	19.2	88	83	75-125	4	20	
Sodium	mg/kg	ND	453	465	558	550	83	79	75-125	2	20	
Thallium	mg/kg	ND	45.3	46.5	36.6	35.7	81	77	75-125	3	20	
Vanadium	mg/kg	21.9	45.3	46.5	54.8	53.9	73	69	75-125	2	20	M1
Zinc	mg/kg	17.8	45.3	46.5	56.7	56.0	86	82	75-125	1	20	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: MSV/34565
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92278504003

METHOD BLANK: 1621285
Matrix: Solid
Associated Lab Samples: 92278504003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	6.6	2.4	12/07/15 10:42	
1,1,2,2-Tetrachloroethane	ug/kg	ND	6.6	2.5	12/07/15 10:42	
1,1,2-Trichloroethane	ug/kg	ND	6.6	2.8	12/07/15 10:42	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	6.6	2.5	12/07/15 10:42	
1,1-Dichloroethane	ug/kg	ND	6.6	2.0	12/07/15 10:42	
1,1-Dichloroethene	ug/kg	ND	6.6	2.4	12/07/15 10:42	
1,2,3-Trichlorobenzene	ug/kg	ND	6.6	2.9	12/07/15 10:42	
1,2,4-Trichlorobenzene	ug/kg	ND	6.6	2.1	12/07/15 10:42	
1,2-Dibromo-3-chloropropane	ug/kg	ND	6.6	4.8	12/07/15 10:42	
1,2-Dibromoethane (EDB)	ug/kg	ND	6.6	2.4	12/07/15 10:42	
1,2-Dichlorobenzene	ug/kg	ND	6.6	2.5	12/07/15 10:42	
1,2-Dichloroethane	ug/kg	ND	6.6	2.9	12/07/15 10:42	
1,2-Dichloropropane	ug/kg	ND	6.6	2.2	12/07/15 10:42	
1,3-Dichlorobenzene	ug/kg	ND	6.6	2.6	12/07/15 10:42	
1,4-Dichlorobenzene	ug/kg	ND	6.6	2.2	12/07/15 10:42	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	198	159	12/07/15 10:42	
2-Butanone (MEK)	ug/kg	ND	132	3.8	12/07/15 10:42	
2-Hexanone	ug/kg	ND	66.1	5.2	12/07/15 10:42	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	66.1	4.9	12/07/15 10:42	
Acetone	ug/kg	17.7J	132	13.2	12/07/15 10:42	
Benzene	ug/kg	ND	6.6	2.1	12/07/15 10:42	
Bromochloromethane	ug/kg	ND	6.6	2.2	12/07/15 10:42	
Bromodichloromethane	ug/kg	ND	6.6	2.5	12/07/15 10:42	
Bromoform	ug/kg	ND	6.6	3.0	12/07/15 10:42	
Bromomethane	ug/kg	ND	13.2	3.3	12/07/15 10:42	
Carbon disulfide	ug/kg	ND	13.2	4.0	12/07/15 10:42	
Carbon tetrachloride	ug/kg	ND	6.6	3.4	12/07/15 10:42	
Chlorobenzene	ug/kg	ND	6.6	2.5	12/07/15 10:42	
Chloroethane	ug/kg	ND	13.2	3.2	12/07/15 10:42	
Chloroform	ug/kg	ND	6.6	2.1	12/07/15 10:42	
Chloromethane	ug/kg	ND	13.2	3.2	12/07/15 10:42	
cis-1,2-Dichloroethene	ug/kg	ND	6.6	1.9	12/07/15 10:42	
cis-1,3-Dichloropropene	ug/kg	ND	6.6	2.4	12/07/15 10:42	
Cyclohexane	ug/kg	ND	6.6	2.1	12/07/15 10:42	
Dibromochloromethane	ug/kg	ND	6.6	2.4	12/07/15 10:42	
Dichlorodifluoromethane	ug/kg	ND	13.2	4.8	12/07/15 10:42	
Ethylbenzene	ug/kg	ND	6.6	2.4	12/07/15 10:42	
Isopropylbenzene (Cumene)	ug/kg	ND	6.6	2.5	12/07/15 10:42	
m&p-Xylene	ug/kg	ND	13.2	4.8	12/07/15 10:42	
Methyl acetate	ug/kg	ND	13.2	1.9	12/07/15 10:42	
Methyl-tert-butyl ether	ug/kg	ND	6.6	2.0	12/07/15 10:42	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

METHOD BLANK: 1621285 Matrix: Solid
Associated Lab Samples: 92278504003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/kg	ND	13.2	2.0	12/07/15 10:42	
Methylene Chloride	ug/kg	ND	26.5	4.0	12/07/15 10:42	
o-Xylene	ug/kg	ND	6.6	2.5	12/07/15 10:42	
Styrene	ug/kg	ND	6.6	2.4	12/07/15 10:42	
Tetrachloroethene	ug/kg	ND	6.6	2.2	12/07/15 10:42	
Toluene	ug/kg	ND	6.6	2.4	12/07/15 10:42	
trans-1,2-Dichloroethene	ug/kg	ND	6.6	2.5	12/07/15 10:42	
trans-1,3-Dichloropropene	ug/kg	ND	6.6	2.0	12/07/15 10:42	
Trichloroethene	ug/kg	ND	6.6	2.8	12/07/15 10:42	
Trichlorofluoromethane	ug/kg	ND	6.6	2.9	12/07/15 10:42	
Vinyl chloride	ug/kg	ND	13.2	2.4	12/07/15 10:42	
1,2-Dichloroethane-d4 (S)	%	97	70-132		12/07/15 10:42	
4-Bromofluorobenzene (S)	%	103	70-130		12/07/15 10:42	
Toluene-d8 (S)	%	101	70-130		12/07/15 10:42	

LABORATORY CONTROL SAMPLE: 1621286

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	50.9	49.5	97	67-140	
1,1,2,2-Tetrachloroethane	ug/kg	50.9	60.4	119	72-141	
1,1,2-Trichloroethane	ug/kg	50.9	57.2	112	78-138	
1,1,2-Trichlorotrifluoroethane	ug/kg	50.9	47.9	94	82-143	
1,1-Dichloroethane	ug/kg	50.9	50.3	99	69-134	
1,1-Dichloroethene	ug/kg	50.9	51.2	101	67-138	
1,2,3-Trichlorobenzene	ug/kg	50.9	60.6	119	70-146	
1,2,4-Trichlorobenzene	ug/kg	50.9	56.4	111	68-148	
1,2-Dibromo-3-chloropropane	ug/kg	50.9	59.8	117	65-140	
1,2-Dibromoethane (EDB)	ug/kg	50.9	62.3	122	77-135	
1,2-Dichlorobenzene	ug/kg	50.9	55.6	109	77-141	
1,2-Dichloroethane	ug/kg	50.9	52.3	103	65-137	
1,2-Dichloropropane	ug/kg	50.9	52.5	103	72-136	
1,3-Dichlorobenzene	ug/kg	50.9	55.1	108	74-138	
1,4-Dichlorobenzene	ug/kg	50.9	53.9	106	76-138	
1,4-Dioxane (p-Dioxane)	ug/kg	1020	1390	136	54-154	
2-Butanone (MEK)	ug/kg	102	126	124	58-147	
2-Hexanone	ug/kg	102	136	133	62-145	
4-Methyl-2-pentanone (MIBK)	ug/kg	102	133	131	64-149	
Acetone	ug/kg	102	110	108	53-153	
Benzene	ug/kg	50.9	55.9	110	73-135	
Bromochloromethane	ug/kg	50.9	51.7	101	73-134	
Bromodichloromethane	ug/kg	50.9	52.8	104	71-135	
Bromoform	ug/kg	50.9	55.9	110	66-141	
Bromomethane	ug/kg	50.9	54.8	108	53-160	
Carbon disulfide	ug/kg	50.9	45.8	90	63-140	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

LABORATORY CONTROL SAMPLE: 1621286

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	50.9	50.8	100	60-145	
Chlorobenzene	ug/kg	50.9	53.2	104	78-130	
Chloroethane	ug/kg	50.9	49.8	98	64-149	
Chloroform	ug/kg	50.9	52.2	102	70-134	
Chloromethane	ug/kg	50.9	52.2	102	52-150	
cis-1,2-Dichloroethene	ug/kg	50.9	53.1	104	70-133	
cis-1,3-Dichloropropene	ug/kg	50.9	54.6	107	68-134	
Cyclohexane	ug/kg	50.9	51.1	100	79-146	
Dibromochloromethane	ug/kg	50.9	55.3	109	71-138	
Dichlorodifluoromethane	ug/kg	50.9	56.0	110	40-160	
Ethylbenzene	ug/kg	50.9	49.8	98	75-133	
Isopropylbenzene (Cumene)	ug/kg	50.9	55.3	109	76-143	
m&p-Xylene	ug/kg	102	101	99	75-136	
Methyl acetate	ug/kg	50.9	48.7	96	31-160	
Methyl-tert-butyl ether	ug/kg	50.9	57.0	112	68-144	
Methylcyclohexane	ug/kg	50.9	55.7	109	84-149	
Methylene Chloride	ug/kg	50.9	49.8	98	45-154	
o-Xylene	ug/kg	50.9	50.2	99	76-141	
Styrene	ug/kg	50.9	53.1	104	79-137	
Tetrachloroethene	ug/kg	50.9	49.9	98	71-138	
Toluene	ug/kg	50.9	53.9	106	74-131	
trans-1,2-Dichloroethene	ug/kg	50.9	50.8	100	67-135	
trans-1,3-Dichloropropene	ug/kg	50.9	54.4	107	65-146	
Trichloroethene	ug/kg	50.9	55.6	109	67-135	
Trichlorofluoromethane	ug/kg	50.9	48.2	95	59-144	
Vinyl chloride	ug/kg	50.9	55.7	109	56-141	
1,2-Dichloroethane-d4 (S)	%			99	70-132	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			100	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: MSV/34587
Analysis Method: EPA 8260
QC Batch Method: EPA 8260
Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92278504001, 92278504002

METHOD BLANK: 1622296
Matrix: Solid
Associated Lab Samples: 92278504001, 92278504002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.2	1.9	12/08/15 12:54	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.2	2.0	12/08/15 12:54	
1,1,2-Trichloroethane	ug/kg	ND	5.2	2.2	12/08/15 12:54	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	5.2	2.0	12/08/15 12:54	
1,1-Dichloroethane	ug/kg	ND	5.2	1.6	12/08/15 12:54	
1,1-Dichloroethene	ug/kg	ND	5.2	1.9	12/08/15 12:54	
1,2,3-Trichlorobenzene	ug/kg	ND	5.2	2.3	12/08/15 12:54	
1,2,4-Trichlorobenzene	ug/kg	ND	5.2	1.7	12/08/15 12:54	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.2	3.7	12/08/15 12:54	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.2	1.9	12/08/15 12:54	
1,2-Dichlorobenzene	ug/kg	ND	5.2	2.0	12/08/15 12:54	
1,2-Dichloroethane	ug/kg	ND	5.2	2.3	12/08/15 12:54	
1,2-Dichloropropane	ug/kg	ND	5.2	1.8	12/08/15 12:54	
1,3-Dichlorobenzene	ug/kg	ND	5.2	2.1	12/08/15 12:54	
1,4-Dichlorobenzene	ug/kg	ND	5.2	1.8	12/08/15 12:54	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	156	124	12/08/15 12:54	
2-Butanone (MEK)	ug/kg	ND	104	3.0	12/08/15 12:54	
2-Hexanone	ug/kg	ND	51.9	4.0	12/08/15 12:54	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	51.9	3.8	12/08/15 12:54	
Acetone	ug/kg	ND	104	10.4	12/08/15 12:54	
Benzene	ug/kg	ND	5.2	1.7	12/08/15 12:54	
Bromochloromethane	ug/kg	ND	5.2	1.8	12/08/15 12:54	
Bromodichloromethane	ug/kg	ND	5.2	2.0	12/08/15 12:54	
Bromoform	ug/kg	ND	5.2	2.4	12/08/15 12:54	
Bromomethane	ug/kg	ND	10.4	2.6	12/08/15 12:54	
Carbon disulfide	ug/kg	ND	10.4	3.1	12/08/15 12:54	
Carbon tetrachloride	ug/kg	ND	5.2	2.7	12/08/15 12:54	
Chlorobenzene	ug/kg	ND	5.2	2.0	12/08/15 12:54	
Chloroethane	ug/kg	ND	10.4	2.5	12/08/15 12:54	
Chloroform	ug/kg	ND	5.2	1.7	12/08/15 12:54	
Chloromethane	ug/kg	ND	10.4	2.5	12/08/15 12:54	
cis-1,2-Dichloroethene	ug/kg	ND	5.2	1.5	12/08/15 12:54	
cis-1,3-Dichloropropene	ug/kg	ND	5.2	1.9	12/08/15 12:54	
Cyclohexane	ug/kg	ND	5.2	1.7	12/08/15 12:54	
Dibromochloromethane	ug/kg	ND	5.2	1.9	12/08/15 12:54	
Dichlorodifluoromethane	ug/kg	ND	10.4	3.7	12/08/15 12:54	
Ethylbenzene	ug/kg	ND	5.2	1.9	12/08/15 12:54	
Isopropylbenzene (Cumene)	ug/kg	ND	5.2	2.0	12/08/15 12:54	
m&p-Xylene	ug/kg	ND	10.4	3.7	12/08/15 12:54	
Methyl acetate	ug/kg	ND	10.4	1.5	12/08/15 12:54	
Methyl-tert-butyl ether	ug/kg	ND	5.2	1.6	12/08/15 12:54	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

METHOD BLANK: 1622296 Matrix: Solid
Associated Lab Samples: 92278504001, 92278504002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/kg	ND	10.4	1.6	12/08/15 12:54	
Methylene Chloride	ug/kg	ND	20.7	3.1	12/08/15 12:54	
o-Xylene	ug/kg	ND	5.2	2.0	12/08/15 12:54	
Styrene	ug/kg	ND	5.2	1.9	12/08/15 12:54	
Tetrachloroethene	ug/kg	ND	5.2	1.8	12/08/15 12:54	
Toluene	ug/kg	ND	5.2	1.9	12/08/15 12:54	
trans-1,2-Dichloroethene	ug/kg	ND	5.2	2.0	12/08/15 12:54	
trans-1,3-Dichloropropene	ug/kg	ND	5.2	1.6	12/08/15 12:54	
Trichloroethene	ug/kg	ND	5.2	2.2	12/08/15 12:54	
Trichlorofluoromethane	ug/kg	ND	5.2	2.3	12/08/15 12:54	
Vinyl chloride	ug/kg	ND	10.4	1.9	12/08/15 12:54	
1,2-Dichloroethane-d4 (S)	%	89	70-132		12/08/15 12:54	
4-Bromofluorobenzene (S)	%	97	70-130		12/08/15 12:54	
Toluene-d8 (S)	%	99	70-130		12/08/15 12:54	

LABORATORY CONTROL SAMPLE: 1622297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	57.5	49.0	85	67-140	
1,1,2,2-Tetrachloroethane	ug/kg	57.5	53.7	93	72-141	
1,1,2-Trichloroethane	ug/kg	57.5	53.0	92	78-138	
1,1,2-Trichlorotrifluoroethane	ug/kg	57.5	49.7	86	82-143	
1,1-Dichloroethane	ug/kg	57.5	50.8	88	69-134	
1,1-Dichloroethene	ug/kg	57.5	50.3	87	67-138	
1,2,3-Trichlorobenzene	ug/kg	57.5	57.2	100	70-146	
1,2,4-Trichlorobenzene	ug/kg	57.5	54.1	94	68-148	
1,2-Dibromo-3-chloropropane	ug/kg	57.5	51.9	90	65-140	
1,2-Dibromoethane (EDB)	ug/kg	57.5	57.0	99	77-135	
1,2-Dichlorobenzene	ug/kg	57.5	57.3	100	77-141	
1,2-Dichloroethane	ug/kg	57.5	46.9	82	65-137	
1,2-Dichloropropane	ug/kg	57.5	54.0	94	72-136	
1,3-Dichlorobenzene	ug/kg	57.5	55.9	97	74-138	
1,4-Dichlorobenzene	ug/kg	57.5	55.8	97	76-138	
1,4-Dioxane (p-Dioxane)	ug/kg	1150	1090	95	54-154	
2-Butanone (MEK)	ug/kg	115	93.0J	81	58-147	
2-Hexanone	ug/kg	115	101	88	62-145	
4-Methyl-2-pentanone (MIBK)	ug/kg	115	106	92	64-149	
Acetone	ug/kg	115	83.5J	73	53-153	
Benzene	ug/kg	57.5	56.5	98	73-135	
Bromochloromethane	ug/kg	57.5	50.8	88	73-134	
Bromodichloromethane	ug/kg	57.5	52.1	91	71-135	
Bromoform	ug/kg	57.5	50.3	87	66-141	
Bromomethane	ug/kg	57.5	57.9	101	53-160	
Carbon disulfide	ug/kg	57.5	55.5	97	63-140	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

LABORATORY CONTROL SAMPLE: 1622297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	57.5	51.7	90	60-145	
Chlorobenzene	ug/kg	57.5	55.3	96	78-130	
Chloroethane	ug/kg	57.5	53.8	94	64-149	
Chloroform	ug/kg	57.5	50.3	88	70-134	
Chloromethane	ug/kg	57.5	52.2	91	52-150	
cis-1,2-Dichloroethene	ug/kg	57.5	53.1	92	70-133	
cis-1,3-Dichloropropene	ug/kg	57.5	52.3	91	68-134	
Cyclohexane	ug/kg	57.5	49.9	87	79-146	
Dibromochloromethane	ug/kg	57.5	53.4	93	71-138	
Dichlorodifluoromethane	ug/kg	57.5	54.7	95	40-160	
Ethylbenzene	ug/kg	57.5	52.1	91	75-133	
Isopropylbenzene (Cumene)	ug/kg	57.5	58.7	102	76-143	
m&p-Xylene	ug/kg	115	105	91	75-136	
Methyl acetate	ug/kg	57.5	45.3	79	31-160	
Methyl-tert-butyl ether	ug/kg	57.5	50.3	88	68-144	
Methylcyclohexane	ug/kg	57.5	56.0	97	84-149	
Methylene Chloride	ug/kg	57.5	49.2	86	45-154	
o-Xylene	ug/kg	57.5	53.0	92	76-141	
Styrene	ug/kg	57.5	55.1	96	79-137	
Tetrachloroethene	ug/kg	57.5	50.1	87	71-138	
Toluene	ug/kg	57.5	54.3	95	74-131	
trans-1,2-Dichloroethene	ug/kg	57.5	53.4	93	67-135	
trans-1,3-Dichloropropene	ug/kg	57.5	50.0	87	65-146	
Trichloroethene	ug/kg	57.5	55.3	96	67-135	
Trichlorofluoromethane	ug/kg	57.5	47.3	82	59-144	
Vinyl chloride	ug/kg	57.5	58.4	102	56-141	
1,2-Dichloroethane-d4 (S)	%			89	70-132	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 1623560

Parameter	Units	92278215005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	17.1	13.9	81	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	ND	17.1	20.2	118	70-130	
1,1,2-Trichloroethane	ug/kg	ND	17.1	18.5	108	70-130	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	17.1	15.3	90	70-130	
1,1-Dichloroethane	ug/kg	ND	17.1	14.5	85	70-130	
1,1-Dichloroethene	ug/kg	ND	17.1	14.0	82	49-180	
1,2,3-Trichlorobenzene	ug/kg	ND	17.1	8.1	47	70-130	M1
1,2,4-Trichlorobenzene	ug/kg	ND	17.1	7.8	46	70-130	M1
1,2-Dibromo-3-chloropropane	ug/kg	ND	17.1	18.0	105	70-130	
1,2-Dibromoethane (EDB)	ug/kg	ND	17.1	20.4	120	70-130	
1,2-Dichlorobenzene	ug/kg	ND	17.1	12.9	76	70-130	
1,2-Dichloroethane	ug/kg	ND	17.1	16.3	96	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

MATRIX SPIKE SAMPLE: 1623560

Parameter	Units	92278215005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	ug/kg	ND	17.1	16.4	96	70-130	
1,3-Dichlorobenzene	ug/kg	ND	17.1	12.5	73	70-130	
1,4-Dichlorobenzene	ug/kg	ND	17.1	12.5	73	70-130	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	341	415	122	70-130	
2-Butanone (MEK)	ug/kg	ND	34.1	43.4J	127	70-130	
2-Hexanone	ug/kg	ND	34.1	46.3	136	70-130	M1
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	34.1	48.1	141	70-130	M1
Acetone	ug/kg	ND	34.1	332	972	70-130	E,M1
Benzene	ug/kg	ND	17.1	16.7	98	50-166	
Bromochloromethane	ug/kg	ND	17.1	18.3	107	70-130	
Bromodichloromethane	ug/kg	ND	17.1	15.1	89	70-130	
Bromoform	ug/kg	ND	17.1	15.1	88	70-130	
Bromomethane	ug/kg	ND	17.1	16.8	99	70-130	
Carbon disulfide	ug/kg	ND	17.1	15.5	91	70-130	
Carbon tetrachloride	ug/kg	ND	17.1	13.5	79	70-130	
Chlorobenzene	ug/kg	ND	17.1	14.0	82	43-169	
Chloroethane	ug/kg	ND	17.1	15.6	91	70-130	
Chloroform	ug/kg	ND	17.1	15.6	91	70-130	
Chloromethane	ug/kg	ND	17.1	14.3	84	70-130	
cis-1,2-Dichloroethene	ug/kg	ND	17.1	15.6	91	70-130	
cis-1,3-Dichloropropene	ug/kg	ND	17.1	16.6	97	70-130	
Cyclohexane	ug/kg	ND	17.1	14.4	84	70-130	
Dibromochloromethane	ug/kg	ND	17.1	16.6	97	70-130	
Dichlorodifluoromethane	ug/kg	ND	17.1	13.4	78	70-130	
Ethylbenzene	ug/kg	ND	17.1	13.6	80	70-130	
Isopropylbenzene (Cumene)	ug/kg	ND	17.1	14.2	83	70-130	
m&p-Xylene	ug/kg	ND	34.1	26.3	77	70-130	
Methyl acetate	ug/kg	ND	17.1	15.7	92	70-130	
Methyl-tert-butyl ether	ug/kg	ND	17.1	21.1	124	70-130	
Methylcyclohexane	ug/kg	ND	17.1	14.2	83	70-130	
Methylene Chloride	ug/kg	ND	17.1	17.7	103	70-130	
o-Xylene	ug/kg	ND	17.1	13.7	80	70-130	
Styrene	ug/kg	ND	17.1	12.9	75	70-130	
Tetrachloroethene	ug/kg	ND	17.1	12.7	75	70-130	
Toluene	ug/kg	ND	17.1	15.6	91	52-163	
trans-1,2-Dichloroethene	ug/kg	ND	17.1	15.7	92	70-130	
trans-1,3-Dichloropropene	ug/kg	ND	17.1	16.0	93	70-130	
Trichloroethene	ug/kg	ND	17.1	15.1	89	49-167	
Trichlorofluoromethane	ug/kg	ND	17.1	13.7	80	70-130	
Vinyl chloride	ug/kg	ND	17.1	17.2	100	70-130	
1,2-Dichloroethane-d4 (S)	%				101	70-132	
4-Bromofluorobenzene (S)	%				97	70-130	
Toluene-d8 (S)	%				98	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

SAMPLE DUPLICATE: 1623559

Parameter	Units	92278707001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND		30	
1,1,2-Trichloroethane	ug/kg	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	ND		30	
1,1-Dichloroethane	ug/kg	ND	ND		30	
1,1-Dichloroethene	ug/kg	ND	ND		30	
1,2,3-Trichlorobenzene	ug/kg	ND	ND		30	
1,2,4-Trichlorobenzene	ug/kg	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/kg	ND	ND		30	
1,2-Dichlorobenzene	ug/kg	ND	ND		30	
1,2-Dichloroethane	ug/kg	ND	ND		30	
1,2-Dichloropropane	ug/kg	ND	ND		30	
1,3-Dichlorobenzene	ug/kg	ND	ND		30	
1,4-Dichlorobenzene	ug/kg	ND	ND		30	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	ND		30	
2-Butanone (MEK)	ug/kg	ND	ND		30	
2-Hexanone	ug/kg	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND		30	
Acetone	ug/kg	ND	21.9J		30	
Benzene	ug/kg	ND	ND		30	
Bromochloromethane	ug/kg	ND	ND		30	
Bromodichloromethane	ug/kg	ND	ND		30	
Bromoform	ug/kg	ND	ND		30	
Bromomethane	ug/kg	ND	ND		30	
Carbon disulfide	ug/kg	ND	ND		30	
Carbon tetrachloride	ug/kg	ND	ND		30	
Chlorobenzene	ug/kg	ND	ND		30	
Chloroethane	ug/kg	ND	ND		30	
Chloroform	ug/kg	ND	ND		30	
Chloromethane	ug/kg	ND	ND		30	
cis-1,2-Dichloroethene	ug/kg	ND	ND		30	
cis-1,3-Dichloropropene	ug/kg	ND	ND		30	
Cyclohexane	ug/kg	ND	ND		30	
Dibromochloromethane	ug/kg	ND	ND		30	
Dichlorodifluoromethane	ug/kg	ND	ND		30	
Ethylbenzene	ug/kg	ND	ND		30	
Isopropylbenzene (Cumene)	ug/kg	ND	ND		30	
m&p-Xylene	ug/kg	ND	ND		30	
Methyl acetate	ug/kg	ND	ND		30	
Methyl-tert-butyl ether	ug/kg	ND	ND		30	
Methylcyclohexane	ug/kg	ND	ND		30	
Methylene Chloride	ug/kg	ND	4.5J		30	
o-Xylene	ug/kg	ND	ND		30	
Styrene	ug/kg	ND	ND		30	
Tetrachloroethene	ug/kg	ND	ND		30	
Toluene	ug/kg	ND	ND		30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

SAMPLE DUPLICATE: 1623559

Parameter	Units	92278707001 Result	Dup Result	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/kg	ND	ND		30	
trans-1,3-Dichloropropene	ug/kg	ND	ND		30	
Trichloroethene	ug/kg	ND	ND		30	
Trichlorofluoromethane	ug/kg	ND	ND		30	
Vinyl chloride	ug/kg	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	88	91	15		
4-Bromofluorobenzene (S)	%	87	82	6		
Toluene-d8 (S)	%	95	90	8		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: OEXT/39497 Analysis Method: EPA 8081
QC Batch Method: EPA 3546 Analysis Description: 8081 GCS Pesticides
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 1621169 Matrix: Solid
Associated Lab Samples: 92278504001, 92278504002, 92278504003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
4,4'-DDD	ug/kg	ND	2.0	2.0	12/11/15 06:07	
4,4'-DDE	ug/kg	ND	2.0	2.0	12/11/15 06:07	
4,4'-DDT	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Aldrin	ug/kg	ND	2.0	2.0	12/11/15 06:07	
alpha-BHC	ug/kg	ND	2.0	2.0	12/11/15 06:07	
beta-BHC	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Chlordane (Technical)	ug/kg	ND	7.0	7.0	12/11/15 06:07	
delta-BHC	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Dieldrin	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Endosulfan I	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Endosulfan II	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Endosulfan sulfate	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Endrin	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Endrin aldehyde	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Endrin ketone	ug/kg	ND	2.0	2.0	12/11/15 06:07	
gamma-BHC (Lindane)	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Heptachlor	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Heptachlor epoxide	ug/kg	ND	2.0	2.0	12/11/15 06:07	
Methoxychlor	ug/kg	ND	5.0	5.0	12/11/15 06:07	
Toxaphene	ug/kg	ND	7.0	7.0	12/11/15 06:07	
Decachlorobiphenyl (S)	%	90	21-123		12/11/15 06:07	
Tetrachloro-m-xylene (S)	%	84	35-108		12/11/15 06:07	

LABORATORY CONTROL SAMPLE: 1621170

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/kg	8.3	8.5	103	63-126	
4,4'-DDE	ug/kg	8.3	8.2	100	62-126	
4,4'-DDT	ug/kg	8.3	8.9	107	65-135	
Aldrin	ug/kg	8.3	6.7	82	40-120	
alpha-BHC	ug/kg	8.3	6.6	80	37-123	
beta-BHC	ug/kg	8.3	8.1	98	51-113	
delta-BHC	ug/kg	8.3	7.4	89	25-139	
Dieldrin	ug/kg	8.3	8.2	100	54-125	
Endosulfan I	ug/kg	8.3	7.9	96	54-125	
Endosulfan II	ug/kg	8.3	8.6	105	62-121	
Endosulfan sulfate	ug/kg	8.3	8.6	104	39-121	
Endrin	ug/kg	8.3	8.6	104	65-134	
Endrin aldehyde	ug/kg	8.3	7.2	87	44-121	
Endrin ketone	ug/kg	8.3	7.8	95	59-124	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

LABORATORY CONTROL SAMPLE: 1621170

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
gamma-BHC (Lindane)	ug/kg	8.3	7.0	85	41-121	
Heptachlor	ug/kg	8.3	6.4	77	43-120	
Heptachlor epoxide	ug/kg	8.3	7.3	89	47-118	
Methoxychlor	ug/kg	24.8	26.2	106	68-125	
Decachlorobiphenyl (S)	%			99	21-123	
Tetrachloro-m-xylene (S)	%			91	35-108	

MATRIX SPIKE SAMPLE: 1621171

Parameter	Units	92278504001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/kg	ND	11.4	105	929	50-150	M6
4,4'-DDE	ug/kg	ND	11.4	85.7	755	50-150	M6
4,4'-DDT	ug/kg	ND	11.4	69.7	614	50-150	M6
Aldrin	ug/kg	ND	11.4	338	2980	50-150	M6
alpha-BHC	ug/kg	ND	11.4	64.0	564	50-150	M6
beta-BHC	ug/kg	ND	11.4	263	2320	50-150	M6
delta-BHC	ug/kg	ND	11.4	190	1680	50-150	M6
Dieldrin	ug/kg	ND	11.4	75.9	669	50-150	M6
Endosulfan I	ug/kg	ND	11.4	99.2	873	50-150	M6
Endosulfan II	ug/kg	ND	11.4	47.9	422	50-150	M6
Endosulfan sulfate	ug/kg	ND	11.4	33.5	295	50-150	M6
Endrin	ug/kg	ND	11.4	66.4	585	50-150	M6
Endrin aldehyde	ug/kg	ND	11.4	ND	221	50-150	M6
Endrin ketone	ug/kg	ND	11.4	ND	177	50-150	M6
gamma-BHC (Lindane)	ug/kg	ND	11.4	67.6	596	50-150	M6
Heptachlor	ug/kg	ND	11.4	69.4	611	50-150	M6
Heptachlor epoxide	ug/kg	ND	11.4	591	5210	50-150	M3,M6
Methoxychlor	ug/kg	ND	34.1	ND	124	50-150	
Decachlorobiphenyl (S)	%				0	21-123	S4
Tetrachloro-m-xylene (S)	%				0	35-108	D3,S4

SAMPLE DUPLICATE: 1621172

Parameter	Units	92278504002 Result	Dup Result	RPD	Max RPD	Qualifiers
4,4'-DDD	ug/kg	ND	ND			
4,4'-DDE	ug/kg	ND	ND			
4,4'-DDT	ug/kg	ND	ND			
Aldrin	ug/kg	ND	ND			
alpha-BHC	ug/kg	ND	ND			
beta-BHC	ug/kg	ND	ND			
Chlordane (Technical)	ug/kg	ND	ND			
delta-BHC	ug/kg	ND	ND			
Dieldrin	ug/kg	ND	ND			
Endosulfan I	ug/kg	ND	ND			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

SAMPLE DUPLICATE: 1621172

Parameter	Units	92278504002 Result	Dup Result	RPD	Max RPD	Qualifiers
Endosulfan II	ug/kg	ND	ND			
Endosulfan sulfate	ug/kg	ND	ND			
Endrin	ug/kg	ND	ND			
Endrin aldehyde	ug/kg	ND	ND			
Endrin ketone	ug/kg	ND	ND			
gamma-BHC (Lindane)	ug/kg	ND	ND			
Heptachlor	ug/kg	ND	ND			
Heptachlor epoxide	ug/kg	ND	ND			
Methoxychlor	ug/kg	ND	ND			
Toxaphene	ug/kg	ND	ND			
Decachlorobiphenyl (S)	%	0	0			S4
Tetrachloro-m-xylene (S)	%	0	0			D3,S4

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: OEXT/39483 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 1620738 Matrix: Solid
Associated Lab Samples: 92278504001, 92278504002, 92278504003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/kg	ND	330	120	12/07/15 16:11	
2,2'-Oxybis(1-chloropropane)	ug/kg	ND	330	88.0	12/08/15 12:12	
2,3,4,6-Tetrachlorophenol	ug/kg	ND	330	130	12/08/15 12:12	
2,4,5-Trichlorophenol	ug/kg	ND	330	102	12/08/15 12:12	
2,4,6-Trichlorophenol	ug/kg	ND	330	73.0	12/08/15 12:12	
2,4-Dichlorophenol	ug/kg	ND	330	72.0	12/08/15 12:12	
2,4-Dimethylphenol	ug/kg	ND	330	130	12/08/15 12:12	
2,4-Dinitrophenol	ug/kg	ND	1650	54.0	12/08/15 12:12	
2,4-Dinitrotoluene	ug/kg	ND	330	62.0	12/08/15 12:12	
2,6-Dinitrotoluene	ug/kg	ND	330	69.0	12/08/15 12:12	
2-Chloronaphthalene	ug/kg	ND	330	65.0	12/08/15 12:12	
2-Chlorophenol	ug/kg	ND	330	90.0	12/08/15 12:12	
2-Methylnaphthalene	ug/kg	ND	330	71.0	12/08/15 12:12	
2-Methylphenol(o-Cresol)	ug/kg	ND	330	100	12/08/15 12:12	
2-Nitroaniline	ug/kg	ND	1650	102	12/08/15 12:12	
2-Nitrophenol	ug/kg	ND	330	80.0	12/08/15 12:12	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	330	130	12/08/15 12:12	
3,3'-Dichlorobenzidine	ug/kg	ND	1650	72.0	12/08/15 12:12	
3-Nitroaniline	ug/kg	ND	1650	90.0	12/08/15 12:12	
4,6-Dinitro-2-methylphenol	ug/kg	ND	660	66.0	12/08/15 12:12	
4-Bromophenylphenyl ether	ug/kg	ND	330	60.0	12/08/15 12:12	
4-Chloro-3-methylphenol	ug/kg	ND	660	68.0	12/08/15 12:12	
4-Chloroaniline	ug/kg	ND	1650	92.0	12/08/15 12:12	
4-Chlorophenylphenyl ether	ug/kg	ND	330	68.0	12/08/15 12:12	
4-Nitroaniline	ug/kg	ND	660	93.0	12/08/15 12:12	
4-Nitrophenol	ug/kg	ND	1650	59.0	12/08/15 12:12	
Acenaphthene	ug/kg	ND	330	76.0	12/08/15 12:12	
Acenaphthylene	ug/kg	ND	330	78.0	12/08/15 12:12	
Acetophenone	ug/kg	ND	330	170	12/08/15 12:12	
Anthracene	ug/kg	ND	330	74.0	12/08/15 12:12	
Atrazine	ug/kg	ND	660	130	12/07/15 16:11	
Benzaldehyde	ug/kg	ND	660	330	12/07/15 16:11	
Benzo(a)anthracene	ug/kg	ND	330	61.0	12/08/15 12:12	
Benzo(a)pyrene	ug/kg	ND	330	63.0	12/08/15 12:12	
Benzo(b)fluoranthene	ug/kg	ND	330	57.0	12/08/15 12:12	
Benzo(g,h,i)perylene	ug/kg	ND	330	84.0	12/08/15 12:12	
Benzo(k)fluoranthene	ug/kg	ND	330	65.0	12/08/15 12:12	
Biphenyl (Diphenyl)	ug/kg	ND	330	104	12/08/15 12:12	
bis(2-Chloroethoxy)methane	ug/kg	ND	330	77.0	12/08/15 12:12	
bis(2-Chloroethyl) ether	ug/kg	ND	330	84.0	12/08/15 12:12	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	90.0	12/08/15 12:12	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

METHOD BLANK: 1620738 Matrix: Solid
Associated Lab Samples: 92278504001, 92278504002, 92278504003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Butylbenzylphthalate	ug/kg	ND	330	70.0	12/08/15 12:12	
Caprolactam	ug/kg	ND	330	57.0	12/07/15 16:11	
Carbazole	ug/kg	ND	330	63.0	12/08/15 12:12	
Chrysene	ug/kg	ND	330	44.0	12/08/15 12:12	
Di-n-butylphthalate	ug/kg	ND	330	54.0	12/08/15 12:12	
Di-n-octylphthalate	ug/kg	ND	330	69.0	12/08/15 12:12	
Dibenz(a,h)anthracene	ug/kg	ND	330	70.0	12/08/15 12:12	
Dibenzofuran	ug/kg	ND	330	54.0	12/08/15 12:12	
Diethylphthalate	ug/kg	ND	330	51.0	12/08/15 12:12	
Dimethylphthalate	ug/kg	ND	330	67.0	12/08/15 12:12	
Fluoranthene	ug/kg	ND	330	48.0	12/08/15 12:12	
Fluorene	ug/kg	ND	330	68.0	12/08/15 12:12	
Hexachloro-1,3-butadiene	ug/kg	ND	330	57.0	12/08/15 12:12	
Hexachlorobenzene	ug/kg	ND	330	42.0	12/08/15 12:12	
Hexachlorocyclopentadiene	ug/kg	ND	330	61.0	12/08/15 12:12	
Hexachloroethane	ug/kg	ND	330	87.0	12/08/15 12:12	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	68.0	12/08/15 12:12	
Isophorone	ug/kg	ND	330	74.0	12/08/15 12:12	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	63.0	12/08/15 12:12	
N-Nitrosodiphenylamine	ug/kg	ND	330	98.0	12/08/15 12:12	
Naphthalene	ug/kg	ND	330	81.0	12/08/15 12:12	
Nitrobenzene	ug/kg	ND	330	90.0	12/08/15 12:12	
Pentachlorophenol	ug/kg	ND	1650	60.0	12/08/15 12:12	
Phenanthrene	ug/kg	ND	330	55.0	12/08/15 12:12	
Phenol	ug/kg	ND	330	99.0	12/08/15 12:12	
Pyrene	ug/kg	ND	330	56.0	12/08/15 12:12	
2,4,6-Tribromophenol (S)	%	80	27-110		12/08/15 12:12	
2-Fluorobiphenyl (S)	%	78	30-110		12/08/15 12:12	
2-Fluorophenol (S)	%	65	13-110		12/08/15 12:12	
Nitrobenzene-d5 (S)	%	74	23-110		12/08/15 12:12	
Phenol-d6 (S)	%	67	22-110		12/08/15 12:12	
Terphenyl-d14 (S)	%	89	28-110		12/08/15 12:12	

LABORATORY CONTROL SAMPLE & LCSD: 1620739 1620740

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/kg	1670	1240	1220	74	73	36-124	1	30	
2,2'-Oxybis(1-chloropropane)	ug/kg	1670	969	1000	58	60	17-120	3	30	
2,3,4,6-Tetrachlorophenol	ug/kg	1670	2930	3060	176	184	82-262	4	30	
2,4,5-Trichlorophenol	ug/kg	1670	1460	1570	88	94	37-120	7	30	
2,4,6-Trichlorophenol	ug/kg	1670	1350	1460	81	88	40-120	8	30	
2,4-Dichlorophenol	ug/kg	1670	1360	1460	82	88	33-120	7	30	
2,4-Dimethylphenol	ug/kg	1670	1300	1370	78	82	36-120	5	30	
2,4-Dinitrophenol	ug/kg	8330	7180	7820	86	94	22-121	9	30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

LABORATORY CONTROL SAMPLE & LCSD: 1620739 1620740

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4-Dinitrotoluene	ug/kg	1670	1590	1670	96	100	60-120	5	30	
2,6-Dinitrotoluene	ug/kg	1670	1560	1630	94	98	54-120	5	30	
2-Chloronaphthalene	ug/kg	1670	1530	1860	92	111	41-120	19	30	
2-Chlorophenol	ug/kg	1670	1300	1380	78	83	39-120	6	30	
2-Methylnaphthalene	ug/kg	1670	1260	1350	76	81	26-120	7	30	
2-Methylphenol(o-Cresol)	ug/kg	1670	1450	1530	87	92	41-120	5	30	
2-Nitroaniline	ug/kg	3330	2460	2660	74	80	45-120	8	30	
2-Nitrophenol	ug/kg	1670	1340	1470	81	88	35-120	9	30	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	1240	1320	74	79	35-120	6	30	
3,3'-Dichlorobenzidine	ug/kg	8330	2590	2710	31	33	16-125	4	30	
3-Nitroaniline	ug/kg	3330	2810	2990	84	90	45-120	6	30	
4,6-Dinitro-2-methylphenol	ug/kg	3330	2890	3090	87	93	46-120	7	30	
4-Bromophenylphenyl ether	ug/kg	1670	1330	1380	80	83	36-120	3	30	
4-Chloro-3-methylphenol	ug/kg	3330	2840	3070	85	92	37-120	8	30	
4-Chloroaniline	ug/kg	3330	2200	2320	66	69	35-120	5	30	
4-Chlorophenylphenyl ether	ug/kg	1670	1280	1330	77	80	30-120	4	30	
4-Nitroaniline	ug/kg	3330	3130	3310	94	99	48-120	5	30	
4-Nitrophenol	ug/kg	8330	7850	8220	94	99	43-120	5	30	
Acenaphthene	ug/kg	1670	1430	1510	86	90	46-120	5	30	
Acenaphthylene	ug/kg	1670	1500	1590	90	96	46-120	6	30	
Acetophenone	ug/kg	1670	1250	1300	75	78	39-120	4	30	
Anthracene	ug/kg	1670	1550	1610	93	96	63-120	4	30	
Atrazine	ug/kg	1670	1630	1470	98	88	70-156	11	30	
Benzaldehyde	ug/kg	1670	ND	ND	4	4	10-120		30	L0
Benzo(a)anthracene	ug/kg	1670	1480	1530	89	92	61-120	3	30	
Benzo(a)pyrene	ug/kg	1670	1480	1520	89	91	59-120	3	30	
Benzo(b)fluoranthene	ug/kg	1670	1520	1560	91	94	55-120	2	30	
Benzo(g,h,i)perylene	ug/kg	1670	1240	1350	74	81	57-120	9	30	
Benzo(k)fluoranthene	ug/kg	1670	1860	1870	112	112	56-120	1	30	
Biphenyl (Diphenyl)	ug/kg	1670	1300	1380	78	83	40-120	6	30	
bis(2-Chloroethoxy)methane	ug/kg	1670	1180	1250	71	75	21-120	5	30	
bis(2-Chloroethyl) ether	ug/kg	1670	1110	1150	66	69	25-120	4	30	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1660	1810	100	109	56-123	9	30	
Butylbenzylphthalate	ug/kg	1670	1710	1870	103	112	57-120	9	30	
Caprolactam	ug/kg	1670	1540	1430	93	86	23-163	8	30	
Carbazole	ug/kg	1670	1530	1590	92	96	57-120	4	30	
Chrysene	ug/kg	1670	1450	1520	87	91	64-120	5	30	
Di-n-butylphthalate	ug/kg	1670	1760	1860	106	111	58-120	5	30	
Di-n-octylphthalate	ug/kg	1670	1450	1570	87	94	47-121	8	30	
Dibenz(a,h)anthracene	ug/kg	1670	1290	1380	78	83	56-120	6	30	
Dibenzofuran	ug/kg	1670	1390	1460	84	88	43-120	5	30	
Diethylphthalate	ug/kg	1670	1530	1620	92	97	55-120	5	30	
Dimethylphthalate	ug/kg	1670	1450	1530	87	92	54-120	5	30	
Fluoranthene	ug/kg	1670	1610	1690	97	101	61-120	5	30	
Fluorene	ug/kg	1670	1530	1600	92	96	51-120	5	30	
Hexachloro-1,3-butadiene	ug/kg	1670	1250	1340	75	80	22-120	7	30	
Hexachlorobenzene	ug/kg	1670	1470	1530	88	92	53-120	4	30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

LABORATORY CONTROL SAMPLE & LCSD: 1620739 1620740

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Hexachlorocyclopentadiene	ug/kg	1670	962	1060	58	63	18-150	9	30	
Hexachloroethane	ug/kg	1670	1480	1520	89	91	39-120	3	30	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1280	1390	77	83	58-120	8	30	
Isophorone	ug/kg	1670	1230	1310	74	79	38-120	7	30	
N-Nitroso-di-n-propylamine	ug/kg	1670	1280	1280	77	77	30-120	0	30	
N-Nitrosodiphenylamine	ug/kg	1670	1380	1430	83	86	50-120	4	30	
Naphthalene	ug/kg	1670	1290	1370	77	82	38-120	7	30	
Nitrobenzene	ug/kg	1670	1170	1270	70	76	37-120	8	30	
Pentachlorophenol	ug/kg	8330	2540	2900	30	35	10-120	13	30	
Phenanthrene	ug/kg	1670	1400	1460	84	88	62-120	4	30	
Phenol	ug/kg	1670	1300	1390	78	83	37-120	7	30	
Pyrene	ug/kg	1670	1550	1660	93	100	63-120	7	30	
2,4,6-Tribromophenol (S)	%				87	91	27-110			
2-Fluorobiphenyl (S)	%				81	83	30-110			
2-Fluorophenol (S)	%				76	79	13-110			
Nitrobenzene-d5 (S)	%				72	78	23-110			
Phenol-d6 (S)	%				76	80	22-110			
Terphenyl-d14 (S)	%				85	89	28-110			

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: PMST/8627 | Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 | Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92278504001, 92278504002, 92278504003

SAMPLE DUPLICATE: 1620837

Parameter	Units	92278466001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	79.5	79.7	0	25	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: TAMP/7944 | Analysis Method: EPA 8315
QC Batch Method: EPA 8315 | Analysis Description: 8315 HPLC Solid
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 1413392 | Matrix: Solid
Associated Lab Samples: 92278504001, 92278504002, 92278504003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Formaldehyde	ug/kg	ND	2000	702	12/09/15 18:45	N2

LABORATORY CONTROL SAMPLE: 1413393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Formaldehyde	ug/kg	5000	3980	79.5	70-130	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1413394 1413395

Parameter	Units	92278244001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Formaldehyde	ug/kg	88100	9310	9310	85200	94100	-31.6	63.6	70-130	9.9	40	M6,N2

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: WET/41791 Analysis Method: EPA 9045
QC Batch Method: EPA 9045 Analysis Description: 9045 pH
Associated Lab Samples: 92278504001, 92278504002, 92278504003

SAMPLE DUPLICATE: 1621148

Parameter	Units	92278226001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.2	8.2	1	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: WETA/25688 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 1623354 Matrix: Solid
Associated Lab Samples: 92278504001, 92278504002, 92278504003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/kg	ND	10.0	10.0	12/10/15 07:35	

LABORATORY CONTROL SAMPLE: 1623355

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/kg	500	488	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1623356 1623357

Parameter	Units	92278244001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/kg	9290	895	895	8520	8440	-87	-95	90-110	1	10	M1,M6

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: WETA/52854 | Analysis Method: EPA 365.4
QC Batch Method: EPA 365.4 | Analysis Description: 365.4 Total Phosphorus
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 1415069 | Matrix: Solid
Associated Lab Samples: 92278504001, 92278504002, 92278504003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus, Total (as P)	mg/kg	ND	6.7	3.4	12/10/15 15:25	

LABORATORY CONTROL SAMPLE: 1415070

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P)	mg/kg	358	360	101	90-110	

MATRIX SPIKE SAMPLE: 1415072

Parameter	Units	35219805001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P)	mg/kg	0.0014 % (w/w)	161	163	93	80-120	

SAMPLE DUPLICATE: 1415071

Parameter	Units	35219805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus, Total (as P)	mg/kg	0.0014 % (w/w)	14.2	3	20	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: WETA/52818 Analysis Method: EPA 9012
QC Batch Method: EPA 9012 Analysis Description: 9012 Cyanide
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 1414366 Matrix: Solid
Associated Lab Samples: 92278504001, 92278504002, 92278504003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	mg/kg	ND	0.27	0.13	12/09/15 14:58	

LABORATORY CONTROL SAMPLE: 1414367

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/kg	.63	0.61	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1414368 1414369

Parameter	Units	35219932001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/kg	0.15U	.61	.76	0.68	0.73	100	87	80-120	7	20	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: WETA/52759 | Analysis Method: EPA 9056
QC Batch Method: EPA 9056 | Analysis Description: 9056 IC Anions
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 1412052 | Matrix: Solid
Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/kg	ND	49.9	25.0	12/05/15 13:54	
Fluoride	mg/kg	ND	5.0	2.5	12/05/15 13:54	
Sulfate	mg/kg	ND	49.9	25.0	12/05/15 13:54	

LABORATORY CONTROL SAMPLE: 1412053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/kg	500	490	98	80-120	
Fluoride	mg/kg	50	49.6	99	80-120	
Sulfate	mg/kg	500	483	97	80-120	

MATRIX SPIKE SAMPLE: 1412055

Parameter	Units	92278504001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/kg	182J	689	743	81	80-120	
Sulfate	mg/kg	ND	689	681	87	80-120	

SAMPLE DUPLICATE: 1412054

Parameter	Units	92278504001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fluoride	mg/kg	ND	ND		20	
Sulfate	mg/kg	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: WETA/52760 | Analysis Method: EPA 9056
QC Batch Method: EPA 9056 | Analysis Description: 9056 IC Anions
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 1412056 | Matrix: Solid
Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate as N	mg/kg	ND	5.0	2.5	12/05/15 13:54	
Nitrite as N	mg/kg	ND	5.0	2.5	12/05/15 13:54	
Orthophosphate as P	mg/kg	ND	10	5.0	12/05/15 13:54	

LABORATORY CONTROL SAMPLE: 1412057

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/kg	50	49.6	99	80-120	
Nitrite as N	mg/kg	50	50.8	102	80-120	
Orthophosphate as P	mg/kg	100	101	101	80-120	

MATRIX SPIKE SAMPLE: 1412059

Parameter	Units	92278504001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/kg	ND	68.9	66.8	97	80-120	H1
Nitrite as N	mg/kg	ND	68.9	66.4	96	80-120	H1
Orthophosphate as P	mg/kg	ND	138	125	70	80-120	H1,M1

SAMPLE DUPLICATE: 1412058

Parameter	Units	92278504001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate as N	mg/kg	ND	ND		20	H1
Nitrite as N	mg/kg	ND	ND		20	H1
Orthophosphate as P	mg/kg	ND	33.9J		20	H1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 3-5FT **Lab ID: 92278504001** Collected: 12/03/15 11:20 Received: 12/03/15 17:55 Matrix: Solid
PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Bismuth-212	EPA 901.1	**1.285 ± 0.647 (0.625)** **C:NA T:NA**	pCi/g	01/04/16 12:12	14913-49-6	
Bismuth-214	EPA 901.1	**0.903 ± 0.219 (0.148)** **C:NA T:NA**	pCi/g	01/04/16 12:12	14733-03-0	
Lead-212	EPA 901.1	**0.836 ± 0.176 (0.144)** **C:NA T:NA**	pCi/g	01/04/16 12:12	15092-94-1	
Lead-214	EPA 901.1	**1.088 ± 0.246 (0.154)** **C:NA T:NA**	pCi/g	01/04/16 12:12	15067-28-4	
Potassium-40	EPA 901.1	**3.565 ± 1.617 (1.354)** **C:NA T:NA**	pCi/g	01/04/16 12:12	13966-00-2	
Radium-226	EPA 901.1	**0.984 ± 0.221 (0.148)** **C:NA T:NA**	pCi/g	01/04/16 12:12	13982-63-3	
Radium-228	EPA 901.1	**0.875 ± 0.338 (0.288)** **C:NA T:NA**	pCi/g	01/04/16 12:12	15262-20-1	
Thallium-208	EPA 901.1	**0.281 ± 0.092 (0.075)** **C:NA T:NA**	pCi/g	01/04/16 12:12	14913-50-9	
Thorium-234	EPA 901.1	**0.887 ± 2.492 (3.085)** **C:NA T:NA**	pCi/g	01/04/16 12:12	15065-10-8	
Uranium-235	EPA 901.1	**0.146 ± 0.071 (0.081)** **C:NA T:NA**	pCi/g	01/04/16 12:12	15117-96-1	
Gross Alpha	EPA 9310	**7.46 ± 5.50 (9.79)** **C:NA T:NA**	pCi/g	12/18/15 10:21	12587-46-1	
Gross Beta	EPA 9310	**4.17 ± 3.13 (5.97)** **C:NA T:NA**	pCi/g	12/18/15 10:21	12587-47-2	
Uranium-234	HSL-300	**0.844 ± 0.248 (0.112)** **C:NA T:100%**	pCi/g	12/22/15 09:39	13966-29-5	N2
Uranium-235	HSL-300	**0.084 ± 0.079 (0.088)** **C:NA T:100%**	pCi/g	12/22/15 09:39	15117-96-1	N2
Uranium-238	HSL-300	**0.752 ± 0.229 (0.067)** **C:NA T:100%**	pCi/g	12/22/15 09:39		N2

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-2 8-10FT **Lab ID: 92278504002** Collected: 12/03/15 12:30 Received: 12/03/15 17:55 Matrix: Solid
PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Bismuth-212	EPA 901.1	**1.753 ± 0.716 (0.557)** **C:NA T:NA**	pCi/g	01/04/16 12:12	14913-49-6	
Bismuth-214	EPA 901.1	**1.292 ± 0.264 (0.148)** **C:NA T:NA**	pCi/g	01/04/16 12:12	14733-03-0	
Lead-212	EPA 901.1	**1.035 ± 0.194 (0.154)** **C:NA T:NA**	pCi/g	01/04/16 12:12	15092-94-1	
Lead-214	EPA 901.1	**1.174 ± 0.245 (0.162)** **C:NA T:NA**	pCi/g	01/04/16 12:12	15067-28-4	
Potassium-40	EPA 901.1	**5.993 ± 1.442 (0.907)** **C:NA T:NA**	pCi/g	01/04/16 12:12	13966-00-2	
Radium-226	EPA 901.1	**1.270 ± 0.238 (0.148)** **C:NA T:NA**	pCi/g	01/04/16 12:12	13982-63-3	
Radium-228	EPA 901.1	**1.193 ± 0.252 (0.316)** **C:NA T:NA**	pCi/g	01/04/16 12:12	15262-20-1	
Thallium-208	EPA 901.1	**0.337 ± 0.101 (0.078)** **C:NA T:NA**	pCi/g	01/04/16 12:12	14913-50-9	
Thorium-234	EPA 901.1	**2.422 ± 1.036 (1.390)** **C:NA T:NA**	pCi/g	01/04/16 12:12	15065-10-8	
Uranium-235	EPA 901.1	**0.227 ± 0.091 (0.093)** **C:NA T:NA**	pCi/g	01/04/16 12:12	15117-96-1	
Gross Alpha	EPA 9310	**10.6 ± 5.46 (7.82)** **C:NA T:NA**	pCi/g	12/18/15 10:22	12587-46-1	
Gross Beta	EPA 9310	**7.77 ± 2.93 (4.14)** **C:NA T:NA**	pCi/g	12/18/15 10:22	12587-47-2	
Uranium-234	HSL-300	**1.40 ± 0.357 (0.041)** **C:NA T:91%**	pCi/g	12/22/15 09:39	13966-29-5	N2
Uranium-235	HSL-300	**-0.009 ± 0.070 (0.116)** **C:NA T:91%**	pCi/g	12/22/15 09:39	15117-96-1	N2
Uranium-238	HSL-300	**1.30 ± 0.340 (0.075)** **C:NA T:91%**	pCi/g	12/22/15 09:39		N2

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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278504

Sample: HAB-3 3-5FT **Lab ID: 92278504003** Collected: 12/03/15 14:30 Received: 12/03/15 17:55 Matrix: Solid
PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Bismuth-212	EPA 901.1	**2.453 ± 1.114 (0.991)** **C:NA T:NA**	pCi/g	01/04/16 12:53	14913-49-6	
Bismuth-214	EPA 901.1	**0.716 ± 0.215 (0.168)** **C:NA T:NA**	pCi/g	01/04/16 12:53	14733-03-0	
Lead-212	EPA 901.1	**0.921 ± 0.195 (0.148)** **C:NA T:NA**	pCi/g	01/04/16 12:53	15092-94-1	
Lead-214	EPA 901.1	**0.803 ± 0.214 (0.154)** **C:NA T:NA**	pCi/g	01/04/16 12:53	15067-28-4	
Potassium-40	EPA 901.1	**5.255 ± 1.366 (0.963)** **C:NA T:NA**	pCi/g	01/04/16 12:53	13966-00-2	
Radium-226	EPA 901.1	**0.788 ± 0.191 (0.168)** **C:NA T:NA**	pCi/g	01/04/16 12:53	13982-63-3	
Radium-228	EPA 901.1	**1.125 ± 0.287 (0.287)** **C:NA T:NA**	pCi/g	01/04/16 12:53	15262-20-1	
Thallium-208	EPA 901.1	**0.318 ± 0.105 (0.082)** **C:NA T:NA**	pCi/g	01/04/16 12:53	14913-50-9	
Thorium-234	EPA 901.1	**2.275 ± 1.882 (3.168)** **C:NA T:NA**	pCi/g	01/04/16 12:53	15065-10-8	
Uranium-235	EPA 901.1	**0.162 ± 0.088 (0.099)** **C:NA T:NA**	pCi/g	01/04/16 12:53	15117-96-1	
Gross Alpha	EPA 9310	**7.32 ± 5.39 (9.65)** **C:NA T:NA**	pCi/g	12/18/15 10:22	12587-46-1	
Gross Beta	EPA 9310	**8.04 ± 3.52 (5.84)** **C:NA T:NA**	pCi/g	12/18/15 10:22	12587-47-2	
Uranium-234	HSL-300	**0.470 ± 0.186 (0.138)** **C:NA T:91%**	pCi/g	12/22/15 09:39	13966-29-5	N2
Uranium-235	HSL-300	**0.133 ± 0.105 (0.098)** **C:NA T:91%**	pCi/g	12/22/15 09:39	15117-96-1	N2
Uranium-238	HSL-300	**0.446 ± 0.177 (0.090)** **C:NA T:91%**	pCi/g	12/22/15 09:39		N2

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: RADC/27247 Analysis Method: EPA 9310
QC Batch Method: EPA 9310 Analysis Description: 9310 Gross Alpha/Beta
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 998775 Matrix: Solid
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.077 ± 0.102 (0.282) C:NA T:NA	pCi/g	12/18/15 10:46	
Gross Beta	-0.058 ± 0.100 (0.250) C:NA T:NA	pCi/g	12/18/15 10:46	

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: RADC/27288 Analysis Method: HSL-300
QC Batch Method: HSL-300 Analysis Description: HSL300(AS) Actinides
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 999573 Matrix: Solid
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Uranium-234	0.073 ± 0.074 (0.114) C:NA T:89%	pCi/g	12/22/15 09:39	N2
Uranium-235	-0.008 ± 0.070 (0.110) C:NA T:89%	pCi/g	12/22/15 09:39	N2
Uranium-238	0.011 ± 0.053 (0.074) C:NA T:89%	pCi/g	12/22/15 09:39	N2

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92278504

QC Batch: RADC/27234 Analysis Method: EPA 901.1
QC Batch Method: EPA 901.1 Analysis Description: 901.1 Gamma Spec Ingrowth
Associated Lab Samples: 92278504001, 92278504002, 92278504003

METHOD BLANK: 998079 Matrix: Solid
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Bismuth-212	0.000 ± 0.301 (1.247) C:NA T:NA	pCi/g	12/21/15 09:31	
Bismuth-214	0.049 ± 0.086 (0.249) C:NA T:NA	pCi/g	12/21/15 09:31	
Lead-212	0.059 ± 0.087 (0.106) C:NA T:NA	pCi/g	12/21/15 09:31	
Lead-214	0.020 ± 0.146 (0.168) C:NA T:NA	pCi/g	12/21/15 09:31	
Potassium-40	0.000 ± 0.291 (1.231) C:NA T:NA	pCi/g	12/21/15 09:31	
Radium-226	0.128 ± 0.077 (0.249) C:NA T:NA	pCi/g	12/21/15 09:31	
Radium-228	0.068 ± 0.081 (0.457) C:NA T:NA	pCi/g	12/21/15 09:31	
Thallium-208	0.002 ± 0.076 (0.086) C:NA T:NA	pCi/g	12/21/15 09:31	
Thorium-234	0.377 ± 1.981 (2.537) C:NA T:NA	pCi/g	12/21/15 09:31	
Uranium-235	0.000 ± 0.043 (0.086) C:NA T:NA	pCi/g	12/21/15 09:31	

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QUALIFIERS

Project: Wright Chemical Site
Pace Project No.: 92278504

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.

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, Styrene, and Vinyl chloride.

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte
PASI-O	Pace Analytical Services - Ormond Beach
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

C9	Common Laboratory Contaminant.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H1	Analysis conducted outside the EPA method holding time.
IO	The internal standard response was outside the laboratory acceptance limits confirmed by reanalysis. The results reported are from the most QC compliant analysis.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

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QUALIFIERS

Project: Wright Chemical Site
Pace Project No.: 92278504

ANALYTE QUALIFIERS

L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N	Tentatively identified compound (TIC) based on mass spectral library search. Result is estimated.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Wright Chemical Site
Pace Project No.: 92278504

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92278504001	**HAB-2 3-5FT**	EPA 3546	OEXT/39497	EPA 8081	GCSV/23463
92278504002	**HAB-2 8-10FT**	EPA 3546	OEXT/39497	EPA 8081	GCSV/23463
92278504003	**HAB-3 3-5FT**	EPA 3546	OEXT/39497	EPA 8081	GCSV/23463
92278504001	**HAB-2 3-5FT**	EPA 3050	MPRP/20201	EPA 6010	ICP/18231
92278504002	**HAB-2 8-10FT**	EPA 3050	MPRP/20201	EPA 6010	ICP/18231
92278504003	**HAB-3 3-5FT**	EPA 3050	MPRP/20201	EPA 6010	ICP/18231
92278504001	**HAB-2 3-5FT**	EPA 7471	MERP/8737	EPA 7471	MERC/8388
92278504002	**HAB-2 8-10FT**	EPA 7471	MERP/8737	EPA 7471	MERC/8388
92278504003	**HAB-3 3-5FT**	EPA 7471	MERP/8737	EPA 7471	MERC/8388
92278504001	**HAB-2 3-5FT**	EPA 3546	OEXT/39483	EPA 8270	MSSV/11606
92278504002	**HAB-2 8-10FT**	EPA 3546	OEXT/39483	EPA 8270	MSSV/11606
92278504003	**HAB-3 3-5FT**	EPA 3546	OEXT/39483	EPA 8270	MSSV/11606
92278504001	**HAB-2 3-5FT**	EPA 8260	MSV/34587		
92278504001	**HAB-2 3-5FT**	EPA 8260	MSV/35094		
92278504002	**HAB-2 8-10FT**	EPA 8260	MSV/34587		
92278504002	**HAB-2 8-10FT**	EPA 8260	MSV/35094		
92278504003	**HAB-3 3-5FT**	EPA 8260	MSV/34565		
92278504003	**HAB-3 3-5FT**	EPA 8260	MSV/35094		
92278504001	**HAB-2 3-5FT**	ASTM D2974-87	PMST/8627		
92278504002	**HAB-2 8-10FT**	ASTM D2974-87	PMST/8627		
92278504003	**HAB-3 3-5FT**	ASTM D2974-87	PMST/8627		
92278504001	**HAB-2 3-5FT**	EPA 901.1	RADC/27234		
92278504002	**HAB-2 8-10FT**	EPA 901.1	RADC/27234		
92278504003	**HAB-3 3-5FT**	EPA 901.1	RADC/27234		
92278504001	**HAB-2 3-5FT**	EPA 9310	RADC/27247		
92278504002	**HAB-2 8-10FT**	EPA 9310	RADC/27247		
92278504003	**HAB-3 3-5FT**	EPA 9310	RADC/27247		
92278504001	**HAB-2 3-5FT**	HSL-300	RADC/27288		
92278504002	**HAB-2 8-10FT**	HSL-300	RADC/27288		
92278504003	**HAB-3 3-5FT**	HSL-300	RADC/27288		
92278504001	**HAB-2 3-5FT**	EPA 8315	TAMP/7944	EPA 8315	TAMP/8013
92278504002	**HAB-2 8-10FT**	EPA 8315	TAMP/7944	EPA 8315	TAMP/8013
92278504003	**HAB-3 3-5FT**	EPA 8315	TAMP/7944	EPA 8315	TAMP/8013
92278504001	**HAB-2 3-5FT**	EPA 9045	WET/41791		
92278504002	**HAB-2 8-10FT**	EPA 9045	WET/41791		
92278504003	**HAB-3 3-5FT**	EPA 9045	WET/41791		
92278504001	**HAB-2 3-5FT**	EPA 350.1	WETA/25688		
92278504002	**HAB-2 8-10FT**	EPA 350.1	WETA/25688		
92278504003	**HAB-3 3-5FT**	EPA 350.1	WETA/25688		
92278504001	**HAB-2 3-5FT**	EPA 365.4	WETA/52854	EPA 365.4	WETA/52887

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Wright Chemical Site
Pace Project No.: 92278504

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92278504002	**HAB-2 8-10FT**	EPA 365.4	WETA/52854	EPA 365.4	WETA/52887
92278504003	**HAB-3 3-5FT**	EPA 365.4	WETA/52854	EPA 365.4	WETA/52887
92278504001	**HAB-2 3-5FT**	EPA 9012	WETA/52818	EPA 9012	WETA/52852
92278504002	**HAB-2 8-10FT**	EPA 9012	WETA/52818	EPA 9012	WETA/52852
92278504003	**HAB-3 3-5FT**	EPA 9012	WETA/52818	EPA 9012	WETA/52852
92278504001	**HAB-2 3-5FT**	EPA 9056	WETA/52759		
92278504002	**HAB-2 8-10FT**	EPA 9056	WETA/52759		
92278504003	**HAB-3 3-5FT**	EPA 9056	WETA/52759		
92278504001	**HAB-2 3-5FT**	EPA 9056	WETA/52760		
92278504002	**HAB-2 8-10FT**	EPA 9056	WETA/52760		
92278504003	**HAB-3 3-5FT**	EPA 9056	WETA/52760		

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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 2

Section A — Required Client Information:

Company: Shield Engineering
Address: 4301 Taggart Creek Rd Charlotte, NC 28208
Email To: dstoner@shieldengineering.com
Phone: 704-394-6913 Fax: 704-394-6916
Requested Due Date: Standard

Section B — Required Project Information:

Report To: David Stoner
Copy To:
Purchase Order #: 92553
Project Name: Wright Chemical Site
Project Number: 1100044-05

Section C — Invoice Information:

Attention: David Stoner
Company Name: Shield
Address: 4301 Taggart Creek Rd Charlotte
Pace Quote:
Pace Project Manager: Nicole Gasiorowski
Pace Profile #: 7739-4

Regulatory Agency

State / Location: NC

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	TCL VOCs + TICs	TCL SVOCs + TICs	TCL Pesticides	TAL Metals	pH/CN/NH3/PO4	Cl/No2/NO3/Ortho-P	Fluoride/Sulfate	RAD	Formaldehyde				Residual Chlorine (Y/N)	92278504
1	HAB-2 3-5ft	SL	G			12/3	1120		13	8						1	4		X	X	X	X	X	X	X	X	X					001
2	HAB-2 8-10ft	SL	G			12/3	1230		13	8						1	4		X	X	X	X	X	X	X	X	X					002
3	HAB-3 3-5ft	SL	G			12/3	1430		13	8						1	4		X	X	X	X	X	X	X	X	X					003
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Danny Hefner / SHIELD	12/3/15	17:55	J. Dixon / Pace	12-3	17:55				
				[illegible] / Pace	12/5/15	1709	4.1	Y	N	Y
				AC 12/8/15	12/4/15	AC 12/5				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Danny Hefner

SIGNATURE of SAMPLER: Danny Hefner

DATE Signed: 12/3/15

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

WO# : 92278504

92278504

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

March 02, 2016

Mr. Mike Armour
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

RE: Project: Wright Chem-Waste Character
Pace Project No.: 92286999

Dear Mr. Armour:
Enclosed are the analytical results for sample(s) received by the laboratory on February 17, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Nicole Gasiorowski

Nicole Gasiorowski
nicole.gasiorowski@pacelabs.com
Project Manager

Enclosures

cc: Dave Stoner
Dave Wallace

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CERTIFICATIONS

Project: Wright Chem-Waste Character
Pace Project No.: 92286999

Pennsylvania Certification IDs
Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Wyoming Certification: FL NELAC Reciprocity
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
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

Asheville Certification IDs
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: Wright Chem-Waste Character
Pace Project No.: 92286999

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92286999001	**Monofill Composite**	Solid	02/17/16 12:15	02/17/16 17:25

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SAMPLE ANALYTE COUNT

Project: Wright Chem-Waste Character
Pace Project No.: 92286999

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92286999001	**Monofill Composite**	EPA 8081	SWB	8	PASI-C
		EPA 8151	LJM	3	PASI-O
		EPA 6010	CDF	1	PASI-A
		ASTM D2974-87	KDF	1	PASI-C
		EPA 1010	MLS	1	PASI-A
		SW-846 7.3.4.2	PAS	1	PASI-PA

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PROJECT NARRATIVE

Project: Wright Chem-Waste Character
Pace Project No.: 92286999

Method: **EPA 8081**
Description: 8081 GCS Pesticides, TCLP
Client: Shield
Date: March 02, 2016

General Information:
1 sample was analyzed for EPA 8081. 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 3510 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.

QC Batch: OEXT/41080

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- Monofill Composite (Lab ID: 92286999001)
  - Tetrachloro-m-xylene (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.

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: Wright Chem-Waste Character
Pace Project No.: 92286999

Method: **EPA 8151**
Description: 8151 Chlorinate Herbicide TCLP
Client: Shield
Date: March 02, 2016

General Information:
1 sample was analyzed for EPA 8151. 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 3510 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: Wright Chem-Waste Character
Pace Project No.: 92286999

Method: **EPA 6010**
Description: 6010 MET ICP, TCLP
Client: Shield
Date: March 02, 2016

General Information:
1 sample was analyzed for EPA 6010. 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 3010A 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: Wright Chem-Waste Character
Pace Project No.: 92286999

Method: **EPA 1010**
Description: 1010 Flashpoint,Closed Cup
Client: Shield
Date: March 02, 2016

General Information:
1 sample was analyzed for EPA 1010. 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: Wright Chem-Waste Character
Pace Project No.: 92286999

Method: **SW-846 7.3.4.2**
Description: 735S Reactive Sulfide
Client: Shield
Date: March 02, 2016

General Information:
1 sample was analyzed for SW-846 7.3.4.2. 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.

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: Wright Chem-Waste Character
Pace Project No.: 92286999

Sample: Monofill Composite **Lab ID: 92286999001** Collected: 02/17/16 12:15 Received: 02/17/16 17:25 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides, TCLP	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
	Leachate Method/Date: EPA 1311; 02/29/16 13:00								
gamma-BHC (Lindane)	ND	ug/L	0.50	0.50	1	03/01/16 14:30	03/02/16 12:15	58-89-9	
Chlordane (Technical)	ND	ug/L	3.0	3.0	1	03/01/16 14:30	03/02/16 12:15	57-74-9	
Endrin	ND	ug/L	0.50	0.50	1	03/01/16 14:30	03/02/16 12:15	72-20-8	
Heptachlor epoxide	ND	ug/L	0.50	0.50	1	03/01/16 14:30	03/02/16 12:15	1024-57-3	
Methoxychlor	ND	ug/L	1000	1000	1	03/01/16 14:30	03/02/16 12:15	72-43-5	
Toxaphene	ND	ug/L	3.0	3.0	1	03/01/16 14:30	03/02/16 12:15	8001-35-2	
Surrogates									
Decachlorobiphenyl (S)	57	%	10-138		1	03/01/16 14:30	03/02/16 12:15	2051-24-3	
Tetrachloro-m-xylene (S)	118	%	10-110		1	03/01/16 14:30	03/02/16 12:15	877-09-8	S3
8151 Chlorinate Herbicide TCLP	Analytical Method: EPA 8151 Preparation Method: EPA 3510								
2,4-D	ND	mg/L	0.010	0.00022	1	02/24/16 08:30	02/25/16 13:30	94-75-7	
2,4,5-TP (Silvex)	ND	mg/L	0.010	0.000049	1	02/24/16 08:30	02/25/16 13:30	93-72-1	
Surrogates									
2,4-DCAA (S)	93	%	42-142		1	02/24/16 08:30	02/25/16 13:30	19719-28-9	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
	Leachate Method/Date: EPA 1311; 02/22/16 02:00 Initial pH: 8.9; Final pH: 5								
Lead	**10.1**	mg/L	0.025	0.020	1	02/23/16 01:45	02/23/16 13:30	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**25.8**	%	0.10	0.10	1		02/19/16 06:21		
1010 Flashpoint,Closed Cup	Analytical Method: EPA 1010								
Flashpoint	**>200**	deg F	70.0	70.0	1		03/01/16 11:00		
735S Reactive Sulfide	Analytical Method: SW-846 7.3.4.2								
Sulfide, Reactive	**248**	mg/kg	26.9	26.9	1		02/25/16 15:15		

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QUALITY CONTROL DATA

Project: Wright Chem-Waste Character
Pace Project No.: 92286999

QC Batch: MPRP/20765
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010
Analysis Description: 6010 MET TCLP
Associated Lab Samples: 92286999001

METHOD BLANK: 1671130
Matrix: Water
Associated Lab Samples: 92286999001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lead	mg/L	ND	0.025	0.020	02/23/16 13:08	

LABORATORY CONTROL SAMPLE: 1671131

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	2.5	2.4	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1671132 1671133

Parameter	Units	92285830045 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/L	3.0	2.5	2.5	5.4	4.9	94	75	75-125	9	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chem-Waste Character
Pace Project No.: 92286999

QC Batch: OEXT/41080 | Analysis Method: EPA 8081
QC Batch Method: EPA 3510 | Analysis Description: 8081 GCS TCLP Pesticides
Associated Lab Samples: 92286999001

METHOD BLANK: 1675828 | Matrix: Water
Associated Lab Samples: 92286999001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	3.0	3.0	03/02/16 13:09	
Endrin	ug/L	ND	0.50	0.50	03/02/16 13:09	
gamma-BHC (Lindane)	ug/L	ND	0.50	0.50	03/02/16 13:09	
Heptachlor epoxide	ug/L	ND	0.50	0.50	03/02/16 13:09	
Methoxychlor	ug/L	ND	1000	1000	03/02/16 13:09	
Toxaphene	ug/L	ND	3.0	3.0	03/02/16 13:09	
Decachlorobiphenyl (S)	%	69	10-138		03/02/16 13:09	
Tetrachloro-m-xylene (S)	%	82	10-110		03/02/16 13:09	

LABORATORY CONTROL SAMPLE & LCSD: 1675829 1675830

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Endrin	ug/L	1.2	1.1	1.2	91	94	20-134	3	30	
gamma-BHC (Lindane)	ug/L	1.2	1.1	1.1	88	91	20-118	3	30	
Heptachlor epoxide	ug/L	1.2	1.1	1.1	90	92	22-133	2	30	
Methoxychlor	ug/L	3.7	ND	ND	98	103	44-150		30	
Decachlorobiphenyl (S)	%				71	65	10-138			
Tetrachloro-m-xylene (S)	%				86	87	10-110			

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QUALITY CONTROL DATA

Project: Wright Chem-Waste Character
Pace Project No.: 92286999

QC Batch: OEXT/26721
QC Batch Method: EPA 3510
Analysis Method: EPA 8151
Analysis Description: 8151 GCS Herbicides TCLP
Associated Lab Samples: 92286999001

METHOD BLANK: 1487391
Matrix: Water
Associated Lab Samples: 92286999001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
2,4,5-TP (Silvex)	mg/L	ND	0.00019	0.000049	02/25/16 11:59	
2,4-D	mg/L	ND	0.00094	0.00022	02/25/16 11:59	
2,4-DCAA (S)	%	84	42-142		02/25/16 11:59	

LABORATORY CONTROL SAMPLE: 1487392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-TP (Silvex)	mg/L	.012	0.012	102	27-170	
2,4-D	mg/L	.06	0.060	100	23-163	
2,4-DCAA (S)	%			92	42-142	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1488053 1488054

Parameter	Units	92286999001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4,5-TP (Silvex)	mg/L	ND	.0162	.0162	0.016	0.016	99	96	27-170	3	40	
2,4-D	mg/L	ND	.0808	.0808	0.080	0.076	99	94	23-163	5	40	
2,4-DCAA (S)	%						94	93	42-142		40	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chem-Waste Character
Pace Project No.: 92286999

QC Batch: PMST/8822
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92286999001

SAMPLE DUPLICATE: 1669086

Parameter	Units	92286903001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.1	20.0	1	25	

SAMPLE DUPLICATE: 1669087

Parameter	Units	92286999001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	25.8	27.7	7	25	

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QUALITY CONTROL DATA

Project: Wright Chem-Waste Character
Pace Project No.: 92286999

QC Batch: WET/43327
QC Batch Method: EPA 1010
Analysis Method: EPA 1010
Analysis Description: 1010 Flash Point, Closed Cup
Associated Lab Samples: 92286999001

SAMPLE DUPLICATE: 1675907

Parameter	Units	92287507001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>200	>200			

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QUALITY CONTROL DATA

Project: Wright Chem-Waste Character
Pace Project No.: 92286999

QC Batch: WETA/22785
QC Batch Method: SW-846 7.3.4.2
Analysis Method: SW-846 7.3.4.2
Analysis Description: 734S Reactive Sulfide
Associated Lab Samples: 92286999001

METHOD BLANK: 1030759
Matrix: Solid
Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	ND	10.0	10.0	02/25/16 15:15	

SAMPLE DUPLICATE: 1030760

Parameter	Units	30174185009 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Reactive	mg/kg	10 U	ND		20	

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QUALIFIERS

Project: Wright Chem-Waste Character
Pace Project No.: 92286999

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.

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, Styrene, and Vinyl chloride.

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.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte
PASI-O	Pace Analytical Services - Ormond Beach
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Wright Chem-Waste Character
Pace Project No.: 92286999

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92286999001	**Monofill Composite**	EPA 3510	OEXT/41080	EPA 8081	GCSV/24258
92286999001	**Monofill Composite**	EPA 3510	OEXT/26721	EPA 8151	GCSV/17386
92286999001	**Monofill Composite**	EPA 3010A	MPRP/20765	EPA 6010	ICP/18704
92286999001	**Monofill Composite**	ASTM D2974-87	PMST/8822		
92286999001	**Monofill Composite**	EPA 1010	WET/43327		
92286999001	**Monofill Composite**	SW-846 7.3.4.2	WETA/22785		

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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:	Shield	Report To:	David Stoner	Attention:	
Address:	4301 Taggart Creek Road	Copy To:		Company Name:	
Charlotte, NC 28208				Address:	
Email:	dstoner@shieldengineering.com	Purchase Order #:		Pace Quote:	
Phone:	(704)604-5202 Fax	Project Name:	Wright Chemical - Waste Characterization	Pace Project Manager:	nicole.gasiorowski@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	7739 - 15

Regulatory Agency	
State / Location	
NC	

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): TCLP Pesticides	TCLP Herbicides	TCLP Lead/Ignitability	Reactive Sulfide	Residual Chlorine (Y/N)	92286999
1	Monofill Composite	SL	C	2-17	~11:00	2-17	12:15		4	✓								✓	✓	✓	✓		001
2																							
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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Stoner/Shield	2-17-16	1725	J. Dixon / Pace	2/17/16	1725				
				J Morris / Pace HVL	2/18/16	945	3B	4	N	4

WO# : 92286999

92286999

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: David Stoner

SIGNATURE of SAMPLER: [signature] DATE Signed: 2-17-16

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

ATTACHMENT D

MONOFILL CELL

VOLUME CALCULATIONS

CALCULATION COVER SHEET

SHIELD ENGINEERING, INC.

Project: Wright Chemical Site, Reigelwood, NC			**Project No.1100044-05**
Calculation Title: MONOFILL CELL VOLUME CALCULATION			
Originated By: JDW	**Date:** 2/15/16	**Checked By:** KJC	**Date:** 8/26/16

Subject: Estimation of the volume of sludge within the Monofill Cell.

Statement of Problem: Lateral dimensions and thickness of the Monofill Cell were directly measured. However, the inside slope of the containment berms for the Monofill Cell were less direct for measurement.

Sources of Data: Field measurements; and Appendix D of the MAWP (Monofill Cell Construction Plans).

Sources of Formula & References: Trigonometric formulae.

Intended Use:	X **Preliminary Calc.**	☐ **Supercedes Calc. No** ____
	☐ **Final Calc.**	☐ **Other** _____

Rev. No.	Description	By	Date	Check	Date

Project: WRIGHT CHEMICAL SITE			Project No.1100044-05
Calculation Title: MONOFILL CELL VOLUME			
Originated By: JDW	Date:2/15/16	Checked By: KJC	Date: 8/26/16

A) **PURPOSE:** **Review of available data for the Monofill Cell.**

Cell Dimensions

1) The measured dimensions of the Monofill Cell are as follows:

Length (East-West) = 497 Feet

Width (North-South) = 100 Feet

Measured on 12/23/2015 recorded in Field Book (FB) #2 (see attached Copy).

Ratio of Inside Berm Slope

2) Inner slope of the berm around the Monofill Cell was measured using a one-inch diameter PVC pipe placed inside the Leachate Collection Pipe located at the Eastern end of the Monofill Cell.

A 4-foot long level was placed on the berm around the Monofill Cell and the top edge of the level touched the bottom side of the 1-inch PVC pipe. With the level held horizontal using the bubble, the vertical height was measured from the opposite end of the level up to the 1-inch PVC pipe. (See Field Book: attached Page 121).

The vertical distance measured from the top of the level up to the 1-inch PVC pipe was measured at 1.3 feet.

Using these measurements: $\tan \Theta = 1.3/4.0 = 0.325$

Therefore the angle of the leachate pipe to the horizontal is $\Theta = 18^{o}$ ✓

This angle translates to an approximate inside slope ratio of 3:1 (H:V).

This leachate pipe is the only location at which the inside slope of the berm could be measured. Therefore, in order to calculate the volume of the Monofill Cell the assumption is that this slope ratio applies to all four inside slopes of the berms around the Monofill Cell.

Project: WRIGHT CHEMICAL SITE			Project No.1100044-05
Calculation Title: MONOFILL CELL VOLUME			
Originated By: JDW	Date:2/16/16	Checked By: KJC	Date: 8/26/16

Height of Monofill Sludge

3) During each of the borings conducted within the Monofill sludge the depth of the sludge was probed to determine the depth of sludge.

HAB-1	Depth was 11.9 Feet	(FB – Page 19)
HAB-3	Depth was 12.0 Feet	(FB – Page 24)

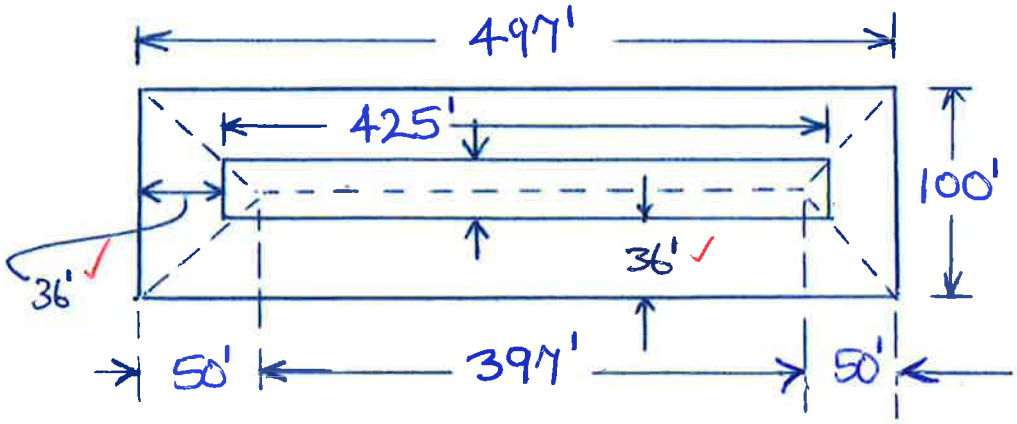
Therefore for the purposes of the Monofill Cell volume calculations the depth of 12 Feet will be used.

Volume of Monofill Cell

4) The volume of the sludge inside the Monofill Cell can be calculated using a combination of two different formulae as follows:

rectangular pyramid prism, and
triangular prism

Based on the inside side slope ratio for the berm (i.e., 1:3 V:H) and the depth of the sludge the base of the Monofill Cell is as follows:



12/23/15

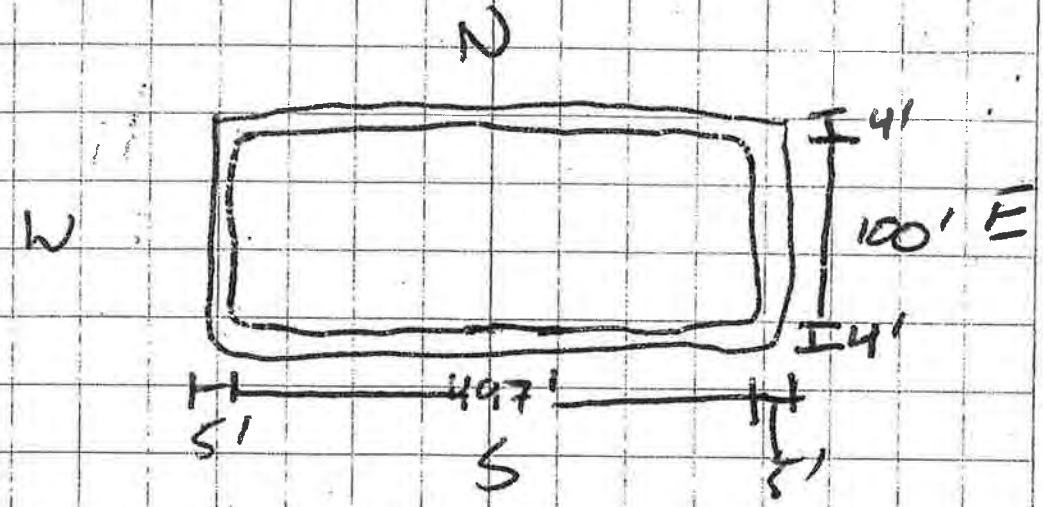
HAB-2 Location hole was then patched at 1215 w/ Heavy Duty Line TAPE

Picture 7 of 12/23/15 (1967) taken of Inflated Bladder under HAB-2 Line Hole @ 1159

Picture 8 & 9 of 12/23/15 (1968/1969) taken of patched HAB-2 hole @ 1211, arch @ 1230-1330

Setup on HAB-3 location @ 1345

Measure Dimensions of Monofill



HAB-3 hole located @ 1613

Picture 10 of 12/23/15 (1970) taken of Location of HAB-3 hole. @ 1615

Picture 11 of 12/23/15 (1971) taken of insertation of Bladder @ 1622

Rite in the Rain

Location Riegelwood, NC Date 1/15/16

Project / Client Wright Chemical

43° sunny

0730 - PMcVey & MMcGinnis arrived on site

0745 - MSmith & AHomer arrived on site, checked in w/ scale house

0810 - calibrated PID and pH meter

0840 - @ SA3 (20AC) SS-13 augered to 0-1, bagged, screened

0855: sampled SA3(20AC) SS-13, sampled for hexamine, formaldehyde, pesticides metals, P, SO_4, pH, NH_3, NO_2 NO_3, TOCs

sampled w/ stainless steel bowl and stainless steel utensil

decontamination process for 1/15/16: ~~first~~ All rinsed bowl, auger and utensil in wash bucket #1 to remove excess soil scrubbed equipment in alconox solution in bucket #2 rinsed in bucket #3 rinsed in bucket #4. Used D.I water as a rinse and sprayed w/ D.I.

Location Riegelwood, NC Date 1/15/16

Project / Client Wright Chemical

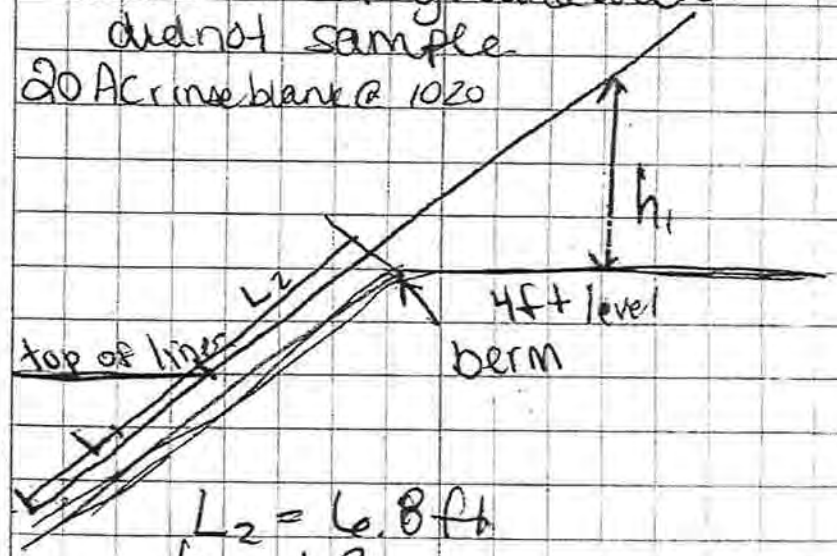
Used D.I water for all buckets

0910 - @ SA3(20AC) SS-14 augered 0-1, bagged, screened

0920 - sampled SA3(20AC) SS-14 deconed equipment

0935 - @ SA3 (20AC) SB-07 ~~All augered down to 5ft bagged~~ ~~Soil 5~~ augered down to 1.5ft encountered groundwater did not sample

20AC rinse blank @ 1020



$L_2 = 6.8$ ft

$h_1 = 1.3$

total length of 1 in pipe 15

length of pipe (1in) 11.7

Checked out w/ scale house @ 11:15

Dylan Stone

Project: WRIGHT CHEMICAL SITE			Project No.1100044-05
Calculation Title: MONOFILL CELL VOLUME			
Originated By: JDW	Date:2/16/16	Checked By: KJC	Date: 8/26/16

Using a sludge depth of 12 Feet the base of the Monofill Cell is 28' x 425'.

Apply the rectangular pyramid prism equation to the two ends of the Monofill Cell placed together, down to the imaginary bottom of the Monofill Cell if the inner side slopes were projected to meet below the base (see the dashed lines shown in the sketch on Page 2). Using the inner side slope of the berms at 3:1 (H:V) ratio the depth to the imaginary base line (dashed line in sketch) is

50 feet/3 = 16.67' (i.e., 4.67' below the 12-foot depth of the Monofill Cell)

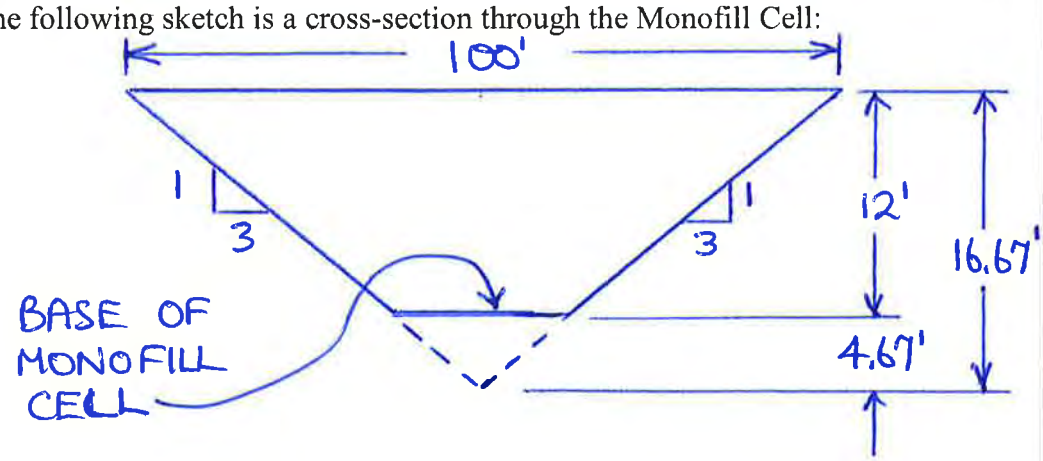
Then subtract a rectangular pyramid prism volume for that portion below the actual base of the Monofill Cell to provide a net volume for the two ends of the Monofill Cell.

Rectangular pyramid prism volume = (w x l x h)/3

where w is the width of the base
l is the length of the base
h is the vertical height of the pyramid

= (100' x 100' x 16.67')/3 – (28' x 28' x 4.67')/3
= 55555.6 – 1219.6
= 54336 cubic feet

Apply the triangular prism equation to that portion of the Monofill Cell between these two ends to acquire the volume of the center section of the Monofill Cell. The following sketch is a cross-section through the Monofill Cell:



Project: WRIGHT CHEMICAL SITE			Project No.1100044-05
Calculation Title: MONOFILL CELL VOLUME			
Originated By: JDW	Date:2/16/16	Checked By: KJC	Date: 8/26/16

Triangular prism volume = L x [(w x h) – (w' x h')]/2

Where L is length of the prism
w is the top width of the Monofill Cell
h is the depth to the imaginary bottom below the Monofill Cell base.
w' is the width of the base of the Monofill Cell
h' is the depth of that portion below the base of the Monofill Cell (dashed line in sketch on Page 3)

= 397' x [(100 x 16.67) – (28 x 4.67)]/2

= 304,900 cubic feet

The total volume of sludge located within the Monofill Cell is the sum of the two separate calculations for the rectangular pyramid prism and the triangular prism as follows:

Total Volume = 54,336 + 304,900 cubic feet

= 359,232 cubic feet

As a confirmation on this estimated volume an Excel spreadsheet was setup to calculate areas for incremental layer and then volume for each incremental layer the results are summarized on the next page.

A large portion of the sludge consists of liquid. The average moisture content for the four samples of sludge collected from the Monofill Cell is 32.3% (see attached Table 3).

Therefore approximately a third of the sludge volume consists of liquid. If the liquid was decanted off from the sludge the approximate sludge volume is

= 359,232 x (1- 0.323) = 243,200 cubic feet.

Using the calculated specific gravity for this decanted sludge the weight of sludge is estimated to be = Volume of solids x Specific Gravity (see attached SG test results) x 62.4 lbs./ft^3
= 243,200 x 2.63 x 62.4 lbs./ft^3
= 39,912,000 lbs.
= 19,960 tons

TABLE 3
MONOFILL CELL SLUDGE ANALYTICAL RESULTS SUMMARY
MONOFILL CELL
WRIGHT CHEMICAL CORPORATION, RIEGELWOOD, NORTH CAROLINA

ANALYTE	CAS NUMBER	UNITS	BORING IDENTIFICATION WITH DEPTH RANGE			
			HAB-1 (3-5 Ft.)	HAB-2 (3-5Ft.)	HAB-2 (8-10Ft.)	HAB-3 (3-5Ft.)
OVA Readings		ppm	88	0	0	5
Percent Moisture		%	46.3	27.3	25.6	29.8
pH at 25 Degrees C		Std. Units	8.4	8.8	8.8	8.3
Nitrogen, Ammonia	7664-41-7	mg/kg	9290 M1,M6	3060	4740	4280
Phosphorus, Total (as P)	7723-14-0	mg/kg	1240	736	278	505
Orthophosphate as P		mg/kg	88.6 J	ND H1,D3,M1	61.7 J,D3	ND D3
Chloride	16887-00-6	mg/kg	283 J,D3	182 J	200 J	ND
Fluoride	16984-48-8	mg/kg	35.1 J	ND	17.4 J	21.0 J
Aluminum	7429-90-5	mg/kg	14000	5660 M1	7120	9940
Antimony	7440-36-0	mg/kg	0.76 J	0.38 J	1.8	0.44 J
Arsenic	7440-38-2	mg/kg	7	2.2	3.6	1.8
Barium	7440-39-3	mg/kg	26.2	12.1	15.4	7.6
Beryllium	7440-41-7	mg/kg	0.55	0.16	0.27	0.2
Cadmium	7440-43-9	mg/kg	0.44	ND	0.16	ND
Calcium	7440-70-2	mg/kg	4120	3170 M1,R1	2600	1310
Chromium	7440-47-3	mg/kg	32.7	6.8	17.9	10.3
Cobalt	7440-48-4	mg/kg	3.4	0.57	1.7	0.87
Copper	7440-50-8	mg/kg	57.1	5.5	25.9	8.2
Iron	7439-89-6	mg/kg	11900	5010 M1	8560	7170
Lead	7439-92-1	mg/kg	177	10.9 M1,R1	83.6	13.4
Magnesium	7439-95-4	mg/kg	305	132	181	159
Manganese	7439-96-5	mg/kg	77	68.1 M1,R1	44.4	45
Nickel	7440-02-0	mg/kg	13.9	2.3	7.3	2.9
Selenium	7782-49-2	mg/kg	2.4	0.51 J	1.6	0.84 J
Sodium	7440-23-5	mg/kg	411 J	ND	279 J	ND
Vanadium	7440-62-2	mg/kg	53.8	21.9 M1	30.2	22
Zinc	7440-66-6	mg/kg	142	17.8	65.8	25.8
Mercury	7439-97-6	mg/kg	0.033	0.024	0.071	0.045
Endosulfan sulfate	1031-07-8	ug/kg	146	ND M6	ND	ND
Heptachlor	76-44-8	ug/kg	222	ND M6	ND	ND
2-Butanone (MEK)	78-93-3	ug/kg	568	ND	140	167
2-Hexanone	591-78-6	ug/kg	44.9 J	ND	ND	16.3 J
4-Methyl-2-pentanone (MIBK)	108-10-1	ug/kg	61.5 J	ND	5.9 J	11.9 J
Acetone	67-64-1	ug/kg	971 E	440 E	188	ND
Carbon disulfide	75-15-0	ug/kg	170	ND	40.7	19.9
Ethylbenzene	100-41-4	ug/kg	14.2	3.4 J	ND	ND
Methylene Chloride	75-09-2	ug/kg	15.7 J	61.1 C9	32.9 C9	ND
Toluene	108-88-3	ug/kg	34.5	4.8 J	ND	5.7 J
Biphenyl (Diphenyl)	92-52-4	ug/kg	3480 J	ND	172 J	ND
Formaldehyde	50-00-0	ug/kg	88100 N2,M6	55900 N2	83200 N2	97100 N2
Diphenyl ether	101-84-8	ug/kg	4420 N	807 N	96.5 N	72.2 N
Biphenyl	92-52-4	ug/kg	1410 N	371 N	30.1 N	
Octane, 2,6-dimethyl-	2051-30-1	ug/kg	37.2 N			
Thiophene, 2-methyl-	554-14-3	ug/kg	25.3 N			
Hexane	110-54-3	ug/kg	45.2 N		17.2 N	
2-Butanone, 3-methyl-	563-80-4	ug/kg		43.5 N		
Benzene, (2-methyl-1-but	56253-64-6	ug/kg		28.3 N		
Benzene, 1-methyl-2-(1-m	97664-19-2	ug/kg		28.4 N		
Benzene, 1-methyl-4-(1-m	99-87-6	ug/kg		39.7 N		
Cyclohexane, 1-methyl-4-	6069-98-3	ug/kg				377 N
Naphthalene, 2-ethenyl-	827-54-3	ug/kg				28.0 N
Limonene	138-86-3	ug/kg				24.6 N
Camphene	79-92-5	ug/kg				37.8 N
1R-.alpha.-Pinene	7785-70-8	ug/kg				189 N
C-10 or larger alkane		ug/kg				18.9 N
Hexadecanoic acid	57-10-3	ug/kg				359 N
1,3,5-Trithiane	291-21-4	ug/kg	2860 N	239 N		
Unknown		ug/kg	5350 N	1070 N	239 N	252 N
Unknown		ug/kg		250 N	312 N	278 N
Unknown		ug/kg		269 N	528 N	286 N
Unknown		ug/kg		319 N	633 N	420 N
Unknown		ug/kg		428 N		454 N
Unknown		ug/kg		469 N		524 N
Unknown		ug/kg		501 N		537 N
Unknown		ug/kg				544 N

NOTES: N - Tentatively Identified Compound
N2 - Laboratory does not hold TNI accreditation for this parameter
M1 - Matrix Spike recovery exceeded QC limits.
M6 - Matrix spike and matrix spike duplicate recovery not evaluated against control limits
J - Estimated
C9 - Common Laboratory contaminant
R1 - RPD values outside control limits
D3 - Sample was diluted due to presence of high levels of non-target analytes
H1 - Analysis conducted outside EPA method hold time

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 15-109/HAB-2

Description of Sample:

Sample Location:

Date: 1/5/2015

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	78.04	(g)
2. Weight of Pycnometer	170.59	(g)
3. Weight of Pycnometer and Water	665.70	(g)
4. Temperature of Water	20.5	(°c)
5. Weight of Pycnometer and Sample and Water	712.72	(g)
Oven Drying Container No. _____ Weight	440.68	(g)
6. Weight of Oven Dried Sample	516.43	(g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.635

SHIELD ENGINEERING, INC.

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

SHIELD ENGINEERING, INC.

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 15-109/HAB-3

Description of Sample:

Sample Location:

Date: 1/5/2015

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	83.67	(g)
2. Weight of Pycnometer	175.74	(g)
3. Weight of Pycnometer and Water	673.65	(g)
4. Temperature of Water	20.5	(°c)
5. Weight of Pycnometer and Sample and Water	723.95	(g)
Oven Drying Container No. _____ Weight	255.78	(g)
6. Weight of Oven Dried Sample	336.91	(g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.630

SHIELD ENGINEERING, INC.

Project: WRIGHT CHEMICAL SITE			Project No.1100044-05
Calculation Title: MONOFILL CELL VOLUME			
Originated By: JDW	Date:2/17/16	Checked By: KJL	Date: 8/26/16

The Excel spreadsheet was setup to calculate the area at the **top of each incremental depth interval using the side slope ratio of 3:1 H:V for reducing the top surface area for each layer** as the depth in the sludge increases.

By calculating the volume using the **top of each incremental layer** the iterative estimates for the sludge volume should start on the high side of the final estimated volume estimate (see below).

The Excel spreadsheet used the incremental thickness of each layer as a key input to the spreadsheet. The larger the incremental thickness the coarser the final answer, inversely the smaller the incremental thickness of each layer the closer the answer would be to the total volume. The results summary from the Excel spreadsheet are as follows:

Layer Thickness (Feet)	Est. Volume (cubic feet)
1.0	392,600
0.5	377,050
0.25	369,300
0.125	365,400
0.1	364,600
0.05	363,100
0.01	361,800

These results exhibit the iterative solution for the estimated sludge volume based on the incremental layer thicknesses used within the Excel spreadsheet. The smaller the incremental layer thickness the volume estimate should become truer or "more accurate". The last incremental layer thickness used within the Excel spreadsheet was 0.01 feet and the final estimated volume was 361,800 cubic feet which is 0.7% difference from the volume estimate calculated using volume calculations shown on previous pages. These results confirm the volume estimate using an independent volume estimation methodology.

Total Volume = 360,000 cubic feet

Total Tonnage = 20,000 tons

Project: WRIGHT CHEMICAL SITE			Project No.1100044-05
Calculation Title: MONOFILL CELL VOLUME			
Originated By: JDW	Date:8/24/16	Checked By: KJL	Date: 8/26/16

Moisture content (M_c) = $[(W_W - W_D) \times 100\%]/ W_W$

Where W_W = Wet Weight of Sludge (tons)
W_D = Dry Weight of Sludge (tons)
M_c = Moisture Content %

On Page #4 the dry weight of sludge was 19,960 tons.

Therefore:

$$32.3\% = [(W_W - 19{,}960) \times 100\%]/ W_W$$
$$32.3 \times W_W = W_W \times 100 - 19{,}960 \times 100$$
$$19{,}960 \times 100 = W_W (100 - 32.3)$$
$$1{,}996{,}000 = W_W \times 67.7$$
$$W_W = 29{,}485 \text{ tons}$$

Therefore the weight of water contained within the sludge is equal to the difference between 29,485 tons and the dry weight of the sludge (19,960 tons):

W_W = 29,485 - 19,960 tons
W_W = 9,525 tons
W_W = 9,525 x 2000 lbs.

Volume of water = 9,525 x 2000 lbs./(62.4 lbs/cubic foot)
Volume of water = 305,290 cubic feet
Volume of water = 305,290 cubic feet x 7.48 gallons/cubic foot
Volume of water = 2,283,600 gallons

Total Volume of water within the Monofill Cell = 2,283,600 gallons

It is physically impossible to remove all of this water from the sludge, and based on our experience the optimal final moisture content for the sludge is likely about 25% moisture content. Assuming that a moisture content of 25% is a reasonable goal the estimated volume of water that could possibly be removed from the sludge is as follows:
Lowering the moisture content from 32.3% to 25% is 7.3% reduction of moisture content.
Therefore volume of removable water = ((2,283,600 gallons) x 7.3)/32.3
Volume of removable water = 516,100 gallons

Volume of removable water from the Monofill Cell ≈ 500,000 gallons

ATTACHMENT E

TESTING LABORATORY

RESULTS FOR LINER SAMPLES

GAI-LAP
Initial: CVZ #:0.13
DATE: 01/25/2016

January 25, 2016

David Wallace
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Wallace:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the ***final*** laboratory report for the Conformance testing of two (2) HDPE Geomembrane samples.

PROJECT NAME: HDPE Testing DATE REPORTED: **January 25, 2016**

REFERENCE TRI JOB NO.: R15051

DATE RECEIVED: December 18, 2015

SAMPLES SENT BY: Shield Engineering

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*TRI CONTROL NUMBER*
1. WSC-HDPE 1	00850
2. WSC-HDPE-2	00851

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D1004	Tear Resistance
2. ASTM D6693 (Type IV)	Tensile Properties
3. ASTM D4833	Puncture Resistance
4. ASTM D751	Hydrostatic Resistance

TEST RESULTS: The test results are summarized in the attached Tables 1 to 2.

Respectfully,

TRI Environmental, Inc. - California

Maria Espitia
Quality Assurance

Cora Queja
TRI-CA Director

Signatures are on file

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

3 Pages Total

GAI-LAP

TABLE 1.

MATERIAL PROPERTIES

CLIENT: Shield Engineering

PROJECT: HDPE Testing

Date Received: **12/18/2015**
Date Reported: **1/25/2016**
Client Sample ID: **WCS-HDPE-1**
Material Description: **HDPE Geomembrane**

QC'd By: Maria Espitia
TRI Job No.: **R15051**
TRI Control No.: **00850**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
ASTM D6693 Type IV	Tensile Properties:															
	Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2 ^{0} C (73.4+/-3.6 ^{0} F), and 50+/-5% relative humidity. Rate of Separation: 2"/min															
	Tensile Strength at Yield (lbs/ in.-width)															
	A	42	36	37	41	38						39	3	36	42	
	B	33	33	34	32	32						33	1	32	34	
	Tensile Strength at Break (lbs/ in.- width)															
	A	72	62	56	67	57						63	7	56	72	
	B	63	62	59	63	67						63	3	59	67	
	Elongation at Yield (percent, %)															
	A	24	25	27	39	37						30	7	24	39	
	B	13	14	14	13	14						14	1	13	14	
	Elongation at Break (percent, %) *Gauge Length = 2.0 in.*															
	A	371	349	333	364	323						348	20	323	371	
	B	691	704	649	683	704						686	23	649	704	
ASTM D1004 Die C	Tear Resistance (lbs)															
	Machine: Tensile machine equipped with constant rate of extension and chart recorder.															
	A	13.0	12.0	12.0	17.0	13.0	14.0	14.0	13.0	14.0	16.0	13.8	1.6	12.0	17.0	
	B	15.0	16.0	15.0	14.0	15.0	16.0	15.0	15.0	16.0	16.0	15.3	0.7	14.0	16.0	
ASTM D4833	Puncture Resistance (lbs)															
	Specimens were tested as directed in Test Method D4833. They were clamped without tension between circular plates of a ring clamp attachment secured in the tensile machine. Test specimens were extended beyond the outer edges of the clamping plates.															
		49	50	52	49	52	56	56	57	54	55	53	3	49	57	
	Limited sample															
ASTM D751 Method A Procedure 1	Hydrostatic Resistance (psi)															
	Test method uses pressure application by Mullen Type Hydrostatic Tester with screen and glass support.															
		105	105	100	110	100	100	**Limited sample**				103	4	100	110	

(End of Table 1) (Sheet 1 of 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

LEGENDS:
A - Direction A
B- Direction B

GAI-LAP

TABLE 2.

MATERIAL PROPERTIES

CLIENT: Shield Engineering

PROJECT: HDPE Testing

Date Received: **12/18/2015**
Date Reported: **1/25/2016**
Client Sample ID: **WCS-HDPE-2**
Material Description: **HDPE Geomembrane**

QC'd By: Maria Espitia
TRI Job No.: **R15051**
TRI Control No.: **00851**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
ASTM D6693 Type IV	Tensile Properties:															
	Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2^0 C (73.4+/-3.6^0 F), and 50+/-5% relative humidity. Rate of Separation: 2"/min															
	Tensile Strength at Yield (lbs/ in.-width)															
	A	36	39	37	41	35						38	2	35	41	
	B	33	30	37	38	32						34	3	30	38	
	Tensile Strength at Break (lbs/ in.- width)															
	A	66	56	50	67	54						59	8	50	67	
	B	57	62	84	76	79						72	12	57	84	
	Elongation at Yield (percent, %)															
	A	45	41	38	55	37						43	7	37	55	
	B	15	14	22	15	18						17	3	14	22	
	Elongation at Break (percent, %) *Gauge Length = 2.0 in.*															
	A	386	333	311	374	325						346	32	311	386	
	B	610	673	856	726	821						737	102	610	856	
ASTM D1004 Die C	Tear Resistance (lbs)															
	Machine: Tensile machine equipped with constant rate of extension and chart recorder.															
	A	15.0	15.0	16.0	18.0	16.0	14.0	17.0	16.0	16.0	15.0	15.8	1.1	14.0	18.0	
	B	13.0	15.0	12.0	13.0	15.0	15.0	14.0	15.0	17.0	15.0	14.4	1.4	12.0	17.0	
ASTM D4833	Puncture Resistance (lbs)															
	Specimens were tested as directed in Test Method D4833. They were clamped without tension between circular plates of a ring clamp attachment secured in the tensile machine. Test specimens were extended beyond the outer edges of the clamping plates.															
		65	63	68	55	56	59	55	48	54	54	56	6	48	68	
		55	50	55	50	54										
ASTM D751 Method A Procedure 1	Hydrostatic Resistance (psi)															
	Test method uses pressure application by Mullen Type Hydrostatic Tester with screen and glass support.															
		105	105	105	105	115	105	Limited sample				107	4	105	115	

(End of Table 2)

(Sheet 1 of 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

LEGENDS:
A - Direction A
B- Direction B

GAI-LAP
Initial: CVZ #:0.13
DATE: 01/25/2016

January 25, 2016

David Wallace
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Wallace:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the ***final*** laboratory report for the Conformance testing of three (3) Hypalon Geomembrane samples.

PROJECT NAME: Hypalon Testing DATE REPORTED: **January 25, 2016**

REFERENCE TRI JOB NO.: R15052

DATE RECEIVED: December 18, 2015

SAMPLES SENT BY: Shield Engineering

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*TRI CONTROL NUMBER*
1. WCS-Hyp-1	00852
2. WCS-Hyp-2	00853
3. WCS-Hyp-3	00854

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D751	Grab Tensile Strength
2. ASTM D751	Tongue Tear Resistance
3. FTMS 101C Method 2031	Puncture Resistance
4. ASTM D751	Hydrostatic Resistance

TEST RESULTS: The test results are summarized in the attached Tables 1 to 3.

Respectfully,

TRI Environmental, Inc. - California

Maria Espitia
Quality Assurance

Cora Queja
TRI-CA Director

Signatures are on file

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

4 Pages Total

GAI-LAP

TABLE 1.

MATERIAL PROPERTIES

CLIENT: Shield Engineering
PROJECT: Hypalon Testing

Date Received : **12/18/2015**
Date Reported: **1/25/2016**
Client Sample ID : **WCS-HYP-1**
Material Description: **Hypalon**

QC'd by: Maria Espitia
TRI Job No. : **R15052**
TRI Control No. : **00852**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	MIN	Max	Proj. Specs.
ASTM D751	Grab Tensile															
Procedure A	Tensile Strength (lbs)															
	A	**271**	**276**									**274**	**3**	271	276	
	B	**297**	**284**									**291**	**9**	284	297	
	Elongation at Break (percent)															
	A	**24**	**23**									**23**	**1**	23	24	
	B	**35**	**33**									**34**	**2**	33	35	
ASTM D751	Tongue Tear Resistance (lbs)															
	A	**60**	**67**									**63**	**5**	60	67	
	B	**79**	**76**									**77**	**2**	76	79	
FTMS 101C	Puncture Resistance (lbs)															
Method 2031	*Test was conducted in compliance with FTMS 101C procedure. Testing machine: Tensile Testing machine with compression head. Probe used is tetrahedron point. Dimensions are on file. Rate of compression is at 12"/min.*															
		320	**322**									**321**	**2**	320	322	
ASTM D751	Hydrostatic Resistance (psi)															
Procedure A1	*Test method used pressure application by Mullen Type Hydrostatic Tester with screen and glass support.*															
		340	**360**	**385**								**362**	**23**	340	385	

(End of Table 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

LEGENDS:
A - Direction A
B - Direction B

1160 North Gilbert Street, Anaheim, CA 92801, www.precisionlabs.net
Precision Geosynthetic Laboratories International dba TRI Environmental, Inc.

TABLE 2.

MATERIAL PROPERTIES

CLIENT: Shield Engineering
PROJECT: Hypalon Testing

Date Received : **12/18/2015**
Date Reported: **1/25/2016**
Client Sample ID : **WCS-HYP-2**
Material Description: **Hypalon**

QC'd by: Maria Espitia
TRI Job No. : **R15052**
TRI Control No. : **00853**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	MIN	Max	Proj. Specs.
ASTM D751	Grab Tensile															
Procedure A	Tensile Strength (lbs)															
	A	317	302	317								312	9	302	317	
	B	285	270	308								288	19	270	308	
	Elongation at Break (percent)															
	A	36	34	43								38	5	34	43	
	B	26	25	30								27	3	25	30	
ASTM D751	Tongue Tear Resistance (lbs)															
	A	65	64	70								66	3	64	70	
	B	56	62	66								61	5	56	66	
FTMS 101C	Puncture Resistance (lbs)															
Method 2031	*Test was conducted in compliance with FTMS 101C procedure. Testing machine: Tensile Testing machine with compression head. Probe used is tetrahedron point. Dimensions are on file. Rate of compression is at 12"/min.*															
		291	277	267								279	12	267	291	
ASTM D751	Hydrostatic Resistance (psi)															
Procedure A1	*Test method used pressure application by Mullen Type Hydrostatic Tester with screen and glass support.*															
		445	425	425								432	12	425	445	

(End of Table 2)

(Sheet 1 of 1)

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LEGENDS:
A - Direction A
B - Direction B

GAI-LAP

TABLE 3.

MATERIAL PROPERTIES

CLIENT: Shield Engineering
PROJECT: Hypalon Testing

Date Received : **12/18/2015**
Date Reported: **1/25/2016**
Client Sample ID : **WCS-HYP-3**
Material Description: **Hypalon**

QC'd by: Maria Espitia
TRI Job No. : **R15052**
TRI Control No. : **00854**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	MIN	Max	Proj. Specs.
ASTM D751	Grab Tensile															
Procedure A	Tensile Strength (lbs)															
	A	264	280									272	11	264	280	
	B	292	281									287	8	281	292	
	Elongation at Break (percent)															
	A	25	29									27	3	25	29	
	B	32	31									31	1	31	32	
ASTM D751	Tongue Tear Resistance (lbs)															
	A	62	56									59	4	56	62	
	B	66	72									69	4	66	72	
FTMS 101C	Puncture Resistance (lbs)															
Method 2031	*Test was conducted in compliance with FTMS 101C procedure. Testing machine: Tensile Testing machine with compression head. Probe used is tetrahedron point. Dimensions are on file. Rate of compression is at 12"/min.*															
		323	339									331	11	323	339	
ASTM D751	Hydrostatic Resistance (psi)															
Procedure A1	*Test method used pressure application by Mullen Type Hydrostatic Tester with screen and glass support.*															
		375	375	400								383	14	375	400	

(End of Table 3)

(Sheet 1 of 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

LEGENDS:
A - Direction A
B - Direction B

GAI-LAP
Initial: CVZ #:0.13
DATE: 01/25/2016

January 25, 2016

David Wallace
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Wallace:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the ***final*** laboratory report for the Conformance testing of two (2) Hypalon Seam samples.

PROJECT NAME: HDPE Testing DATE REPORTED: **January 25, 2016**

REFERENCE TRI JOB NO.: R15053

DATE RECEIVED: December 18, 2015

SAMPLES SENT BY: Shield Engineering

SAMPLE IDENTIFICATIONS:

SAMPLE ID	***TRI CONTROL NUMBER***
1. WCS-Hyp-1 Seam 1	00855
2. WCS-Hyp-3 Seam 2	00856

TESTS REQUIRED / PERFORMED:

TEST METHOD	***DESCRIPTION***
1. ASTM D751	Shear Strength

TEST RESULTS: The test results are summarized in the attached Table 1.

Respectfully,

TRI Environmental, Inc. - California

Maria Espitia
Quality Assurance

Cora Queja
TRI-CA Director

Signatures are on file

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

2 Pages Total

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Shield Engineering** MATERIAL: **HYPALON** QC'd By: Maria Espitia
PROJECT: **Seam Testing** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D751 NSF MOD/D413 NSF MOD**
DATE REC'D: **18-Dec-15** TRI JOB #: **R15053** DATE REPORT: **25-Jan-16**

ASTM D751 NSF MOD USING 4" WIDE SPECIMENS						ASTM D413 NSF MOD USING 1" WIDE SPECIMEN				
		SHEAR EVALUATION				PEEL EVALUATION				
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lbs)	LOCUS of BREAK	CLASSIFICATION	PROJECT SPEC. (lbs)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	LOCUS of BREAK	CLASSIFICATION	PROJECT SPEC. (lb/in width)
WCS-Hyp-1 Seam 1	**00855**	232 230 232 Limited Sample	BRK BRK BRK	FTB FTB FTB		1 Outside 2 Outside 3 Outside 4 Outside 5 Outside	No tab to pull			
	AVG. *STD. DEV.*	**231** **1**				***AVG:*** *STD. DEV.*				
WCS-Hyp-3 Seam 2	**00856**	224 209 216 Limited Sample	BRK BRK BRK	FTB FTB FTB		1 Outside 2 Outside 3 Outside 4 Outside 5 Outside	No tab to pull			
	AVG: *STD. DEV.*	**216** **8**				***AVG:*** *STD. DEV.*				

LOCUS OF BREAK AND CLASSIFICATION BASED ON FABRIC- REINFORCED SEAMS (NSF 54, 1993):

LOCUS OF BREAK

AD	ADHESION FAILURE RESULTING IN THE DELAMINATION IN THE PLANE OF THE BOND.
DEL	DELAMINATION IN THE PLANE OF THE SCRIM.
AD-DEL	DELAMINATION IN THE PLANE OF THE SCRIM AFTER SOME DELAMINATION IN THE PLANE OF THE BOND
BRK	BREAK IN THE SHEET THROUGH BOTH THE FABRIC AND THE PLIES OF THE POLYMER.
FP	FABRIC PULLOUT. (NO TEST).

CLASSIFICATION

FTB	FILM TEAR BOND
NON-FTB	ADHESION FAILURE

(End of Table 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of Precision Geosynthetic Laboratories from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless Precision Geosynthetic Laboratories from and against all liabilities in excess of the aforementioned limit.

1160 North Gilbert Street, Anaheim, CA 92801, www.precisionlabs.net
Precision Geosynthetic Laboratories International dba of TRI Environmental, Inc.

ATTACHMENT F

BORING LOGS FOR TEMPORARY

WELLS AROUND MONOFILL CELL

BORING LOG

SHIELD ENGINEERING, INC.

Report No.: **1100044-05** DATE: **2/12/16**

Client: **Oak Bark Corporation / Koch Sulfur Products LLC**

Project: **Wright Chemical Site**

Boring No.: **MDB-1** | Total Depth **30.0'** | Elev: **43.73** ± | Location:

Type of Boring: **Hollow Stem Auger** | Started: **1/8/16** | Completed: **1/8/16** | Driller: **Geologic Exploration Inc.**

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (Feet)	OVA (ppm)	WELL LOG	REMARKS
43.5	0.20	Gravel					
		Light Brown poorly graded fine SAND (SP)	6-2-3	1.0	2.3		PID Background 0.2ppm - dry
				2.5			
			6-4-3	3.5	3.9		
				5.0			
37.7	6.00			6.0	3.5		
		Tan poorly graded fine SAND, clay (SP-SC)	3-2-4	7.5			- dry
			2-3-5	8.5	3.5		- dry
				10.0			
30.2	13.50			13.5	4.3	30.7	Bentonite 13 to 16 ft.
		Black poorly graded fine Sandy CLAY (SP-SC)	3-2-2	15.0			
						27.7	Sand 16 to 28 ft.
				18.5	2.2	25.7	Screen 18 to 28 ft. - moist
24.7	19.00		2-4-4				
		Grey poorly graded fine SAND (SP)		20.0			
	▽						- water @ 22.3', wet @ 24'
				23.5	1.7		
19.7	24.00		1-2-2				
		Grey poorly graded fine SAND, clay, layers of coarse sand (SP-SC)		25.0			
				28.5	4.0	15.7	2" Temp Well set at 28 ft. - wet
			2-1-5				
13.7	30.00			30.0		13.7	
		Boring terminated at 30 feet.					

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.

BORING LOG

SHIELD ENGINEERING, INC.

Report No.: **1100044-05** DATE: **2/12/16**

Client: **Oak Bark Corporation / Koch Sulfur Products LLC**

Project: **Wright Chemical Site**

Boring No.: **MDB-2** | Total Depth **28.0'** | Elev: **43.41** ± | Location:

Type of Boring: **Hollow Stem Auger** | Started: **1/11/16** | Completed: **1/11/16** | Driller: **Geologic Exploration Inc.**

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (Feet)	OVA (ppm)	WELL LOG	REMARKS
		Light Brown poorly graded fine SAND, clay (SP-SC)		1.0	1.2		
			2-2-3				- dry
				2.5			Shelby Tube collected from 2.5-5.0 ft.
37.4	6.00			6.0	0.4		
		Light Brown poorly graded fine Clayey SAND (SC)	2-2-3				- dry
				7.5			
				8.5	1.4		
			4-3-3				- dry
33.4	10.00			10.0			
		Tan poorly graded fine Clayey SAND (SC)					Shelby Tube collected from 11-13.0 ft.
29.9	13.50			13.5	2.2		
		Grey poorly graded fine Clayey SAND (SC)	3-3-4			29.4	- dry
28.9	14.50						Bentonite 14-16 ft.
		Brown lean CLAY (CL)		15.0			- dry
						27.4	Sand 16-28 ft.
						25.4	Screen 18-28 ft. Shelby Tube collected from 18-20.0 ft.
23.4	20.00						
		Brown poorly graded fine SAND, clay (SP-SC)					- moist
	▽						- water @ 21.6'
19.9	23.50			23.5	1.6		
		White poorly graded medium SAND (SP)	3-3-4				- wet
				25.0			
15.4	28.00					15.4	
		Boring terminated at 28 feet.					Well set at 28 ft.

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.

BORING LOG

SHIELD ENGINEERING, INC.

Report No.: **1100044-05** DATE: **2/12/16**

Client: **Oak Bark Corporation / Koch Sulfur Products LLC**

Project: **Wright Chemical Site**

Boring No.: **MDB-3** | Total Depth **23.0'** | Elev: **42.01** ± | Location:

Type of Boring: **Hollow Stem Auger** | Started: **1/12/16** | Completed: **1/12/16** | Driller: **Geologic Exploration Inc.**

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (Feet)	OVA (ppm)	WELL LOG	REMARKS
		Light Brown poorly graded fine SAND, clay (SP-SC)	2-2-2	1.0 2.5	0.8		- dry Shelby Tube collected from 2.5-5.0 ft.
36.0	6.00						
35.5	6.50	Dark Brown poorly graded SAND (SP)		6.5	0.3		- wet
		Light Brown lean CLAY (CL)	5-4-6	8.0		35.0	- dry Bentonite 7-9 ft.
33.5	8.50			8.5	2.6		
		Light Brown and Grey lean CLAY (CL)	2-2-3	10.0		33.0 31.0	- dry Sand 9-21 ft. Screen 11-21 ft. Shelby Tube collected from 11-13.0 ft.
28.5	13.50			13.5	2.7		
		Light Brown and White poorly graded fine SAND (SP)	3-1-3	15.0			- moist
23.5	18.50			18.5	1.8		
		Black poorly graded fine to medium SAND (SP)	3-4-4	20.0			- wet - wet
						21.0	Well set at 21 ft.
19.0	23.00					19.0	
		Boring terminated at 23 feet.					

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.

BORING LOG

SHIELD ENGINEERING, INC.

Report No.: **1100044-05** DATE: **2/12/16**

Client: **Oak Bark Corporation / Koch Sulfur Products LLC**

Project: **Wright Chemical Site**

Boring No.: **MDB-4** | Total Depth **14.0'** | Elev: **28.56** ± | Location:

Type of Boring: **Hollow Stem Auger** | Started: **1/12/16** | Completed: **1/12/16** | Driller: **Geologic Exploration Inc.**

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (Feet)	OVA (ppm)	WELL LOG	REMARKS
		Light Brown lean CLAY (CL)					-dry
						25.6	Sand 3-14 ft.
24.6	4.00					24.6	-dry
		Brown lean CLAY (CL)					Screen 4-14 ft.
21.1	7.50						
20.6	8.00	Black poorly graded fine SAND (SC)					- moist
19.6	9.00	Brown poorly graded fine SAND (SC)					
	▽	Black poorly graded fine SAND (SC)					- wet - water at 9.3 ft.
							- wet
14.6	14.00					14.6	
		Boring terminated at 14 feet.					Well set at 14 ft.

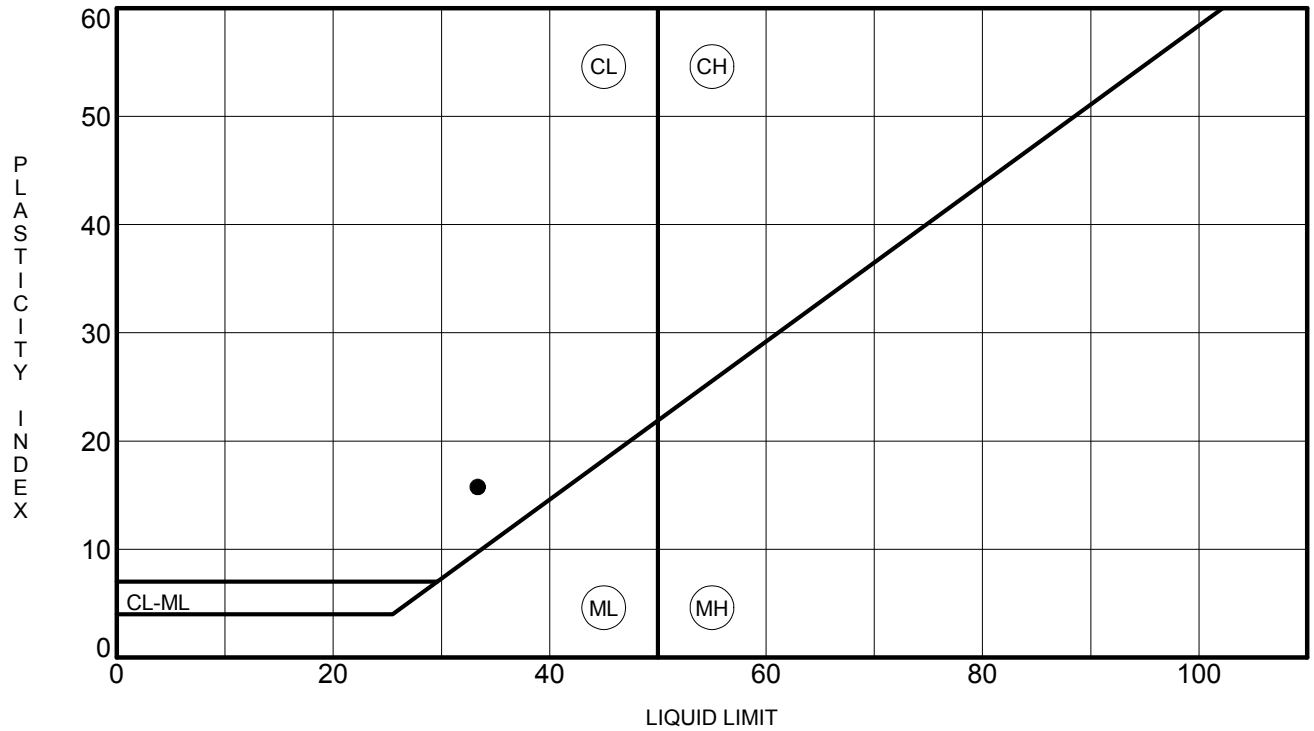
*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.

ATTACHMENT G

SOIL TESTING

LABORATORY RESULTS

ATTERBERG LIMITS' RESULTS



	Specimen Identification		LL	PL	PI	Fines	Classification
●	**HAB-2**	**0.0**	**33**	**18**	**15**	**41**	**CLAYEY SAND(SC)**

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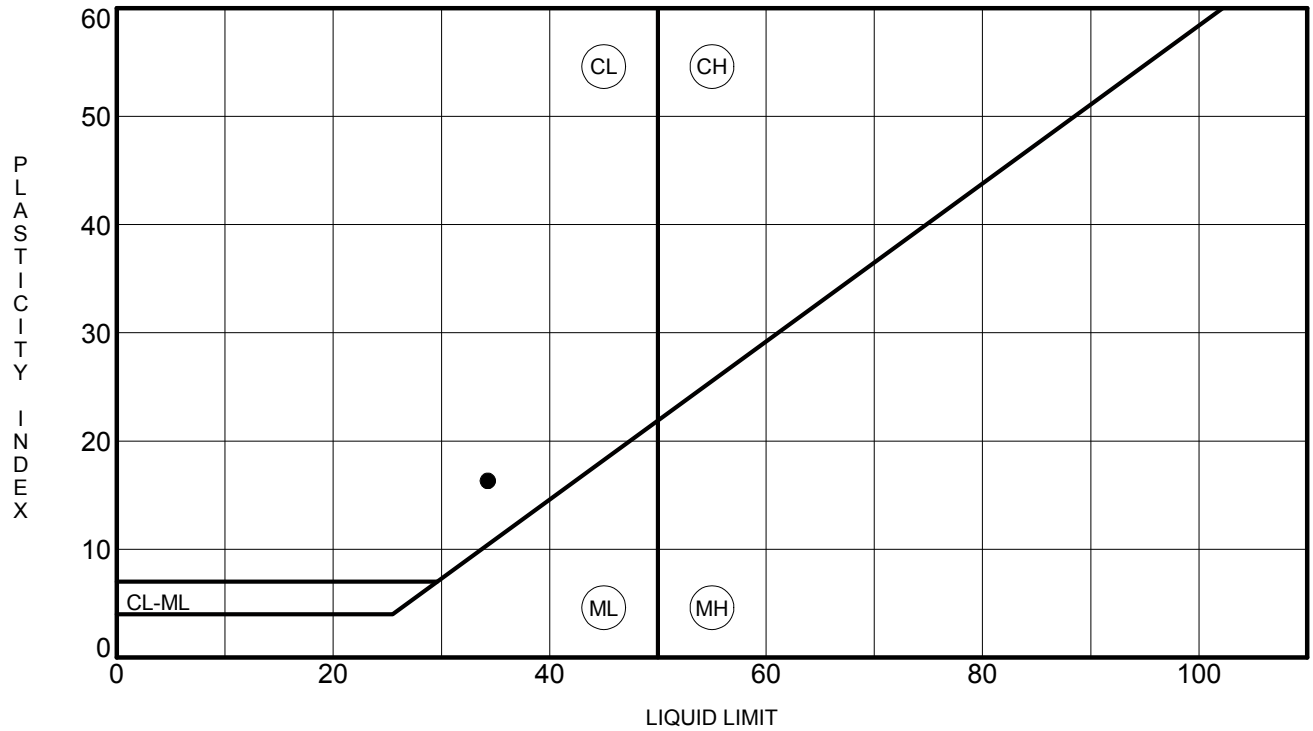
Riegelwood, NC
Shield Project No.: 1100044-05

ATTERBERG LIMITS' RESULTS



	Specimen Identification		LL	PL	PI	Fines	Classification
●	**HAB-3**	**0.0**	**34**	**18**	**16**	**44**	**CLAYEY SAND(SC)**

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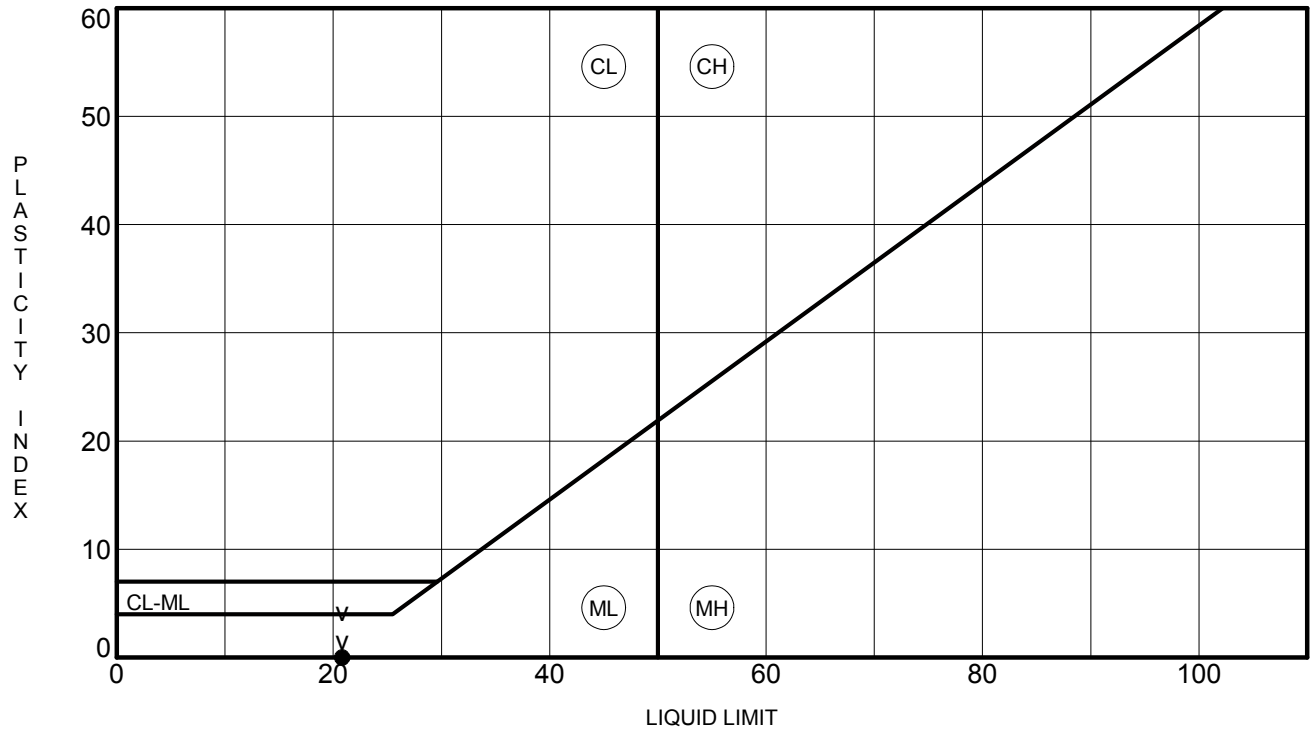

	Specimen Identification		LL	PL	PI	Fines	Classification
●	**MDB-1**	**2.5**	**21**	**36**	**NP**	**25**	**SILTY SAND(SM)**

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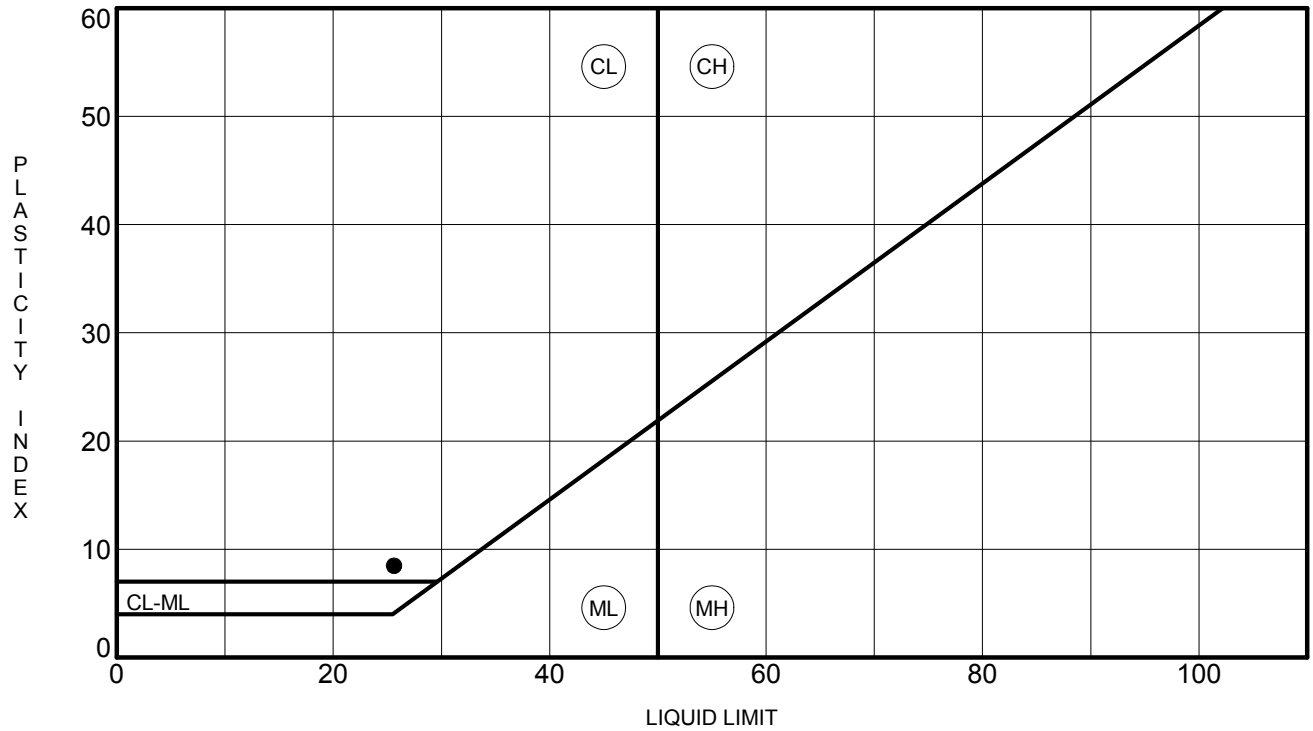
ATTERBERG LIMITS' RESULTS



	Specimen Identification		LL	PL	PI	Fines	Classification
●	**MDB-1**	**10.0**	**26**	**17**	**9**	**37**	**CLAYEY SAND(SC)**

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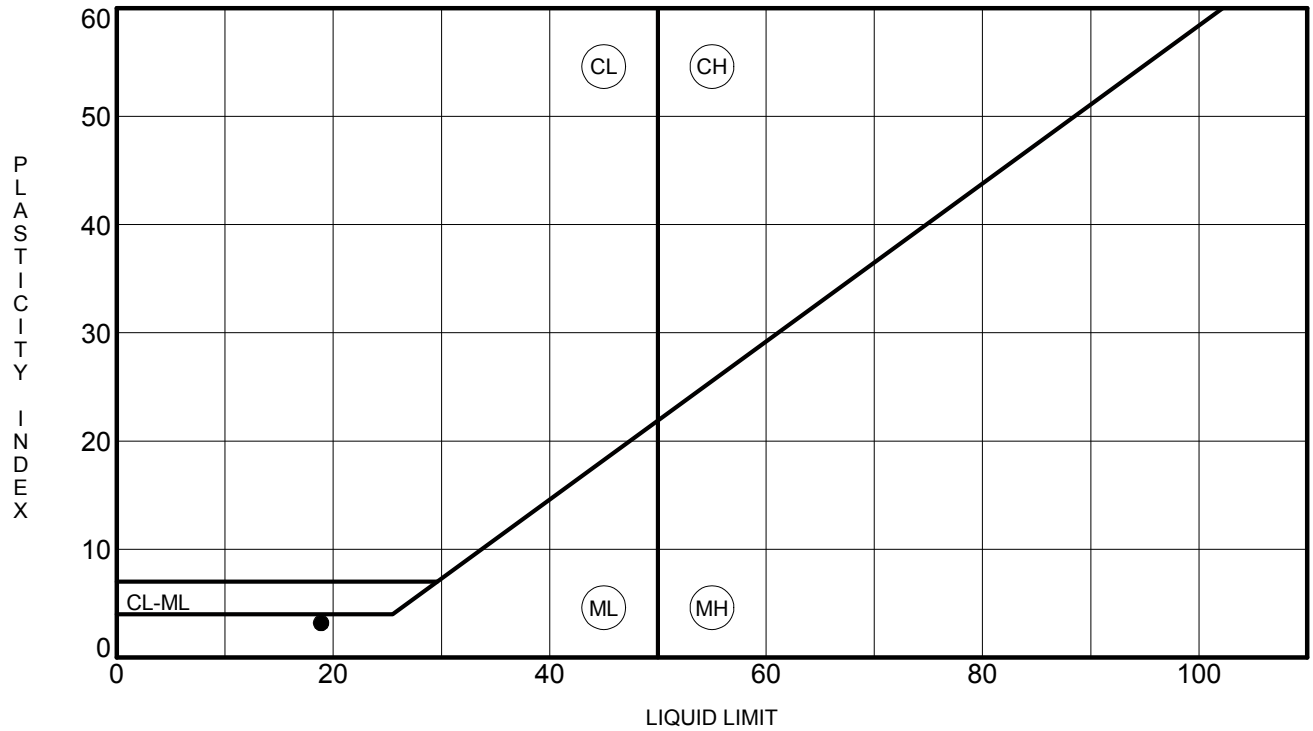
ATTERBERG LIMITS' RESULTS



	Specimen Identification		LL	PL	PI	Fines	Classification
●	**MDB-1**	**25.0**	**19**	**16**	**3**	**31**	**SILTY SAND(SM)**

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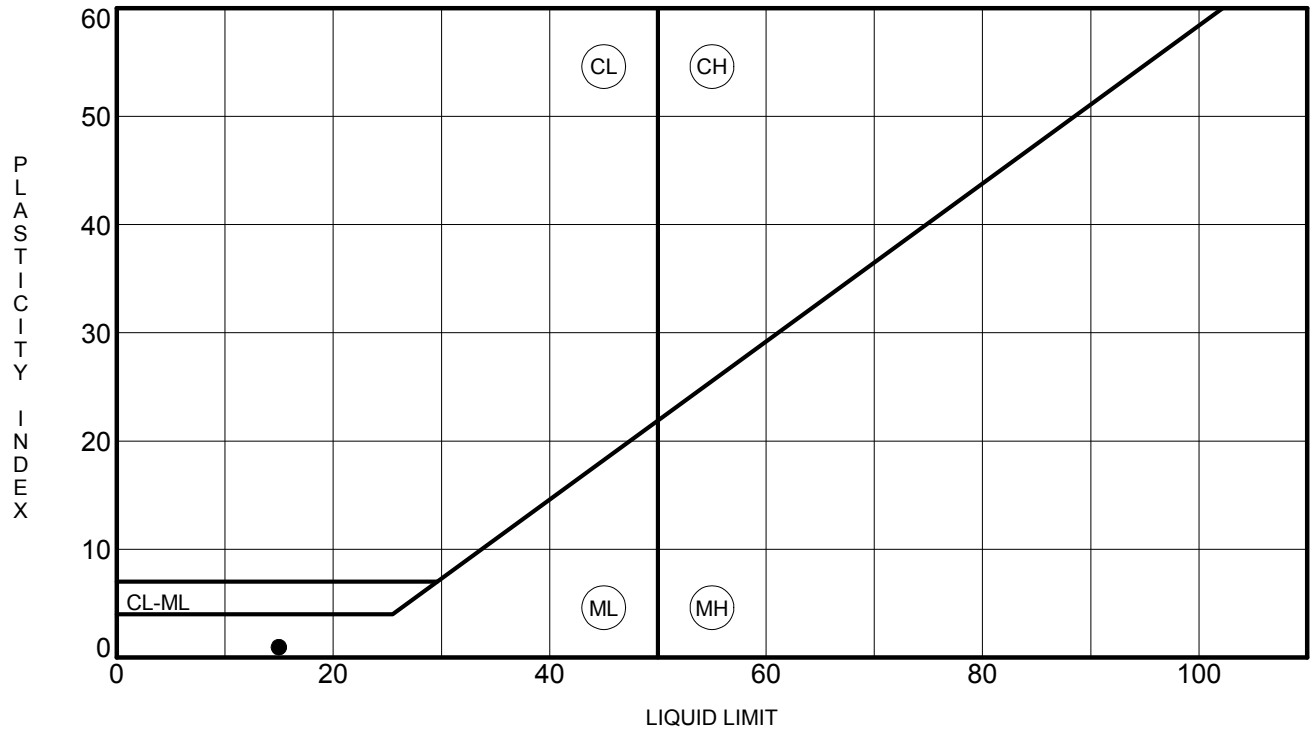

	Specimen Identification		LL	PL	PI	Fines	Classification
●	**MDB-2**	**5.0**	**15**	**14**	**1**	**39**	**SILTY SAND(SM)**

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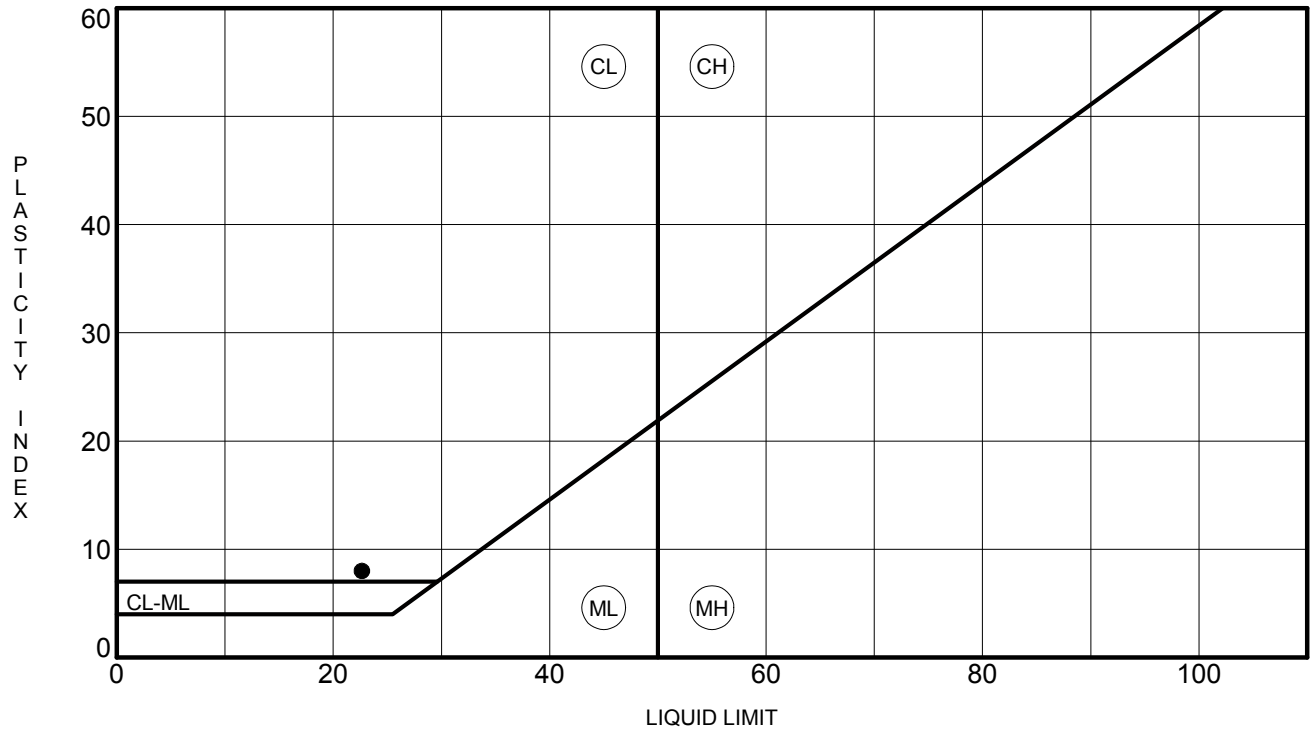

	Specimen Identification		LL	PL	PI	Fines	Classification
●	**MDB-2**	**13.0**	**23**	**15**	**8**	**43**	**CLAYEY SAND(SC)**

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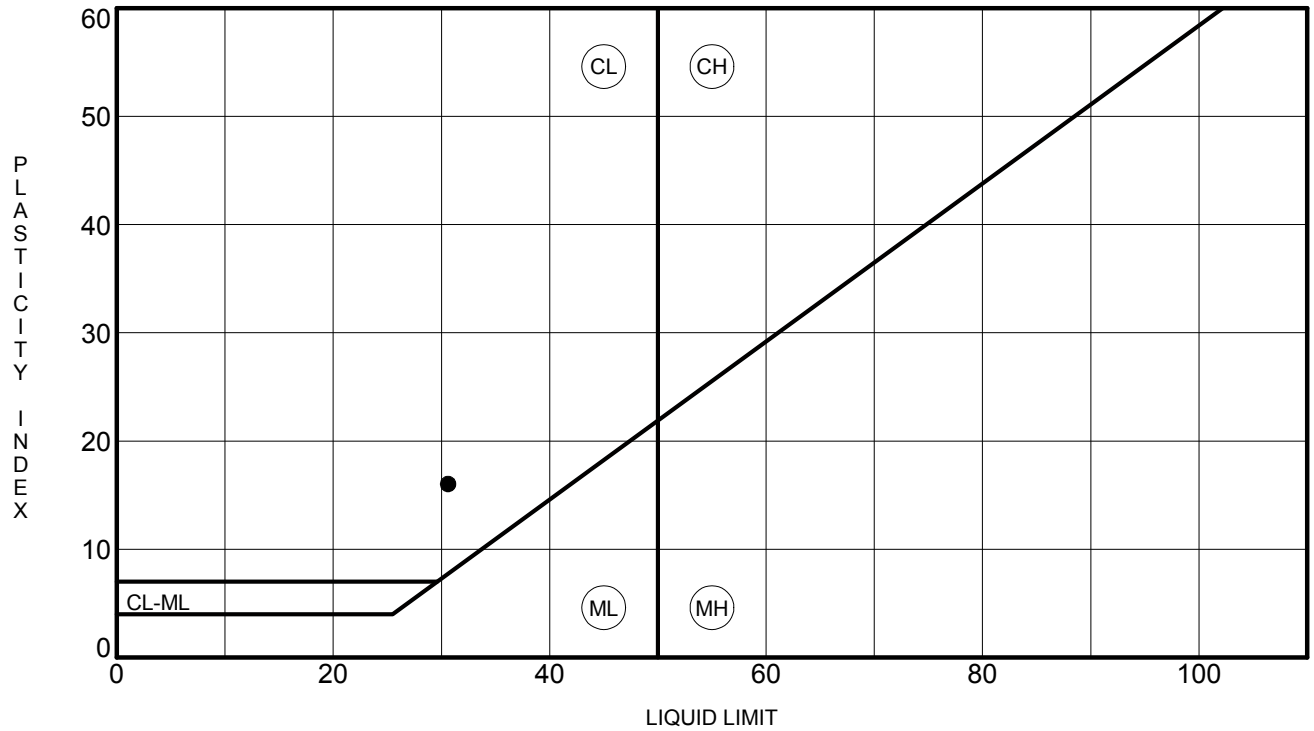
ATTERBERG LIMITS' RESULTS



	Specimen Identification		LL	PL	PI	Fines	Classification
●	**MDB-2**	**20.0**	**31**	**15**	**16**	**50**	**CLAYEY SAND(SC)**

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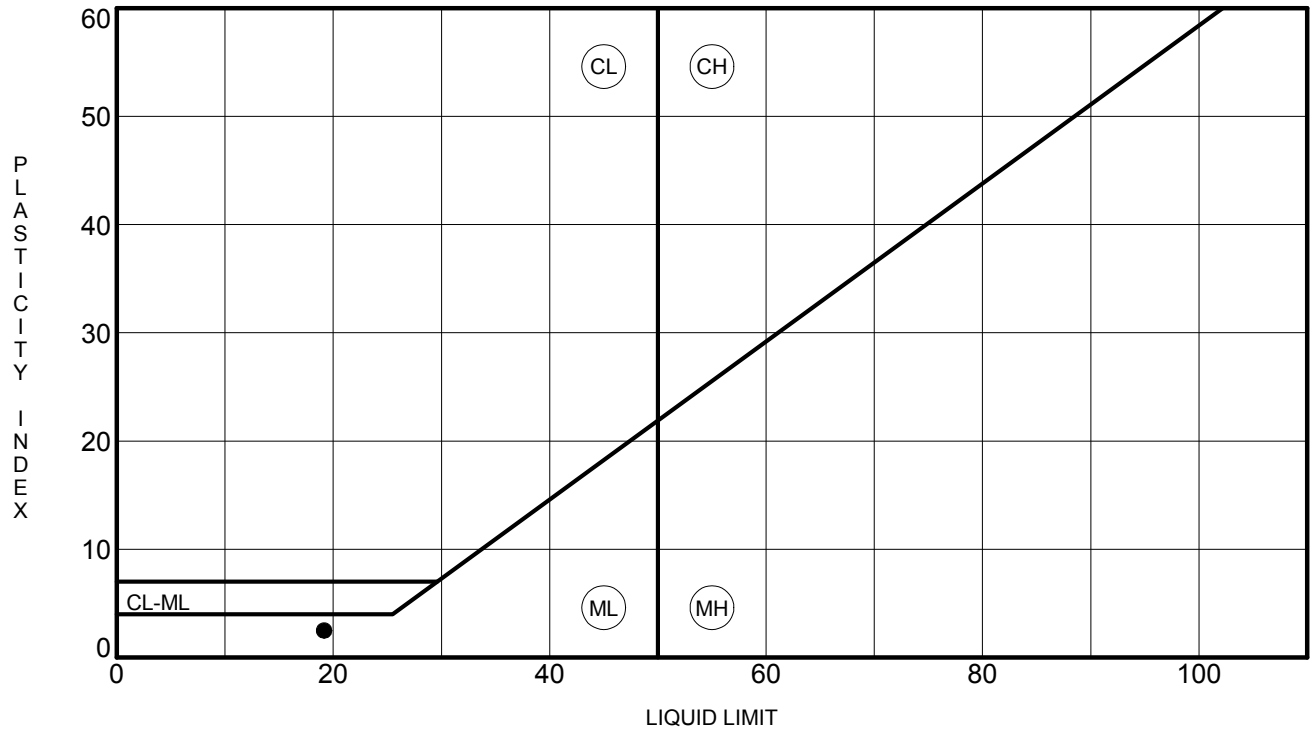
ATTERBERG LIMITS' RESULTS



	Specimen Identification		LL	PL	PI	Fines	Classification
●	**MDB-3**	**5.0**	**19**	**17**	**2**	**39**	**SILTY SAND(SM)**

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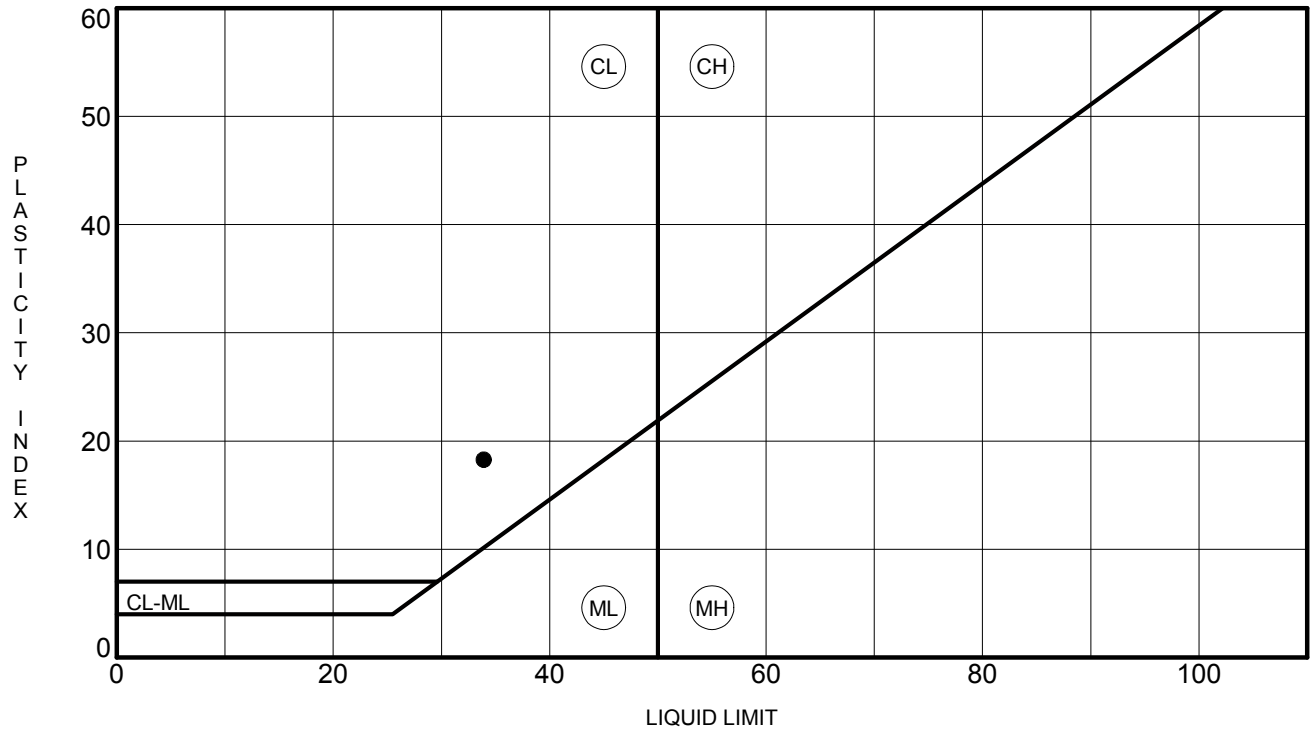

	Specimen Identification		LL	PL	PI	Fines	Classification
●	**MDB-3**	**7.0**	**34**	**16**	**18**	**49**	**CLAYEY SAND(SC)**

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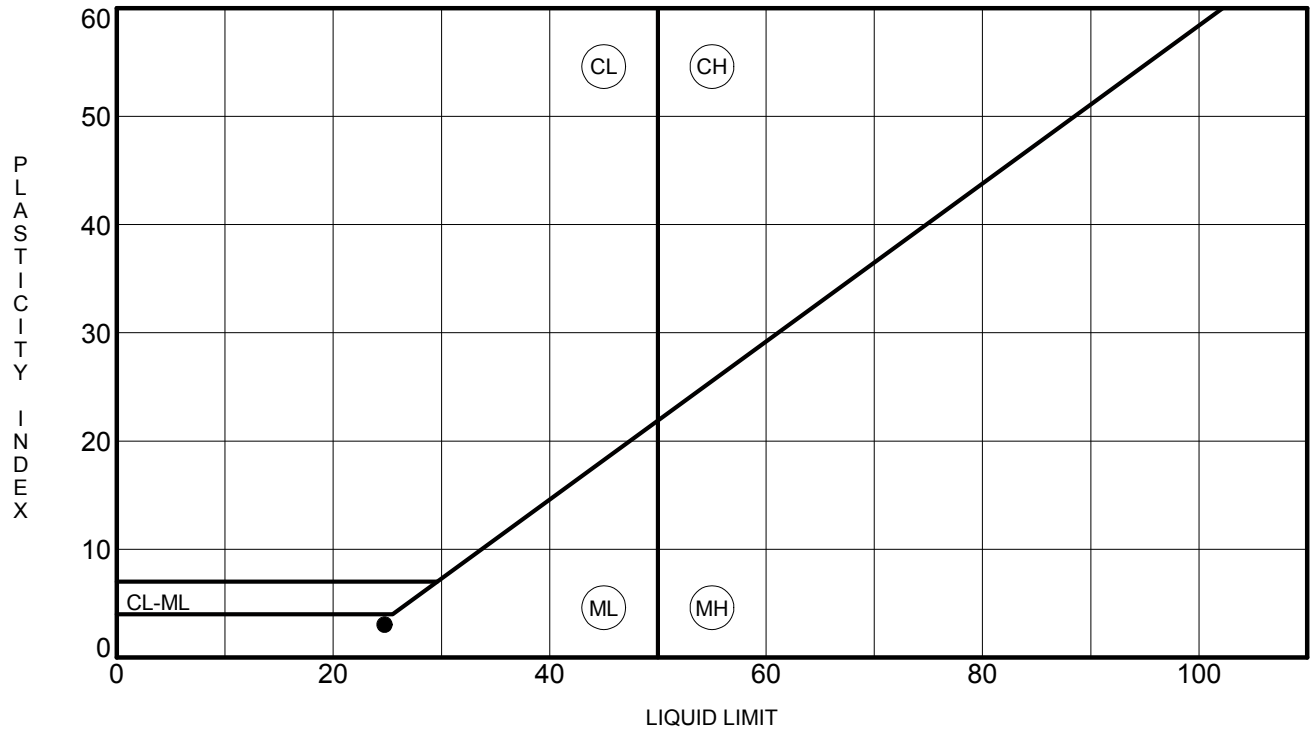

	Specimen Identification		LL	PL	PI	Fines	Classification
●	**MDB-3**	**13.0**	**25**	**22**	**3**	**19**	**SILTY SAND(SM)**

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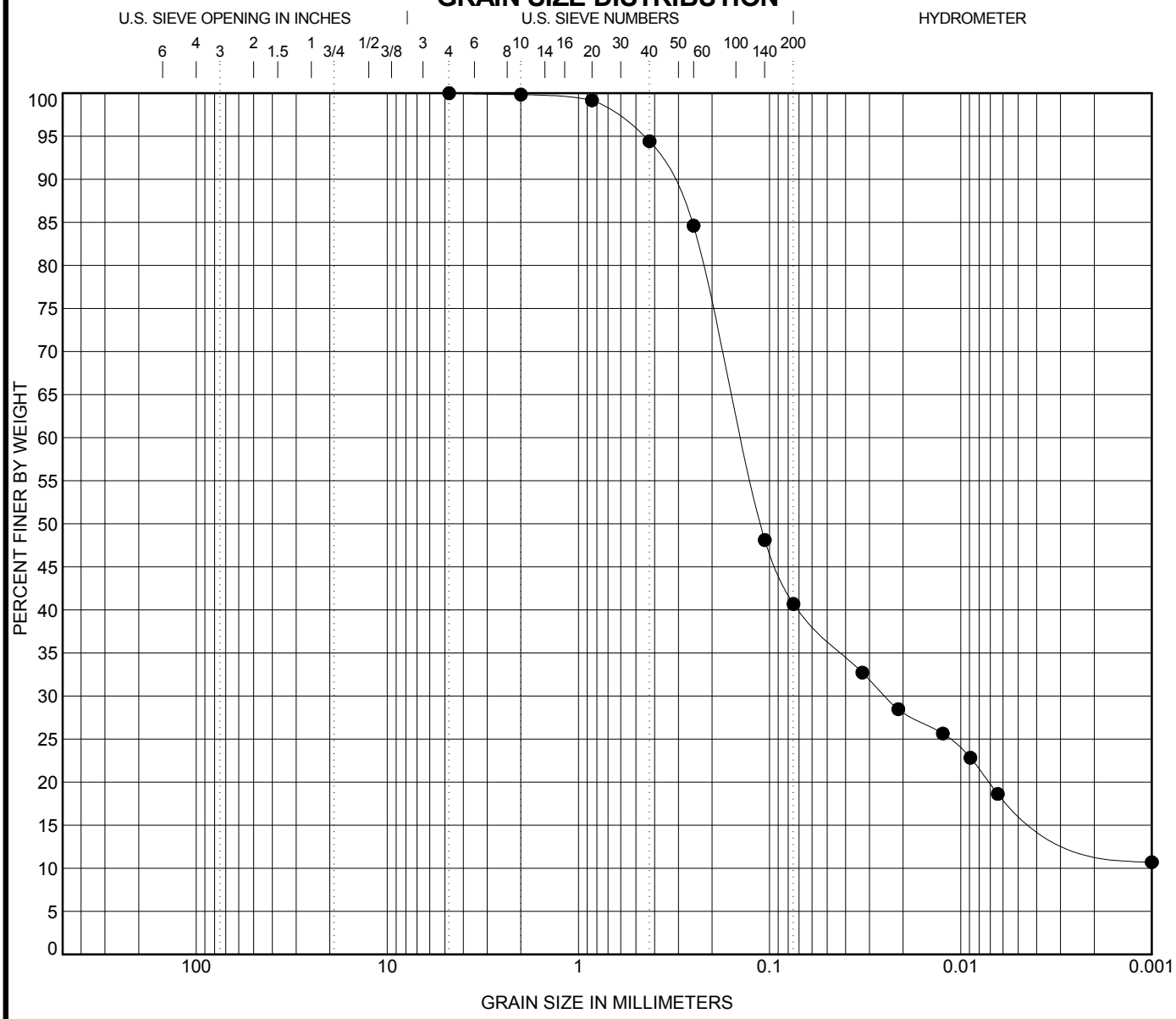
GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**HAB-2**	**0.0**	**CLAYEY SAND(SC)**	**33**	**18**	**15**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**HAB-2**	**0.0**	**4.75**	**0.14**	**0.025**		**0.0**	**59.3**	**23.1**	**17.6**

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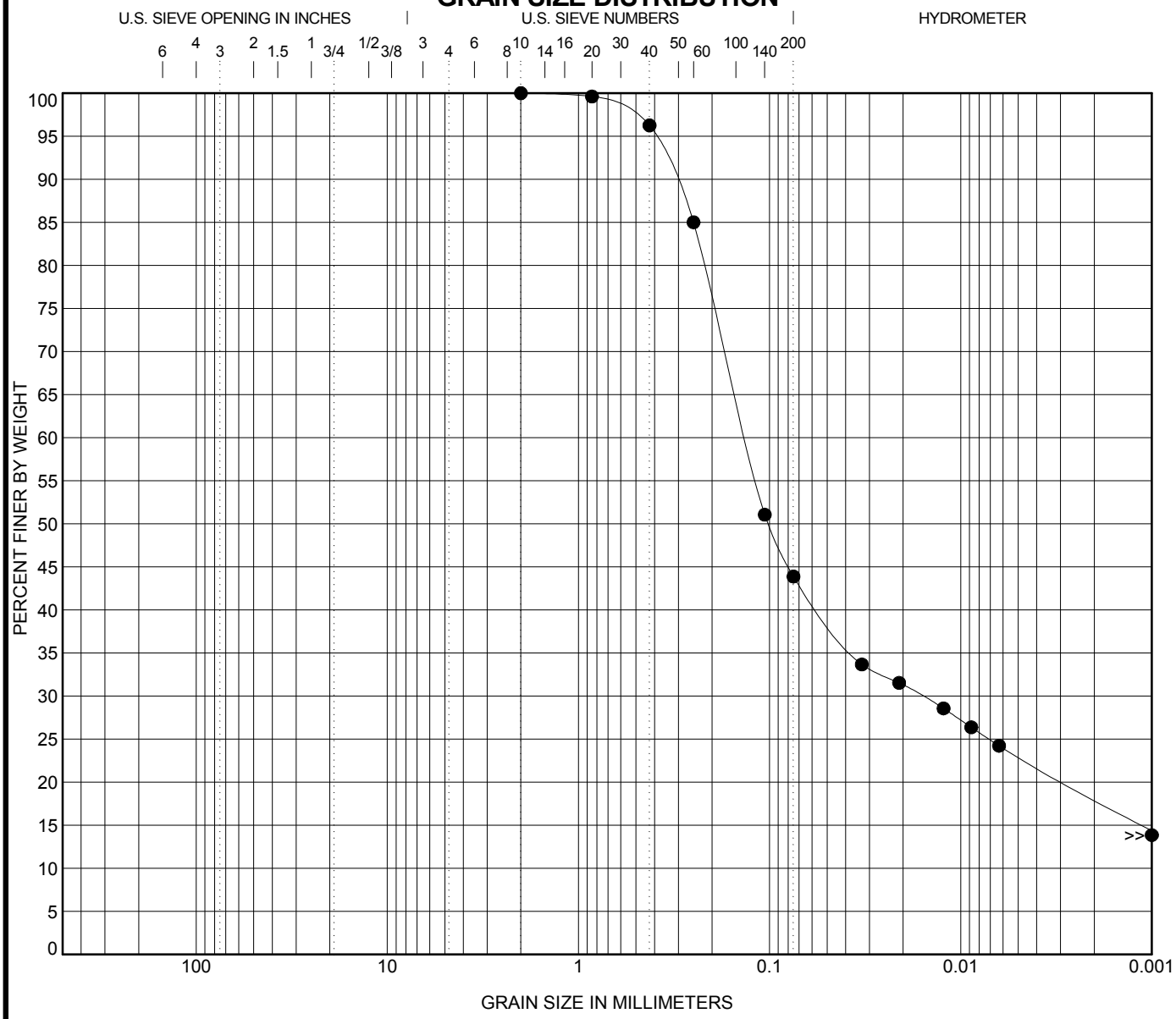
GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**HAB-3**	**0.0**	**CLAYEY SAND(SC)**	**34**	**18**	**16**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**HAB-3**	**0.0**	**2**	**0.133**	**0.016**		**0.0**	**56.1**	**20.9**	**23.0**

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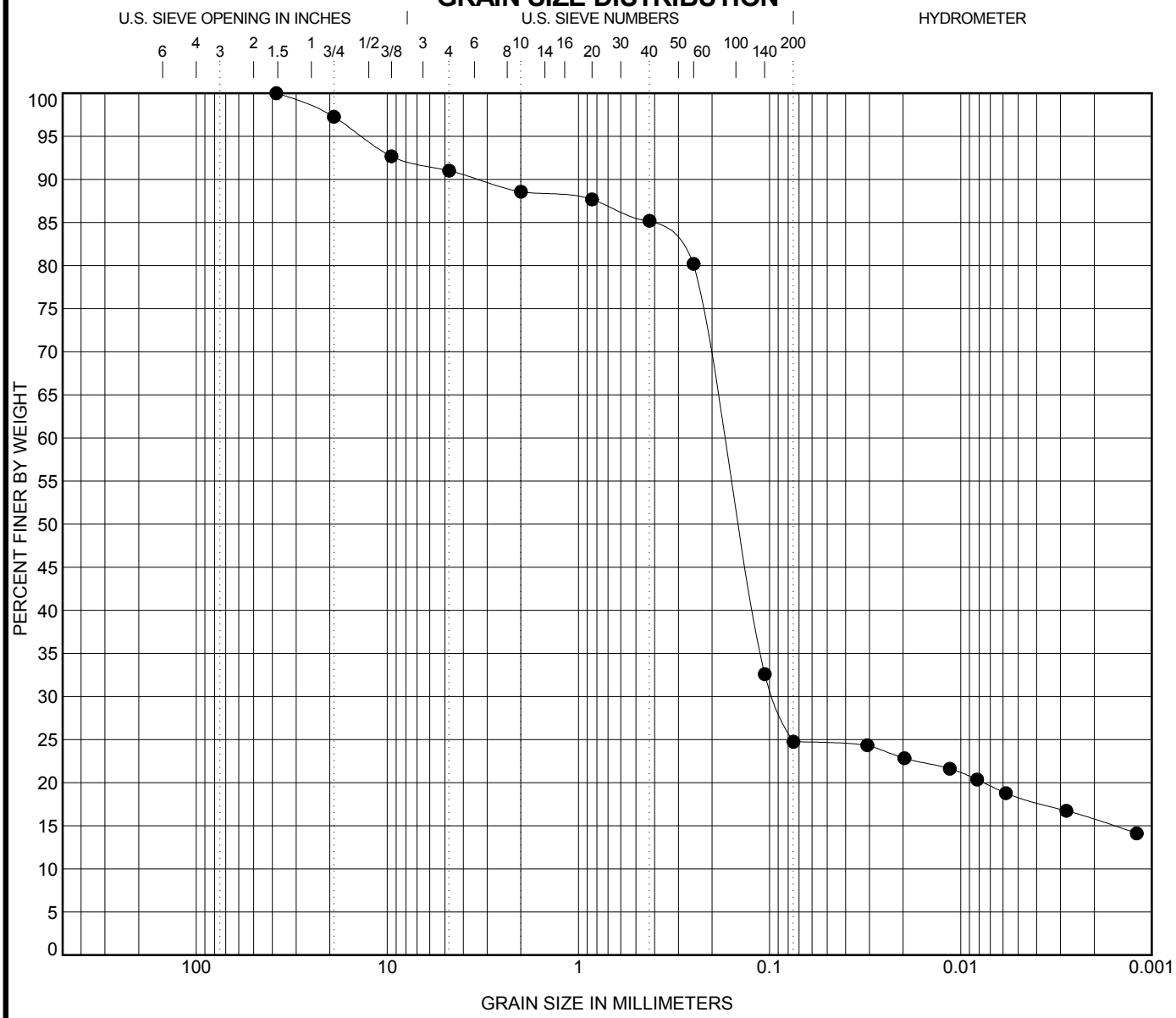
GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**MDB-1**	**2.5**	**SILTY SAND(SM)**	**21**	**36**	**NP**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**MDB-1**	**2.5**	**38.1**	**0.174**	**0.095**		**9.0**	**66.3**	**6.4**	**18.4**

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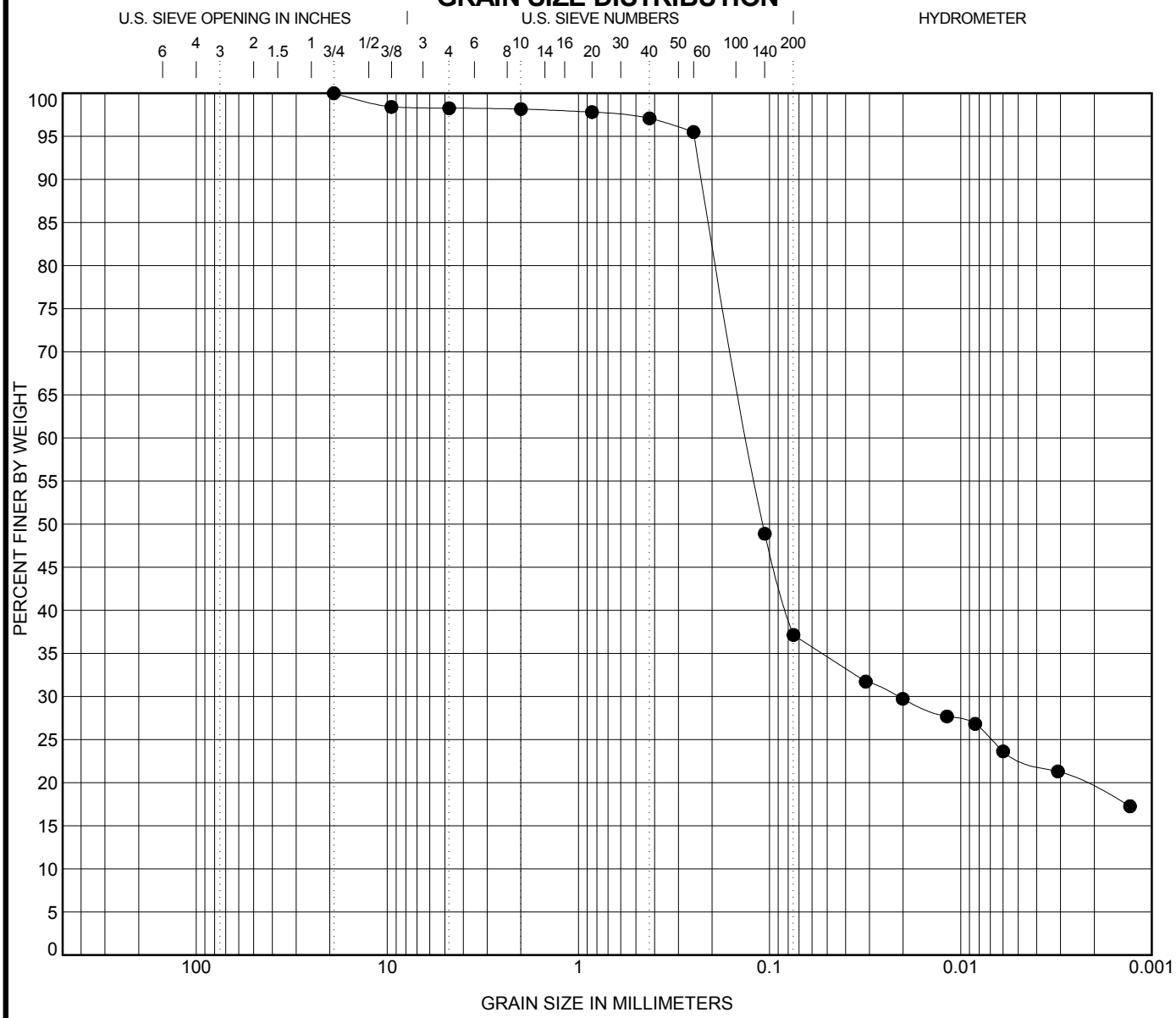
GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**MDB-1**	**10.0**	**CLAYEY SAND(SC)**	**26**	**17**	**9**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**MDB-1**	**10.0**	**19.05**	**0.13**	**0.021**		**1.7**	**61.1**	**14.1**	**23.0**

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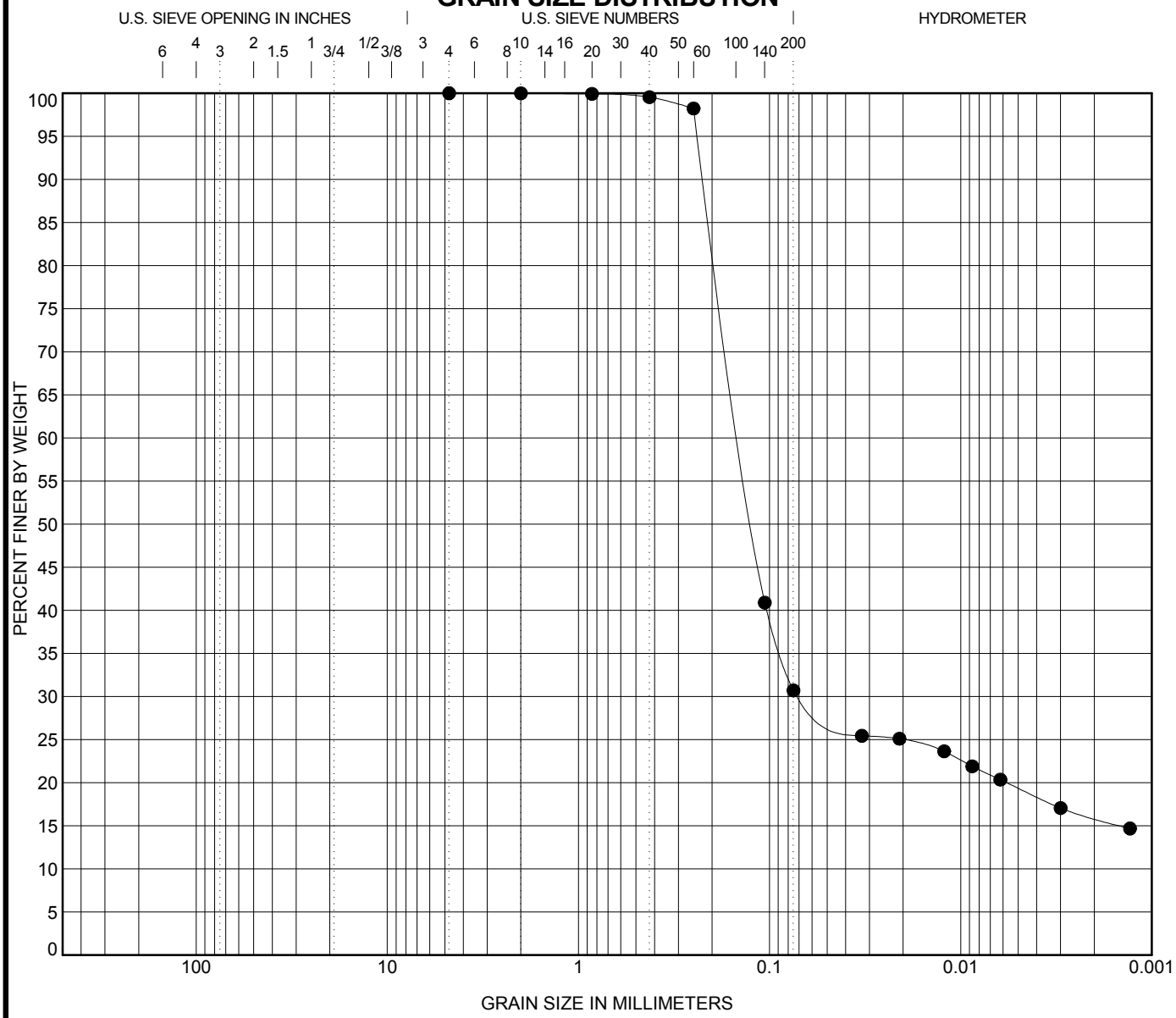
GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**MDB-1**	**25.0**	**SILTY SAND(SM)**	**19**	**16**	**3**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**MDB-1**	**25.0**	**4.75**	**0.141**	**0.067**		**0.0**	**69.3**	**11.3**	**19.4**

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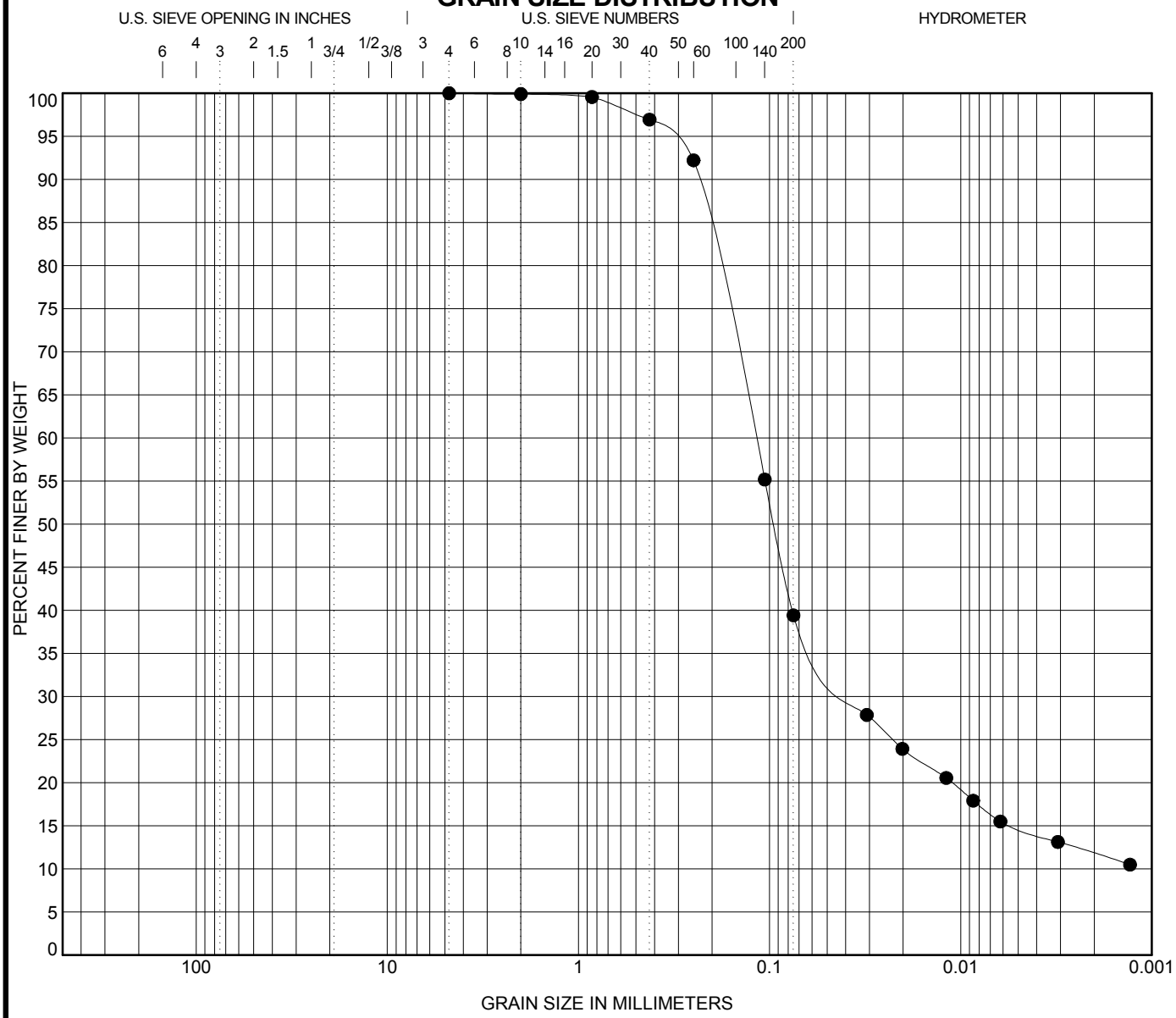
GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**MDB-2**	**5.0**	**SILTY SAND(SM)**	**15**	**14**	**1**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**MDB-2**	**5.0**	**4.75**	**0.119**	**0.037**		**0.0**	**60.6**	**24.7**	**14.8**

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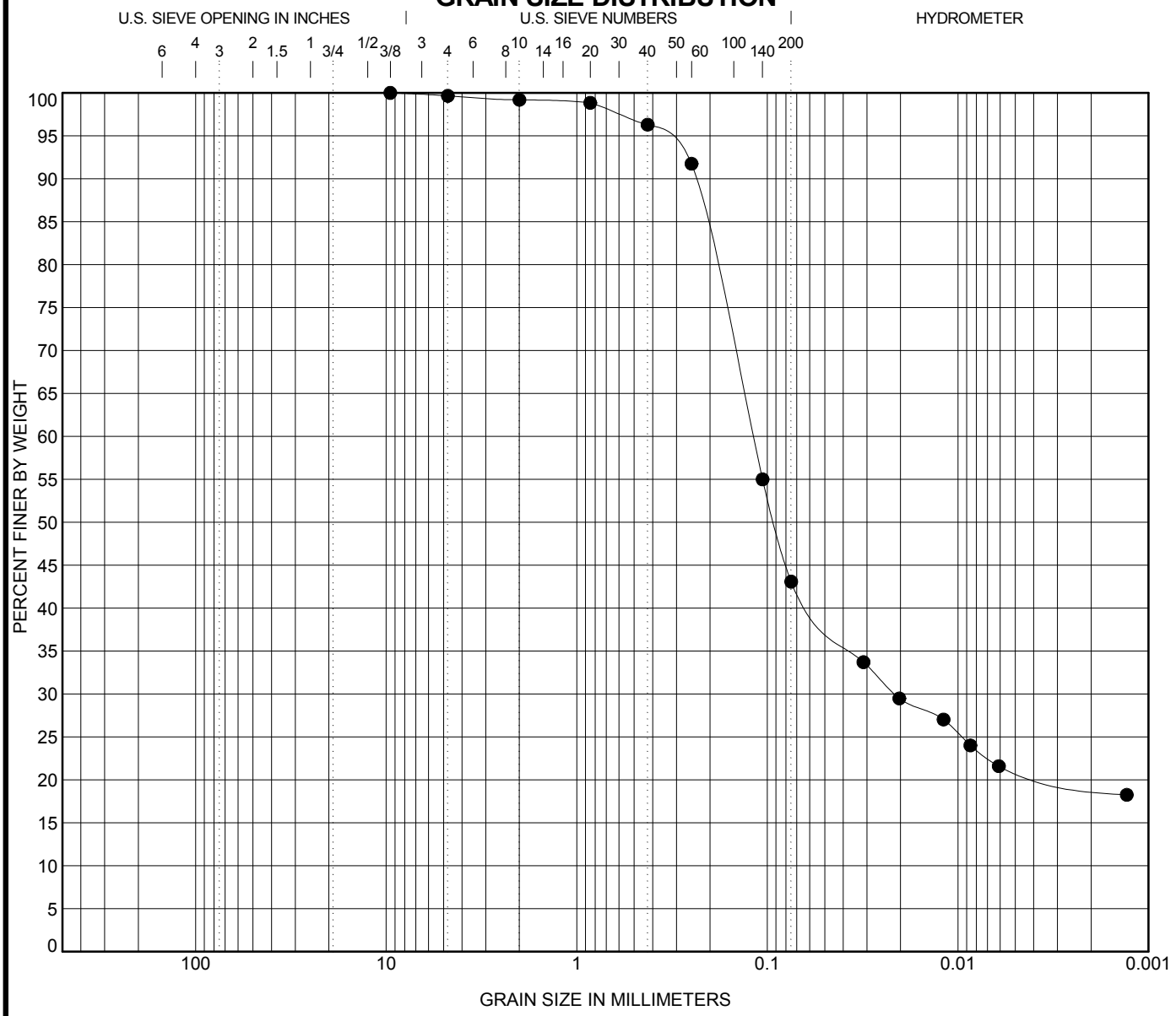

COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**MDB-2**	**13.0**	**CLAYEY SAND(SC)**	**23**	**15**	**8**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**MDB-2**	**13.0**	**9.525**	**0.119**	**0.021**		**0.3**	**56.6**	**21.9**	**21.2**

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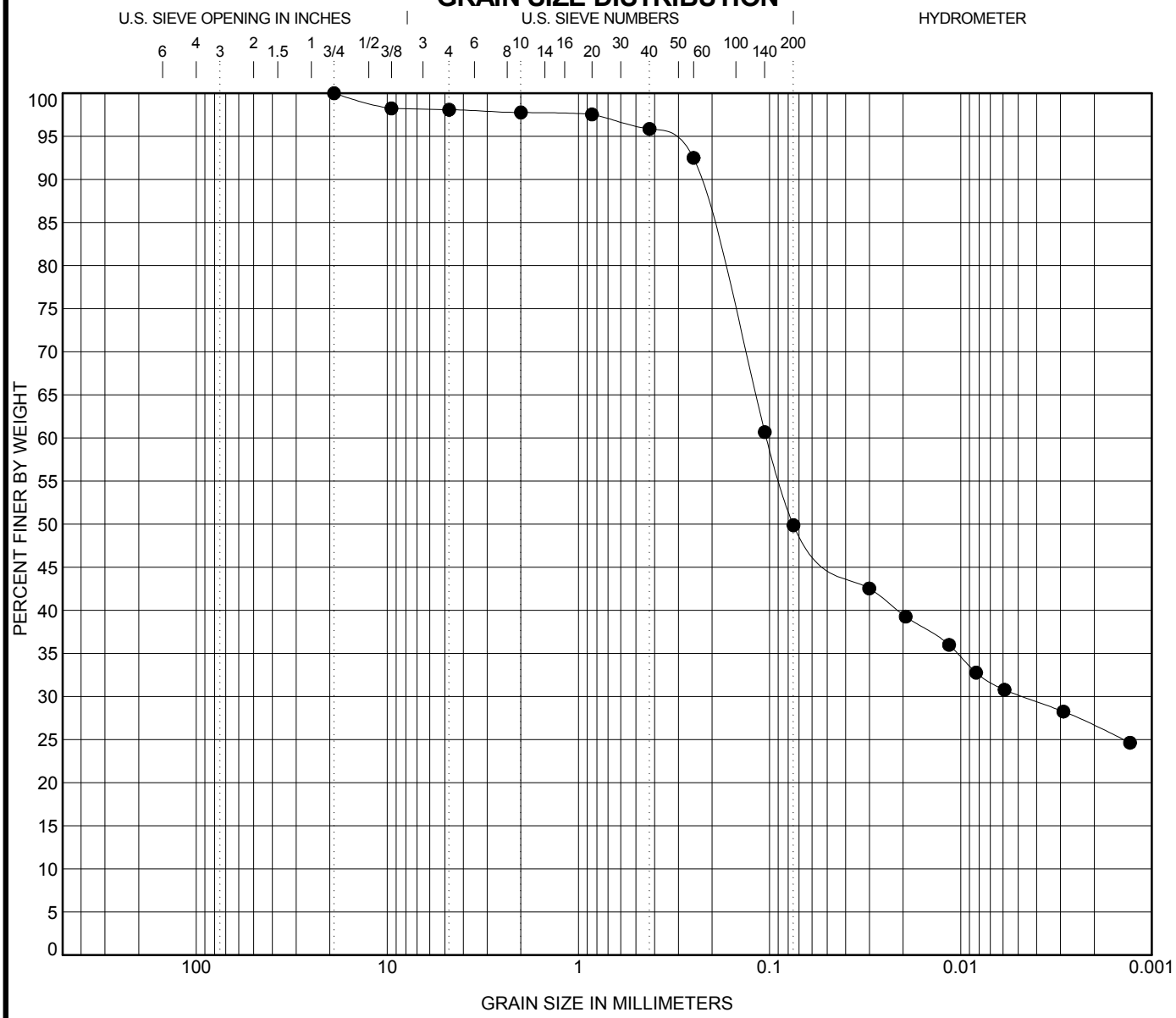
GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**MDB-2**	**20.0**	**CLAYEY SAND(SC)**	**31**	**15**	**16**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**MDB-2**	**20.0**	**19**	**0.104**	**0.005**		**1.9**	**48.2**	**19.7**	**30.2**

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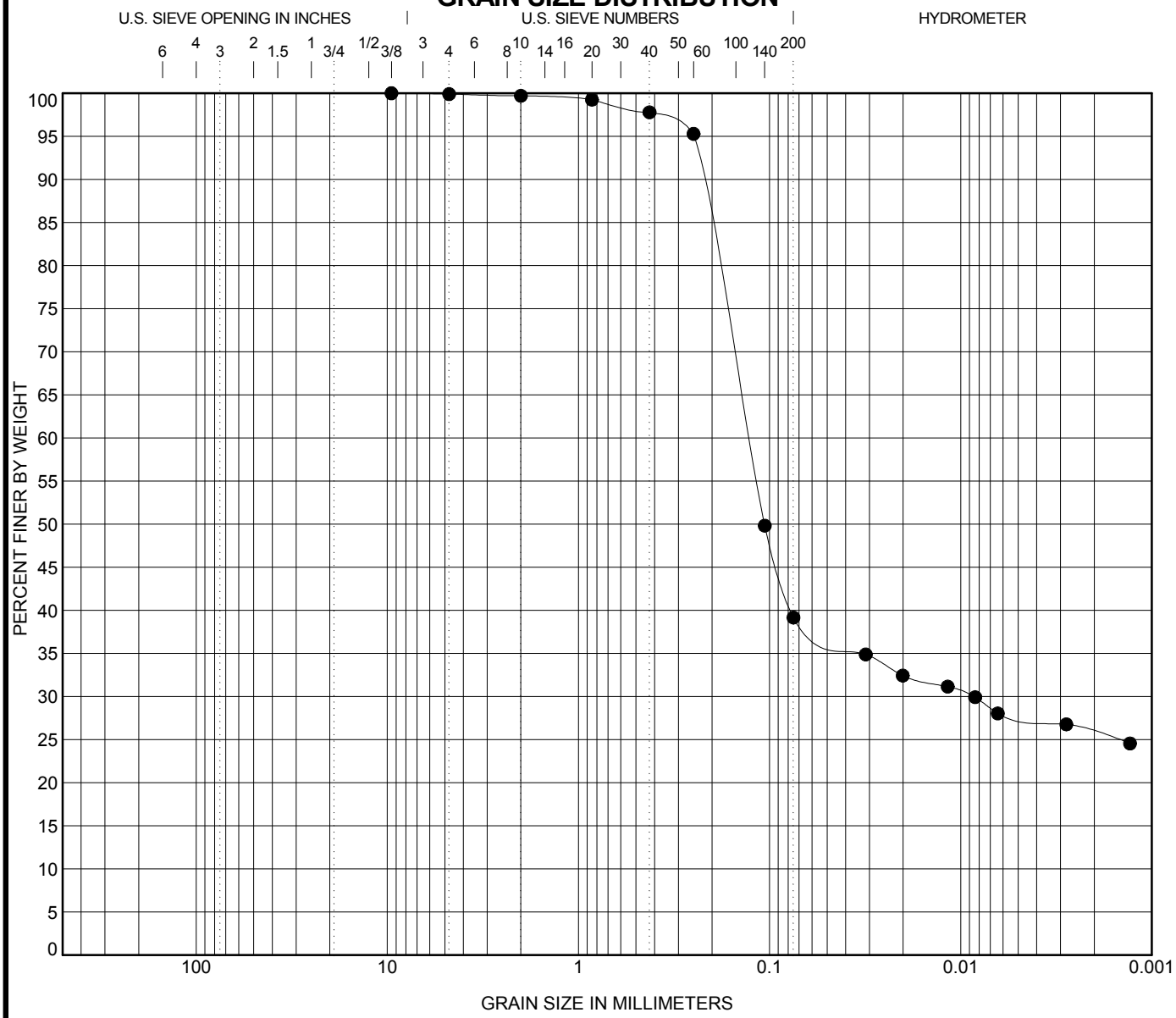

COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**MDB-3**	**5.0**	**SILTY SAND(SM)**	**19**	**17**	**2**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**MDB-3**	**5.0**	**9.525**	**0.128**	**0.009**		**0.1**	**60.7**	**11.5**	**27.7**

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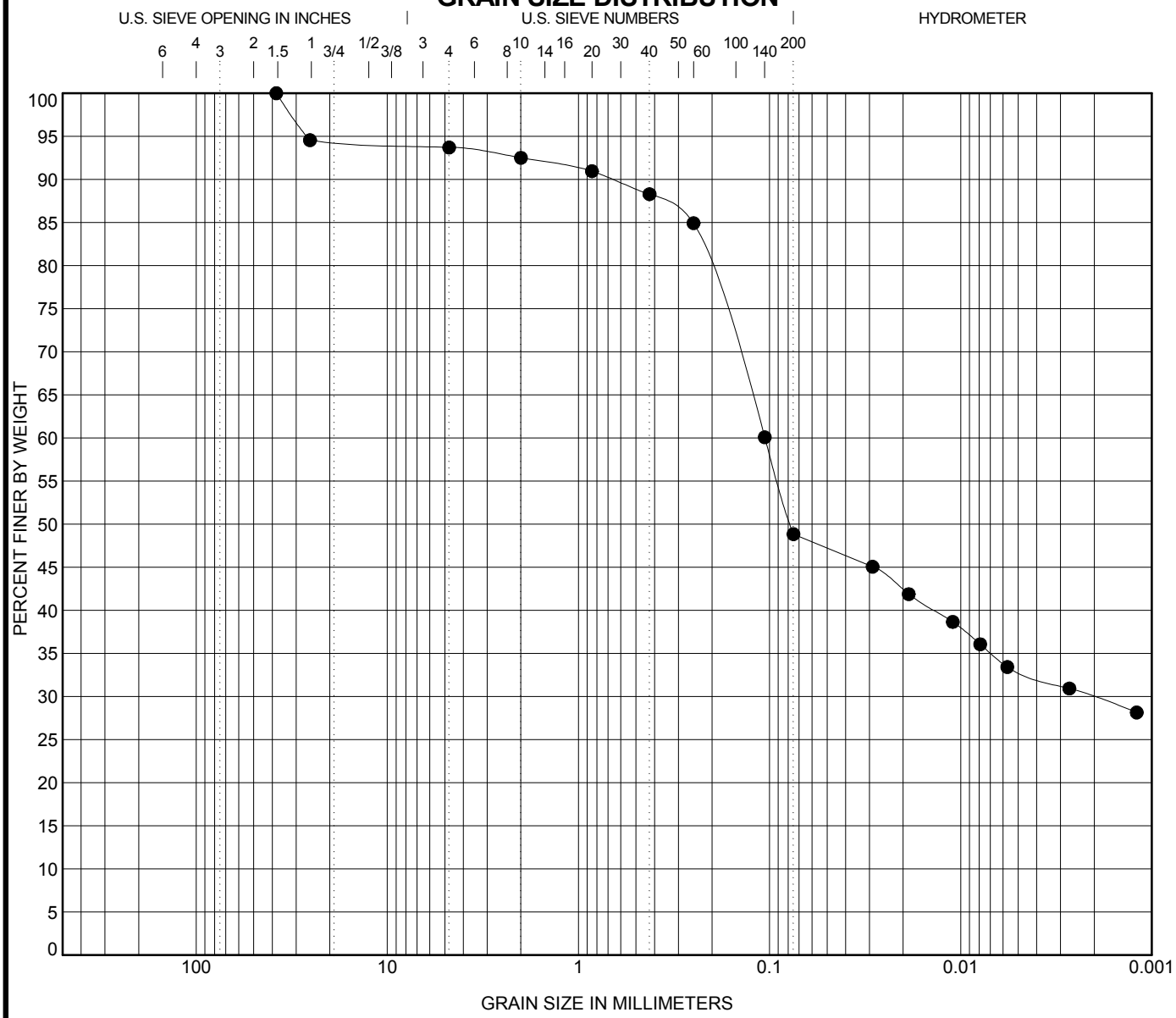

COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**MDB-3**	**7.0**	**CLAYEY SAND(SC)**	**34**	**16**	**18**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**MDB-3**	**7.0**	**38.1**	**0.106**	**0.002**		**6.3**	**44.9**	**15.9**	**33.0**

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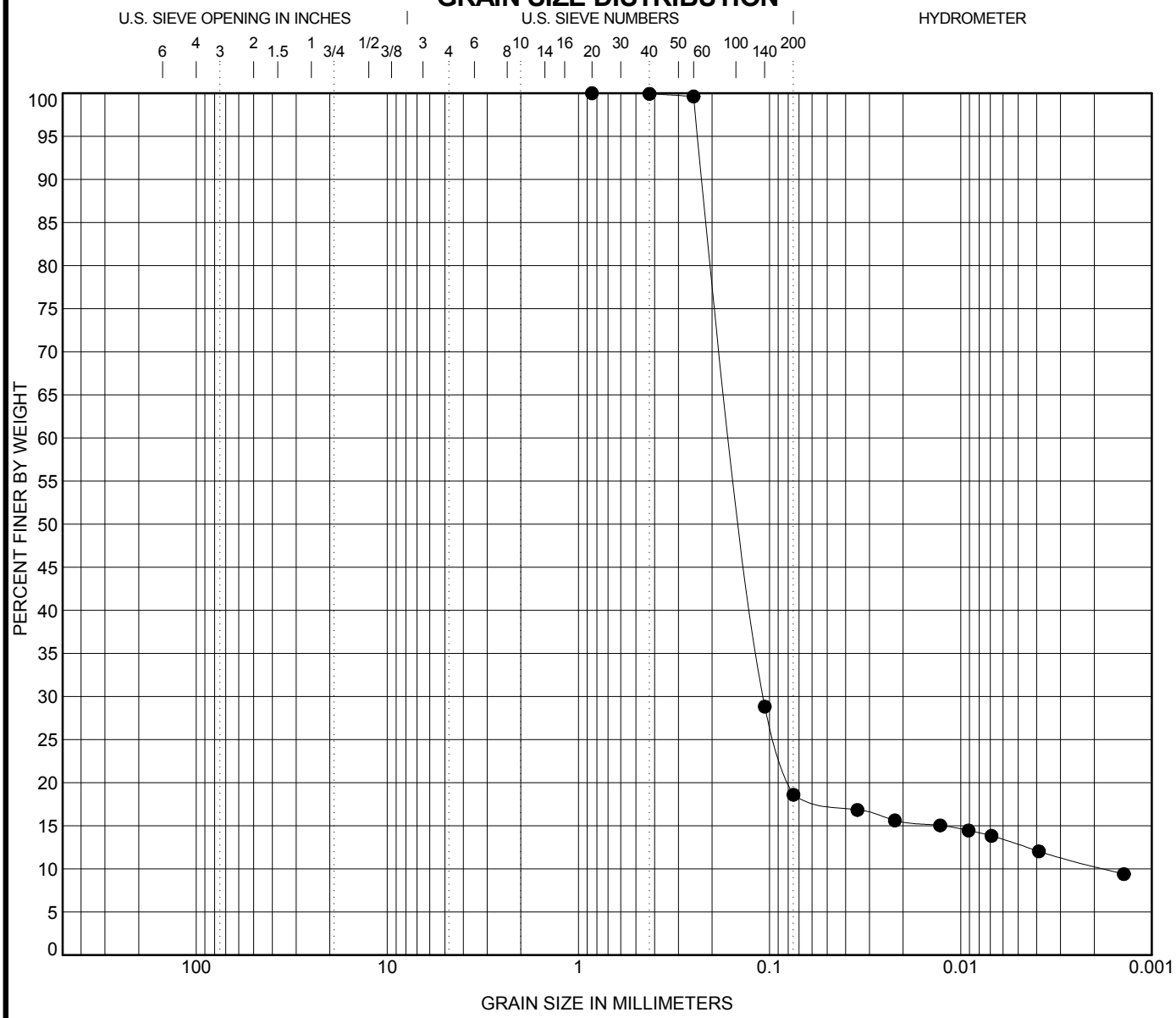

COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**MDB-3**	**13.0**	**SILTY SAND(SM)**	**25**	**22**	**3**	**42.24**	**87.40**

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**MDB-3**	**13.0**	**0.85**	**0.155**	**0.108**	**0.002**	**0.0**	**81.4**	**5.8**	**12.8**

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Wright Chemical RI Phase 1
(Oak Bark Corporation / Koch Sulfur Products LLC)
Riegelwood, NC
Shield Project No.: 1100044-05

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 15-109/HAB-2

Description of Sample:

Sample Location:

Date: 1/5/2015

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	78.04	(g)
2. Weight of Pycnometer	170.59	(g)
3. Weight of Pycnometer and Water	665.70	(g)
4. Temperature of Water	20.5	(°c)
5. Weight of Pycnometer and Sample and Water	712.72	(g)
Oven Drying Container No. _____ Weight	440.68	(g)
6. Weight of Oven Dried Sample	516.43	(g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.635

SHIELD ENGINEERING, INC.

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY

AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 15-109/HAB-3

Description of Sample:

Sample Location:

Date: 1/5/2015

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	83.67	(g)
2. Weight of Pycnometer	175.74	(g)
3. Weight of Pycnometer and Water	673.65	(g)
4. Temperature of Water	20.5	(°c)
5. Weight of Pycnometer and Sample and Water	723.95	(g)
Oven Drying Container No. _____ Weight	255.78	(g)
6. Weight of Oven Dried Sample	336.91	(g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.630

SHIELD ENGINEERING, INC.

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 16-002/MDB-1 @ 1-2.5

Description of Sample:

Sample Location:

Date: 2/13/2016

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	88.19 (g)
2. Weight of Pycnometer	176.12 (g)
3. Weight of Pycnometer and Water	673.58 (g)
4. Temperature of Water	20.8 (°c)
5. Weight of Pycnometer and Sample and Water	728.83 (g)
Oven Drying Container No. _____ Weight	368.05 (g)
6. Weight of Oven Dried Sample	453.51 (g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.827

SHIELD ENGINEERING, INC.

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 16-002/MDB-1 @8.5-10

Description of Sample:

Sample Location:

Date: 2/13/2016

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	80.29 (g)
2. Weight of Pycnometer	173.98 (g)
3. Weight of Pycnometer and Water	671.58 (g)
4. Temperature of Water	20.4 (°c)
5. Weight of Pycnometer and Sample and Water	721.46 (g)
Oven Drying Container No. _____ Weight	368.13 (g)
6. Weight of Oven Dried Sample	447.91 (g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.666

SHIELD ENGINEERING, INC.

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 16-002/MDB-1 @23.5-25

Description of Sample:

Sample Location:

Date: 2/13/2016

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	81.67 (g)
2. Weight of Pycnometer	168.00 (g)
3. Weight of Pycnometer and Water	665.70 (g)
4. Temperature of Water	20.8 (°c)
5. Weight of Pycnometer and Sample and Water	716.65 (g)
Oven Drying Container No. _____ Weight	245.07 (g)
6. Weight of Oven Dried Sample	326.92 (g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.647

SHIELD ENGINEERING, INC.

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 16-001/MDB-2 @ 2.5-5

Description of Sample:

Sample Location:

Date: 2/13/2016

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	89.18 (g)
2. Weight of Pycnometer	168.18 (g)
3. Weight of Pycnometer and Water	665.63 (g)
4. Temperature of Water	20.8 (°c)
5. Weight of Pycnometer and Sample and Water	720.97 (g)
Oven Drying Container No. _____ Weight	246.15 (g)
6. Weight of Oven Dried Sample	333.44 (g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.730

SHIELD ENGINEERING, INC.

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 16-001/MDB-2 @ 11-13

Description of Sample:

Sample Location:

Date: 2/13/2016

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	81.81 (g)
2. Weight of Pycnometer	176.22 (g)
3. Weight of Pycnometer and Water	673.65 (g)
4. Temperature of Water	21.2 (°c)
5. Weight of Pycnometer and Sample and Water	724.13 (g)
Oven Drying Container No. _____ Weight	245.77 (g)
6. Weight of Oven Dried Sample	326.06 (g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.692

SHIELD ENGINEERING, INC.

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 16-001/MDB-2 @ 18-20

Description of Sample:

Sample Location:

Date: 2/13/2016

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	79.99 (g)
2. Weight of Pycnometer	167.95 (g)
3. Weight of Pycnometer and Water	665.74 (g)
4. Temperature of Water	21.1 (°c)
5. Weight of Pycnometer and Sample and Water	715.23 (g)
Oven Drying Container No. _____ Weight	246.22 (g)
6. Weight of Oven Dried Sample	324.90 (g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.694

SHIELD ENGINEERING, INC.

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 16-002/MDB-3 @ 2.5-5

Description of Sample:

Sample Location:

Date: 2/13/2016

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	81.45 (g)
2. Weight of Pycnometer	173.61 (g)
3. Weight of Pycnometer and Water	671.58 (g)
4. Temperature of Water	20.9 (°c)
5. Weight of Pycnometer and Sample and Water	722.37 (g)
Oven Drying Container No. _____ Weight	370.02 (g)
6. Weight of Oven Dried Sample	451.03 (g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.679

SHIELD ENGINEERING, INC.

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 16-002/MDB-3 @ 6.5-7

Description of Sample:

Sample Location:

Date: 2/13/2016

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	80.23 (g)
2. Weight of Pycnometer	175.89 (g)
3. Weight of Pycnometer and Water	673.58 (g)
4. Temperature of Water	21.1 (°c)
5. Weight of Pycnometer and Sample and Water	723.82 (g)
Oven Drying Container No. _____ Weight	368.79 (g)
6. Weight of Oven Dried Sample	447.45 (g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.766

SHIELD ENGINEERING, INC.

SPECIFIC GRAVITY DETERMINATION

SOILS TESTING LABORATORY
AASHTO T-100

Project Name: Wright Chemical

Project No.: 1100044-05

Project Location: Riegelwood, NC

Task No.:

SAMPLE I.D. 16-002/MDB-3 @ 11-13

Description of Sample:

Sample Location:

Date: 2/13/2016

Sample Depth:

Tested By: KAW

Laboratory Data:

1. Weight of Soil Sample	81.19 (g)
2. Weight of Pycnometer	167.99 (g)
3. Weight of Pycnometer and Water	665.70 (g)
4. Temperature of Water	21 (°c)
5. Weight of Pycnometer and Sample and Water	716.30 (g)
Oven Drying Container No. _____ Weight	368.83 (g)
6. Weight of Oven Dried Sample	449.78 (g)

S.G. = (6) / [(6) + ((3) - (5))] @ TEMP. (4)

SPECIFIC GRAVITY = 2.665

SHIELD ENGINEERING, INC.

SHIELD ENGINEERING, INC.

UNIT WEIGHT
ASTM D-7263

Project Name: Wright Chemical
Client Name: Oak Bark Corporation / Koch Sulfur Products
Shield Project Number: 1100044-05
Date: 2/29/2016

Sample ID: **16-001 / MDB-2 @ 2.5-5'**

Moisture Content

pan:	25.34	g	wt.soil+tube:	2.237	lbs	volume:	0.0181	ft^3
wet:	80.26	g	wt. tube:	0.000	lbs	height:	4.9778	in
dry:	74.71	g	wt. soil:	2.237	lbs	diameter:	2.8268	in
water:	5.55	g						
soil:	49.37	g	Wet Density:	123.73				
m/c:	**11.24%**		Dry Density:	**111.23**				

Sample ID: **16-002 / MDB-3 @ 11-13'**

Moisture Content

pan:	188.87	g	wt.soil+tube:	2.479	lbs	volume:	0.0173	ft^3
wet:	969.59	g	wt. tube:	0.690	lbs	height:	4.5661	in
dry:	882.56	g	wt. soil:	1.789	lbs	diameter:	2.8848	in
water:	87.03	g						
soil:	693.69	g	Wet Density:	103.61				
m/c:	**12.55%**		Dry Density:	**92.06**				

Sample ID: **16-002 / MDB-3 @ 2.5-5'**

Moisture Content

pan:	194.96	g	wt.soil+tube:	3.902	lbs	volume:	0.0248	ft^3
wet:	1451.47	g	wt. tube:	1.043	lbs	height:	6.6055	in
dry:	1237.68	g	wt. soil:	2.858	lbs	diameter:	2.8729	in
water:	213.79	g						
soil:	1042.72	g	Wet Density:	115.35				
m/c:	**20.50%**		Dry Density:	**95.73**				

SHIELD ENGINEERING, INC.

Flexible Wall Permeability Test
ASTM D 5084-90

Project Name: Wright Chemical
Project No: 1100044-05
Date: 1/21/2016

Sample ID: 16-001/MDB-2 (2.5-5')
Location: --
Sample Condition: Undisturbed

Test Data:

Initial Dry Density (pcf) :	111.2
Initial Moisture Content (%) :	11.2
Sample Length (cm) :	12.6
Sample Area (cm^2) :	40.5
Average Temperature (^oC) :	19.5
Hydraulic Conductivity K (cm/sec) :	**2.19E-06**
Saturated:	95%

Shield Engineering, Inc.
4301 Taggart Creek Road, Charlotte, NC 20208
Telephone 704-394-6913 Fax 704-394-6968

Consolidation test

Project Name	Wright Chemical	Project No.	1100044-05
Sample No.	16-043	Location	MDB-2
Depth	2.5-5.0'	Tested by	JRS
Description of Soil			
Date of Test			

[A] Specimen Data

At Beginning of Test	Undisturbed	Remolded	
(1) Type of specimen (check one)	☐	☐	
(2) Diameter of specimen, D:		6.35	cm
		2.50	in
(3) Area of specimen, A:		31.67	cm^2
(4) Initial height of specimen, Ho:		1.91	cm
		0.75	in
(5) Initial Volume of specimen V_o[3x4]:		60.49	cm^3
(6) Mass of specimen ring+specimen		185.94	g
(7) Mass of specimen ring		75.17	g
(8) Initial wet mass of specimen,M_{TO}[(6)-(7)]		110.77	g
(9) Initial wet unit weight, ϕ		1.83	g/cm^3
		114.3	pcf
(10) Initial moisture content, W_o		11.3	%
(a) Can no.		189.45	g
(b) Initial wet mass of specimen, M_{TO}[(8)]		640.73	g
(c) Dry mass of total specimen, M_d[(21)]		594.84	g
(d) Initial moisture content, W_o [((b)-(c))/((c)-(a))x100]		11.3	%
(11) Dry mass of total specimen[(21)]		92.87	g
(12) Specific gravity of soil		2.7	
(13) Volume of solids specimen, Vs[(11)/(12)]		34.40	cm^3
(14) Height of solids, Hs [(13)/(3)]		1.086	cm
(15) Initial degree of saturation, So [{(8)-(11)}/{(3)((4)-(14))}x100]		68.60	%
(16) Initial dail reading for test		0.1688	in
At End of Test			
(17) Can no.		287.98	
(18) Mass of can+mass of specimen+mass of specimen ring		472.68	g
(19) Mass of can+oven-dried specimen+ mass of specimen ring		456.02	g
(20) Mass of can+mass of specimen ring		363.15	g
(21) Final mass of water in the specimen [(18)-(19)]		16.66	g
(22) Dry mass of total specimen [(19)-(20)]		92.87	g
(23) Final moisture content, Wf [(21)/(22)x100]		17.9	%
(24) Moist mass after test, M_{tf} [(18)-(20)]		109.5	g
(25) Final height reading		0.0333	in
(26) Final height of specimen, H_f [(4)-{(16)-(25)}]		0.616	in
		1.566	cm
(27) Final degree of saturation, S_f [{(24)-(22)}/{(3)*{(26)-(14)}}]x100		109.66	%
Initial void ratio			
(28) Initial void ratio, eo [{(4)-(14)}/(14)]		0.76	

SHIELD ENGINEERING, INC.

ONE-DIMENSIONAL CONSOLIDATION TEST
AASHTO T216

Project Name: Wright Chemical

Sample ID: 16-043

Project Number: 1100044-05

Sample Depth: 2.5-5'

Time vs. Deformation Data

Pressure: 250 psf
Correction Factor: 0.0000 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
		0	1700.0	**0.17000**
		0.1	1702.0	**0.17020**
		0.25	1702.0	**0.17020**
		0.5	1702.0	**0.17020**
		1	1702.0	**0.17020**
		2	1702.0	**0.17020**
		4	1702.0	**0.17020**
		8	1702.0	**0.17020**
		15	1702.0	**0.17020**
		30	1702.0	**0.17020**
		60	1701.8	**0.17018**
		120	1701.5	**0.17015**
		240	1701.5	**0.17015**
		480	1701.5	**0.17015**
		1440	1701.5	**0.17015**

Pressure: 500 psf
Correction Factor: -0.0001 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
		0	1701.5	**0.17015**
		0.1	1691.0	**0.16900**
		0.25	1690.0	**0.16890**
		0.5	1689.0	**0.16880**
		1	1688.0	**0.16870**
		2	1687.0	**0.16860**
		4	1686.0	**0.16850**
		8	1685.5	**0.16845**
		15	1685.0	**0.16840**
		30	1685.0	**0.16840**
		60	1684.0	**0.16830**
		120	1683.5	**0.16825**
		240	1683.0	**0.16820**
		480	1682.0	**0.16810**
		1440	1681.5	**0.16805**

SHIELD ENGINEERING, INC.

ONE-DIMENSIONAL CONSOLIDATION TEST
AASHTO T216

Project Name: Wright Chemical

Sample ID: 16-043

Project Number: 1100044-05

Sample Depth: 2.5-5'

Time vs. Deformation Data

Pressure: 1,000 psf
Correction Factor: -0.0004 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
		0	1681.5	**0.16805**
		0.1	1634.0	**0.16300**
		0.25	1631.0	**0.16270**
		0.5	1628.5	**0.16245**
		1	1626.5	**0.16225**
		2	1625.0	**0.16210**
		4	1623.5	**0.16195**
		8	1622.0	**0.16180**
		15	1620.5	**0.16165**
		30	1619.0	**0.16150**
		60	1618.0	**0.16140**
		120	1617.0	**0.16130**
		240	1616.0	**0.16120**
		480	1615.0	**0.16110**
		1440	1612.0	**0.16080**

Pressure: 2,000 psf
Correction Factor: -0.0008 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
		0	1612.0	**0.16080**
		0.1	1538.0	**0.15300**
		0.25	1533.0	**0.15250**
		0.5	1530.5	**0.15225**
		1	1528.0	**0.15200**
		2	1525.5	**0.15175**
		4	1524.0	**0.15160**
		8		
		15		
		30	1519.0	**0.15110**
		60	1517.5	**0.15095**
		120	1515.5	**0.15075**
		240	1515.0	**0.15070**
		480	1513.5	**0.15055**
		1440	1511.0	**0.15030**

SHIELD ENGINEERING, INC.

ONE-DIMENSIONAL CONSOLIDATION TEST
AASHTO T216

Project Name: Wright Chemical

Sample ID: 16-043

Project Number: 1100044-05

Sample Depth: 2.5-5'

Time vs. Deformation Data

Pressure: 1,000 psf
Correction Factor: -0.0004 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
3-May		0	1511.0	**0.15030**
		0.1	1515.5	**0.15115**
		0.25	1516.0	**0.15120**
		0.5	1516.0	**0.15120**
		1		
		2	1516.0	**0.15120**
		4		
		8		
		15		
		30	1516.5	**0.15125**
		60	1517.0	**0.15130**
		120		
		240	1517.0	**0.15130**
		480		
		1440	1517.0	**0.15130**

Pressure: 500 psf
Correction Factor: -0.0001 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
4-May		0	1517.0	**0.15130**
		0.1	1523.0	**0.15220**
		0.25	1523.5	**0.15225**
		0.5		
		1	1524.0	**0.15230**
		2		
		4	1524.5	**0.15235**
		8	1525.0	**0.15240**
		15	1525.0	**0.15240**
		30		
		60	1525.5	**0.15245**
		120	1526.0	**0.15250**
		240	1526.0	**0.15250**
		480	1527.0	**0.15260**
		1440	1528.0	**0.15270**

SHIELD ENGINEERING, INC.

ONE-DIMENSIONAL CONSOLIDATION TEST
AASHTO T216

Project Name: Wright Chemical

Sample ID: 16-043

Project Number: 1100044-05

Sample Depth: 2.5-5'

Time vs. Deformation Data

Pressure: 250 psf
Correction Factor: 0.0000 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
5-May		0	1528	**0.1527**
		0.1	1532.5	**0.1533**
		0.25	1533	**0.1533**
		0.5	1533	**0.1533**
		1	1533.5	**0.1534**
		2	1534	**0.1534**
		4	1534	**0.1534**
		8	1534.25	**0.1534**
		15	1534.5	**0.1535**
		30		
		60	1535	**0.1535**
		120	1537	**0.1537**
		240	1537	**0.1537**
		480		
		1440	1538	**0.1538**

Pressure: 500 psf
Correction Factor: -0.0001 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
6-May		0	1538	**0.1538**
		0.1	1536	**0.1535**
		0.25	1536	**0.1535**
		0.5		
		1		
		2		
		4	1536	**0.1535**
		8		
		15		
		30		
		60		
		120		
		240	1535	**0.1534**
		480		
		1440	1535	**0.1534**

SHIELD ENGINEERING, INC.

ONE-DIMENSIONAL CONSOLIDATION TEST
AASHTO T216

Project Name: Wright Chemical

Sample ID: 16-043

Project Number: 1100044-05

Sample Depth: 2.5-5'

Time vs. Deformation Data

Pressure: 1,000 psf
Correction Factor: -0.0004 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
9-May		0	1535	**0.1534**
		0.1	1529	**0.1525**
		0.25	1529	**0.1525**
		0.5	1529	**0.1525**
		1		
		2		
		4	1528	**0.1524**
		8		
		15		
		30		
		60	1527	**0.1523**
		120		
		240	1526.5	**0.1523**
		480	1526	**0.1522**
		1440	1526	**0.1522**

Pressure: 2,000 psf
Correction Factor: -0.0008 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
		0	1526	**0.1522**
		0.1	1512.5	**0.1505**
		0.25	1511.5	**0.1504**
		0.5	1511	**0.1503**
		1	1510	**0.1502**
		2	1509.5	**0.1502**
		4	1508.5	**0.1501**
		8	1508	**0.1500**
		15	1508	**0.1500**
		30		
		60	1505.5	**0.1498**
		120	1505	**0.1497**
		240	1504	**0.1496**
		480	1503	**0.1495**
		1440	1501	**0.1493**

SHIELD ENGINEERING, INC.

ONE-DIMENSIONAL CONSOLIDATION TEST
AASHTO T216

Project Name: Wright Chemical

Sample ID: 16-043

Project Number: 1100044-05

Sample Depth: 2.5-5'

Time vs. Deformation Data

Pressure: 4,000 psf
Correction Factor: -0.0013 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
		0	1501	**0.1493**
		0.1	1415	**0.1402**
		0.25	1407.5	**0.1395**
		0.5	1403	**0.1390**
		1	1400	**0.1387**
		2	1397	**0.1384**
		4	1394.5	**0.1382**
		8	1392	**0.1379**
		15	1390	**0.1377**
		30	1388.5	**0.1376**
		60	1386	**0.1373**
		120	1385	**0.1372**
		240	1383.5	**0.1371**
		480	1382.5	**0.1370**
		1440	1376	**0.1363**

Pressure: 8,000 psf
Correction Factor: -0.0022 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
18-May		0	1376	**0.1363**
		0.1	1258	**0.1236**
		0.25	1253	**0.1231**
		0.5	1248	**0.1226**
		1	1245	**0.1223**
		2	1242	**0.1220**
		4	1239	**0.1217**
		8	1236.5	**0.1215**
		15		
		30	1233	**0.1211**
		60	1230.5	**0.1209**
		120	1229	**0.1207**
		240	1227	**0.1205**
		480	1225	**0.1203**
		1440	1223	**0.1201**

SHIELD ENGINEERING, INC.

ONE-DIMENSIONAL CONSOLIDATION TEST
AASHTO T216

Project Name: Wright Chemical

Sample ID: 16-043

Project Number: 1100044-05

Sample Depth: 2.5-5'

Time vs. Deformation Data

Pressure: 16,000 psf
Correction Factor: -0.0035 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
19-May		0	1223	**0.1201**
		0.1	1194	**0.1159**
		0.25	1185	**0.1150**
		0.5	1180	**0.1145**
		1	1176	**0.1141**
		2	1172.5	**0.1138**
		4		
		8	1165.5	**0.1131**
		15	1165	**0.1130**
		30	1162	**0.1127**
		60	1160	**0.1125**
		120	1157	**0.1122**
		240	1155	**0.1120**
		480	1154	**0.1119**
		1440	1047.5	**0.1013**

Pressure: 32,000 psf
Correction Factor: -0.0054 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
23-May		0	1048	**0.1013**
		0.1	918	**0.0864**
		0.25	906	**0.0852**
		0.5	900	**0.0846**
		1	895	**0.0841**
		2	891	**0.0837**
		4	887.5	**0.0834**
		8	884	**0.0830**
		15	882	**0.0828**
		30	878	**0.0824**
		60	876.5	**0.0823**
		120	874.5	**0.0821**
		240	872	**0.0818**
		480	870	**0.0816**
		1440	860	**0.0806**

SHIELD ENGINEERING, INC.

ONE-DIMENSIONAL CONSOLIDATION TEST
AASHTO T216

Project Name: Wright Chemical

Sample ID: 16-043

Project Number: 1100044-05

Sample Depth: 2.5-5'

Time vs. Deformation Data

Pressure: 16,000 psf
Correction Factor: -0.0035 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
31-May		0	860	**0.0806**
		0.1	876	**0.0841**
		0.25	876	**0.0841**
		0.5	876	**0.0841**
		1	876.5	**0.0842**
		2	876.5	**0.0842**
		4	876.5	**0.0842**
		8	877	**0.0842**
		15	877	**0.0842**
		30		
		60	877	**0.0842**
		120		
		240		
		480		
		1440	877.5	**0.0843**

Pressure: 4,000 psf
Correction Factor: -0.0013 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
1-Jun		0	878	**0.0843**
		0.1	913	**0.0900**
		0.25	915.5	**0.0903**
		0.5	917	**0.0904**
		1	917.5	**0.0905**
		2	918	**0.0905**
		4		
		8	919	**0.0906**
		15	920	**0.0907**
		30	920	**0.0907**
		60		
		120		
		240	921	**0.0908**
		480	921	**0.0908**
		1440	922	**0.0909**

SHIELD ENGINEERING, INC.

ONE-DIMENSIONAL CONSOLIDATION TEST
AASHTO T216

Project Name: Wright Chemical

Sample ID: 16-043

Project Number: 1100044-05

Sample Depth: 2.5-5'

Time vs. Deformation Data

Pressure: 2,000 psf
Correction Factor: -0.0008 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
2-Jun		0	922	**0.0909**
		0.1	933	**0.0925**
		0.25	935	**0.0927**
		0.5	936	**0.0928**
		1	937	**0.0929**
		2	937.5	**0.0930**
		4	938	**0.0930**
		8	939	**0.0931**
		15	939.5	**0.0932**
		30	940	**0.0932**
		60	941	**0.0933**
		120	941.5	**0.0934**
		240	942	**0.0934**
		480	943	**0.0935**
		1440	944	**0.0936**

Pressure: 500 psf
Correction Factor: -0.0001 in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
3-Jun		0	944	**0.0936**
		0.1	970	**0.0969**
		0.25	975	**0.0974**
		0.5	979.5	**0.0979**
		1	983	**0.0982**
		2	986	**0.0985**
		4	988	**0.0987**
		8	990	**0.0989**
		15		
		30	993	**0.0992**
		60	995	**0.0994**
		120	996.5	**0.0996**
		240	998	**0.0997**
		480		
		1440	1008	**0.1007**

SHIELD ENGINEERING, INC.

ONE-DIMENSIONAL CONSOLIDATION TEST
AASHTO T216

Project Name: Wright Chemical

Sample ID: 16-043

Project Number: 1100044-05

Sample Depth: 2.5-5'

Time vs. Deformation Data

Pressure: _____ psf
Correction Factor: _____ in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
		0	1008	**0.1007**
		0.1		
		0.25		
		0.5		
		1		
		2		
		4		
		8		
		15		
		30		
		60		
		120		
		240		
		480		
		1440		

Pressure: _____ psf
Correction Factor: _____ in.

Date	Time	Elapsed Time (min)	Deformation Dial Reading x 10,000(in.)	Corrected Deformation (in.)
		0		
		0.1		
		0.25		
		0.5		
		1		
		2		
		4		
		8		
		15		
		30		
		60		
		120		
		240		
		480		
		1440		

ATTACHMENT H

SLOPE STABILITY ANALYSES

ATTACHMENT H-1

SLOPE STABILITY ANALYSIS

FOR

LINE #1 & CASE #1

Wright Chemical Line 1 (Between MDB-1 and MDB-2)

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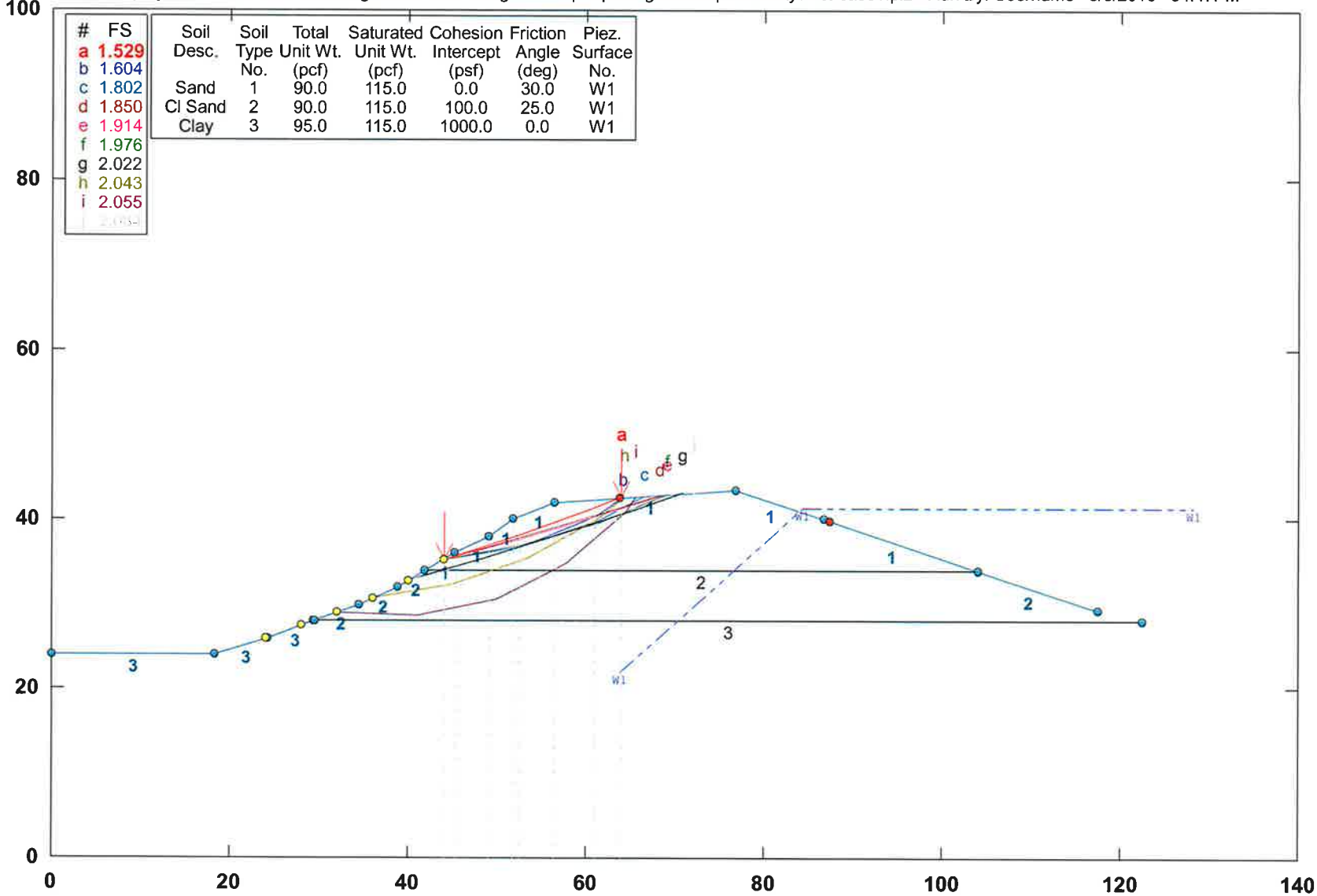
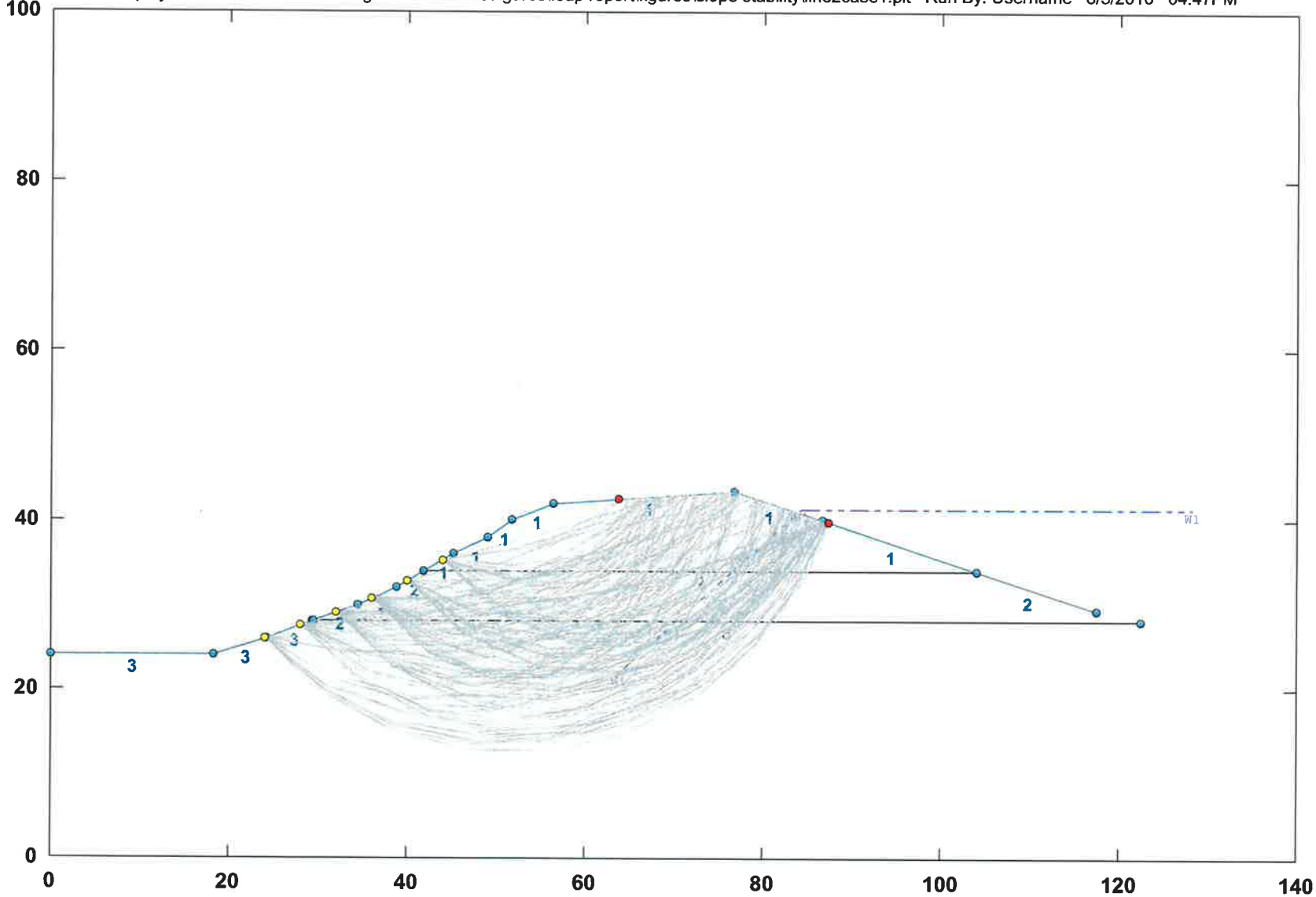


GSTABL7 v.2 FSmin=1.529

Safety Factors Are Calculated By The Modified Bishop Method

Wright Chemical Line 1 (Between MDB-1 and MDB-2)

h:\projects\2010\1100044-04 wright chemical rifs\figures\fsap report\figures\slope stability\line2case1.plt Run By: Username 8/3/2016 04:47PM



```
                    *** GSTABL7 ***
              ** GSTABL7 by Garry H. Gregory, P.E. **
   ** Original Version 1.0, January 1996; Current Version 2.005, Sept. 2006 **
              (All Rights Reserved-Unauthorized Use Prohibited)
*******************************************************************************
                    SLOPE STABILITY ANALYSIS SYSTEM
         Modified Bishop, Simplified Janbu, or GLE Method of Slices.
         (Includes Spencer & Morgenstern-Price Type Analysis)
         Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
         Nonlinear Undrained Shear Strength, Curved Phi Envelope,
         Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
         Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.
*******************************************************************************
   Analysis Run Date:        8/3/2016
   Time of Run:              04:47PM
   Run By:                   Username
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P REPORT\Figures\Slope Stability\line2case1.in
   Output Filename:          H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSA
P REPORT\Figures\Slope Stability\line2case1.OUT
   Unit System:              English
   Plotted Output Filename:  H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSA
P REPORT\Figures\Slope Stability\line2case1.PLT
   PROBLEM DESCRIPTION:  Wright Chemical
                         Line 1 (Between MDB-1 and MDB-2)
   BOUNDARY COORDINATES
      14 Top   Boundaries
      16 Total Boundaries
   Boundary     X-Left     Y-Left    X-Right    Y-Right    Soil Type
      No.        (ft)       (ft)       (ft)       (ft)     Below Bnd
       1         0.00      24.00      18.32      24.00        3
       2        18.32      24.00      24.12      26.00        3
       3        24.12      26.00      29.25      28.00        3
       4        29.25      28.00      34.42      30.00        2
       5        34.42      30.00      38.79      32.00        2
       6        38.79      32.00      41.84      34.00        2
       7        41.84      34.00      45.26      36.00        1
       8        45.26      36.00      48.99      38.00        1
       9        48.99      38.00      51.72      40.00        1
      10        51.72      40.00      56.35      42.00        1
      11        56.35      42.00      76.72      43.48        1
      12        76.72      43.48      86.78      40.00        1
      13        86.78      40.00     104.07      34.00        1
      14       104.07      34.00     117.50      29.34        2
      15        41.84      34.00     104.07      34.00        2
      16        29.52      28.00     122.50      28.00        3
   Default Y-Origin = 0.00(ft)
   Default X-Plus Value = 0.00(ft)
   Default Y-Plus Value = 0.00(ft)
  ISOTROPIC SOIL PARAMETERS
    3 Type(s) of Soil
   Soil  Total  Saturated  Cohesion Friction   Pore   Pressure   Piez.
   Type Unit Wt. Unit Wt. Intercept   Angle  Pressure Constant Surface
    No.  (pcf)    (pcf)     (psf)     (deg)    Param.   (psf)     No.
     1    90.0    115.0       0.0     30.0    0.00       0.0      1
     2    90.0    115.0     100.0     25.0    0.00       0.0      1
     3    95.0    115.0    1000.0      0.0    0.00       0.0      1
   1 PIEZOMETRIC SURFACE(S) SPECIFIED
   Unit Weight of Water =  62.40 (pcf)
   Piezometric Surface No.  1 Specified by  3 Coordinate Points
   Pore Pressure Inclination Factor =  0.50
     Point      X-Water     Y-Water
      No.         (ft)        (ft)
       1         63.77       22.00
       2         84.35       41.33
       3        128.21       41.33
   A Critical Failure Surface Searching Method, Using A Random
   Technique For Generating Circular Surfaces, Has Been Specified.
```

```
 240 Trial Surfaces Have Been Generated.
  40 Surface(s) Initiate(s) From Each Of     6 Points Equally Spaced
Along The Ground Surface Between  X =  24.00(ft)
                                 and  X =  44.00(ft)
Each Surface Terminates Between   X =  63.77(ft)
                                 and  X =  87.35(ft)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is  Y =      0.00(ft)
 9.00(ft) Line Segments Define Each Trial Failure Surface.
Following Are Displayed The Ten Most Critical Of The Trial
      Failure Surfaces Evaluated. They Are
      Ordered - Most Critical First.
      * * Safety Factors Are Calculated By The Modified Bishop Method * *
      Total Number of Trial Surfaces Attempted =   240
      Number of Trial Surfaces With Valid FS =  240
      Statistical Data On All Valid FS Values:
         FS Max =  15.090   FS Min =   1.529   FS Ave =   5.955
         Standard Deviation =    2.580   Coefficient of Variation =   43.32 %
      Failure Surface Specified By  4 Coordinate Points
        Point      X-Surf      Y-Surf
         No.        (ft)        (ft)
          1        44.000       35.263
          2        52.543       38.094
          3        60.964       41.270
          4        63.994       42.555
      Circle Center At X =   -16.661 ; Y =   232.642 ; and Radius =   206.490
             Factor of Safety
            ***    1.529   ***
           Individual data on the     7  slices
                     Water  Water     Tie     Tie     Earthquake
                     Force  Force    Force   Force       Force   Surcharge
Slice  Width   Weight   Top    Bot    Norm    Tan     Hor     Ver    Load
 No.    (ft)    (lbs)   (lbs)  (lbs)   (lbs)   (lbs)   (lbs)   (lbs)  (lbs)
  1     1.3      23.1   519.0  485.2      0.      0.     0.0     0.0     0.0
  2     3.7     300.9  1143.6 1233.7      0.      0.     0.0     0.0     0.0
  3     2.7     512.1   492.0  710.9      0.      0.     0.0     0.0     0.0
  4     0.8     210.2    64.5  182.5      0.      0.     0.0     0.0     0.0
  5     3.8    1035.8    39.4  639.3      0.      0.     0.0     0.0     0.0
  6     4.6     841.5     0.0  286.3      0.      0.     0.0     0.0     0.0
  7     3.0     145.3     0.0    0.0      0.      0.     0.0     0.0     0.0
      Failure Surface Specified By  4 Coordinate Points
        Point      X-Surf      Y-Surf
         No.        (ft)        (ft)
          1        44.000       35.263
          2        52.846       36.921
          3        61.126       40.448
          4        64.086       42.562
      Circle Center At X =    41.342 ; Y =    73.866 ; and Radius =    38.695
             Factor of Safety
            ***    1.604   ***
      Failure Surface Specified By  4 Coordinate Points
        Point      X-Surf      Y-Surf
         No.        (ft)        (ft)
          1        44.000       35.263
          2        52.848       36.912
          3        61.331       39.916
          4        66.546       42.741
      Circle Center At X =    38.400 ; Y =    89.878 ; and Radius =    54.901
             Factor of Safety
            ***    1.802   ***
      Failure Surface Specified By  4 Coordinate Points
        Point      X-Surf      Y-Surf
         No.        (ft)        (ft)
          1        44.000       35.263
          2        52.618       37.859
          3        61.204       40.554
          4        68.286       42.867
```

```
Circle Center At X =  -170.256 ; Y =   762.154 ; and Radius =   757.810
       Factor of Safety
      ***    1.850   ***
Failure Surface Specified By  4 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1        44.000       35.263
    2        52.652       37.742
    3        61.257       40.379
    4        69.042       42.922
Circle Center At X =   -84.583 ; Y =   500.449 ; and Radius =   482.630
       Factor of Safety
      ***    1.914   ***
Failure Surface Specified By  4 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1        44.000       35.263
    2        52.837       36.969
    3        61.435       39.628
    4        69.028       42.921
Circle Center At X =    33.035 ; Y =   115.827 ; and Radius =    81.307
       Factor of Safety
      ***    1.976   ***
Failure Surface Specified By  5 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1        40.000       32.793
    2        48.585       35.495
    3        57.136       38.303
    4        65.651       41.216
    5        70.808       43.050
Circle Center At X =  -175.167 ; Y =   731.410 ; and Radius =   731.001
       Factor of Safety
      ***    2.022   ***
Failure Surface Specified By  5 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1        36.000       30.723
    2        44.853       32.345
    3        53.299       35.454
    4        61.091       39.958
    5        64.223       42.572
Circle Center At X =    30.991 ; Y =    83.038 ; and Radius =    52.554
       Factor of Safety
      ***    2.043   ***
Failure Surface Specified By  6 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1        32.000       29.064
    2        40.993       28.710
    3        49.777       30.670
    4        57.768       34.811
    5        64.432       40.860
    6        65.607       42.673
Circle Center At X =    37.918 ; Y =    62.750 ; and Radius =    34.202
       Factor of Safety
      ***    2.055   ***
Failure Surface Specified By  5 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1        40.000       32.793
    2        48.684       35.156
    3        57.286       37.803
    4        65.797       40.730
    5        72.141       43.147
Circle Center At X =   -27.683 ; Y =   298.689 ; and Radius =   274.375
       Factor of Safety
```

```
***    2.084    ***
    **** END OF GSTABL7 OUTPUT ****
```

ATTACHMENT H-2

SLOPE STABILITY ANALYSIS

FOR

LINE #1 & CASE #2

Wright Chemical Line 1 Surcharge(B/T MDB-1 and MDB-2)

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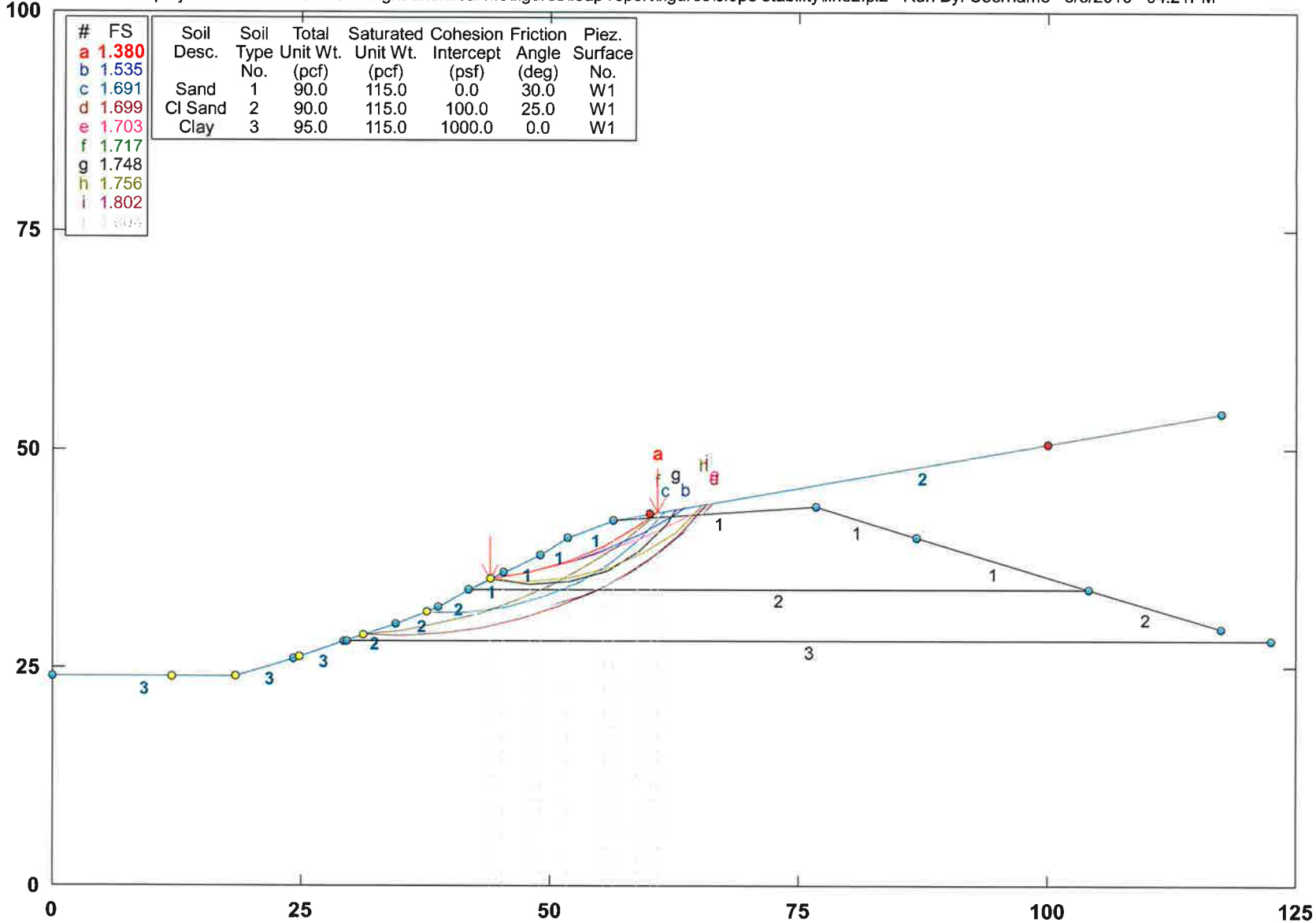

GSTABL7 v.2 FSmin=1.380

Safety Factors Are Calculated By The Modified Bishop Method

Wright Chemical Line 1 Surcharge(B/T MDB-1 and MDB-2)

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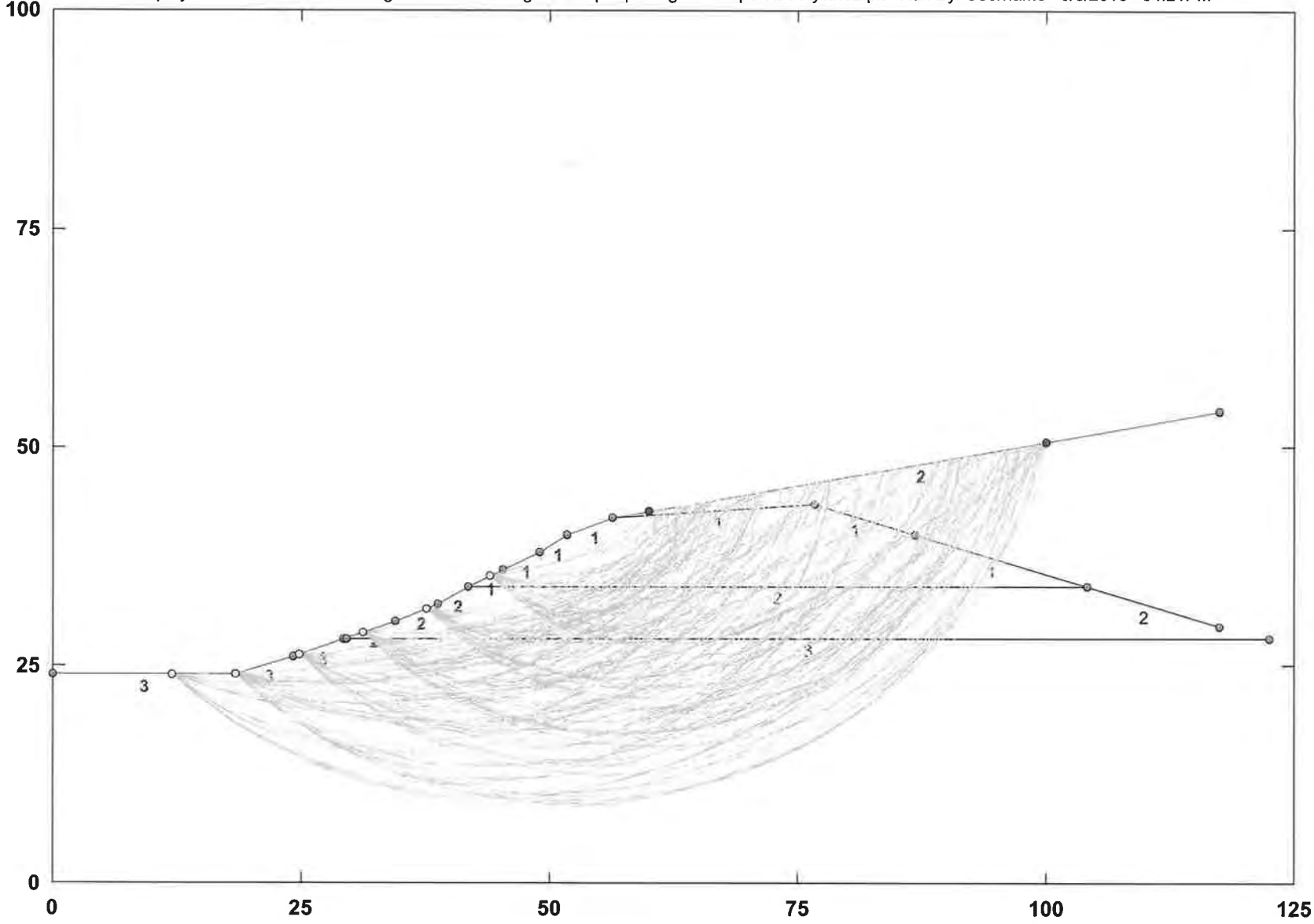

***** GSTABL7 *****

** GSTABL7 by Garry H. Gregory, P.E. **
** Original Version 1.0, January 1996; Current Version 2.005, Sept. 2006 **
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****

SLOPE STABILITY ANALYSIS SYSTEM
Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

Analysis Run Date: 8/3/2016
Time of Run: 04:21PM
Run By: Username
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Output Filename: H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSAP REPORT\Figures\Slope Stability\line2.OUT
Unit System: English
Plotted Output Filename: H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSAP REPORT\Figures\Slope Stability\line2.PLT
PROBLEM DESCRIPTION: Wright Chemical
Line 1 Surcharge(B/T MDB-1 and MDB-2)

BOUNDARY COORDINATES
11 Top Boundaries
17 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	24.00	18.32	24.00	3
2	18.32	24.00	24.12	26.00	3
3	24.12	26.00	29.25	28.00	3
4	29.25	28.00	34.42	30.00	2
5	34.42	30.00	38.79	32.00	2
6	38.79	32.00	41.84	34.00	2
7	41.84	34.00	45.26	36.00	1
8	45.26	36.00	48.99	38.00	1
9	48.99	38.00	51.72	40.00	1
10	51.72	40.00	56.35	42.00	1
11	56.35	42.00	117.50	54.00	2
12	56.35	42.00	76.72	43.48	1
13	76.72	43.48	86.78	40.00	1
14	86.78	40.00	104.07	34.00	1
15	104.07	34.00	117.50	29.34	2
16	41.84	34.00	104.07	34.00	2
17	29.52	28.00	122.50	28.00	3

Default Y-Origin = 0.00(ft)
Default X-Plus Value = 0.00(ft)
Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	90.0	115.0	0.0	30.0	0.00	0.0	1
2	90.0	115.0	100.0	25.0	0.00	0.0	1
3	95.0	115.0	1000.0	0.0	0.00	0.0	1

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.
240 Trial Surfaces Have Been Generated.
40 Surface(s) Initiate(s) From Each Of 6 Points Equally Spaced
Along The Ground Surface Between X = 12.00(ft)
and X = 44.00(ft)
Each Surface Terminates Between X = 60.00(ft)
and X = 100.00(ft)
Unless Further Limitations Were Imposed, The Minimum Elevation

At Which A Surface Extends Is Y = 0.00(ft)
4.00(ft) Line Segments Define Each Trial Failure Surface.
Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Evaluated. They Are
Ordered - Most Critical First.
* * Safety Factors Are Calculated By The Modified Bishop Method * *
Total Number of Trial Surfaces Attempted = 240
Number of Trial Surfaces With Valid FS = 240
Statistical Data On All Valid FS Values:
FS Max = 6.726 FS Min = 1.380 FS Ave = 3.124
Standard Deviation = 0.690 Coefficient of Variation = 22.10 %
Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	44.000	35.263
2	47.932	36.000
3	51.736	37.237
4	55.349	38.953
5	58.711	41.119
6	60.784	42.870

Circle Center At X = 40.395 ; Y = 65.537 ; and Radius = 30.488
Factor of Safety
*** 1.380 ***
Individual data on the 10 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	1.3	28.4	0.0	0.0	0.	0.	0.0	0.0	0.0
2	2.7	232.4	0.0	0.0	0.	0.	0.0	0.0	0.0
3	1.1	147.1	0.0	0.0	0.	0.	0.0	0.0	0.0
4	2.7	543.5	0.0	0.0	0.	0.	0.0	0.0	0.0
5	0.0	3.9	0.0	0.0	0.	0.	0.0	0.0	0.0
6	3.6	875.5	0.0	0.0	0.	0.	0.0	0.0	0.0
7	1.0	226.0	0.0	0.0	0.	0.	0.0	0.0	0.0
8	2.4	398.1	0.0	0.0	0.	0.	0.0	0.0	0.0
9	1.4	110.7	0.0	0.0	0.	0.	0.0	0.0	0.0
10	0.7	14.7	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	44.000	35.263
2	47.932	35.996
3	51.776	37.102
4	55.497	38.570
5	59.061	40.387
6	62.434	42.537
7	63.556	43.414

Circle Center At X = 38.323 ; Y = 76.645 ; and Radius = 41.769
Factor of Safety
*** 1.535 ***
Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	37.600	31.455
2	41.600	31.417
3	45.558	31.993
4	49.381	33.170
5	52.978	34.920
6	56.263	37.202
7	59.159	39.961
8	61.505	43.012

Circle Center At X = 39.855 ; Y = 57.294 ; and Radius = 25.936
Factor of Safety
*** 1.691 ***
Failure Surface Specified By 11 Coordinate Points

Point	X-Surf	Y-Surf

```
   No.        (ft)        (ft)
    1         31.200       28.754
    2         35.198       28.618
    3         39.189       28.876
    4         43.136       29.525
    5         47.000       30.558
    6         50.744       31.967
    7         54.331       33.737
    8         57.727       35.851
    9         60.898       38.289
   10         63.814       41.027
   11         66.387       43.970
Circle Center At X =    34.580 ; Y =    69.243 ; and Radius =    40.629
       Factor of Safety
      ***    1.699   ***
Failure Surface Specified By  8 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1         44.000       35.263
    2         47.928       36.021
    3         51.792       37.055
    4         55.573       38.358
    5         59.253       39.926
    6         62.814       41.749
    7         66.236       43.820
    8         66.472       43.986
Circle Center At X =    35.297 ; Y =    90.991 ; and Radius =    56.403
       Factor of Safety
      ***    1.703   ***
Failure Surface Specified By 10 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1         31.200       28.754
    2         35.166       29.272
    3         39.075       30.123
    4         42.897       31.303
    5         46.605       32.803
    6         50.172       34.612
    7         53.574       36.717
    8         56.784       39.103
    9         59.781       41.753
   10         60.861       42.885
Circle Center At X =    27.174 ; Y =    75.400 ; and Radius =    46.819
       Factor of Safety
      ***    1.717   ***
Failure Surface Specified By  7 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1         44.000       35.263
    2         47.936       34.552
    3         51.924       34.865
    4         55.701       36.182
    5         59.019       38.416
    6         61.660       41.421
    7         62.559       43.218
Circle Center At X =    48.719 ; Y =    50.132 ; and Radius =    15.600
       Factor of Safety
      ***    1.748   ***
Failure Surface Specified By  8 Coordinate Points
  Point      X-Surf      Y-Surf
   No.        (ft)        (ft)
    1         44.000       35.263
    2         47.986       34.931
    3         51.967       35.328
    4         55.809       36.439
    5         59.386       38.229
    6         62.579       40.638
```

```
    7          65.283        43.587
    8          65.401        43.776
Circle Center At X =    47.815 ; Y =    56.830 ; and Radius =    21.902
       Factor of Safety
      ***    1.756   ***
Failure Surface Specified By 10 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1          37.600        31.455
    2          41.580        31.053
    3          45.576        31.227
    4          49.505        31.974
    5          53.287        33.279
    6          56.841        35.114
    7          60.094        37.442
    8          62.978        40.214
    9          65.433        43.372
   10          65.695        43.834
Circle Center At X =    42.386 ; Y =    58.665 ; and Radius =    27.628
       Factor of Safety
      ***    1.802   ***
Failure Surface Specified By 10 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1          37.600        31.455
    2          41.584        31.099
    3          45.579        31.294
    4          49.510        32.038
    5          53.300        33.315
    6          56.879        35.102
    7          60.177        37.365
    8          63.133        40.060
    9          65.689        43.136
   10          66.181        43.929
Circle Center At X =    42.188 ; Y =    59.924 ; and Radius =    28.836
       Factor of Safety
      ***    1.804   ***
          **** END OF GSTABL7 OUTPUT ****
```

ATTACHMENT H-3

SLOPE STABILITY ANALYSIS

FOR

LINE #2 & CASE #1

Wright Chemical Line 2 (Southwest Corner)

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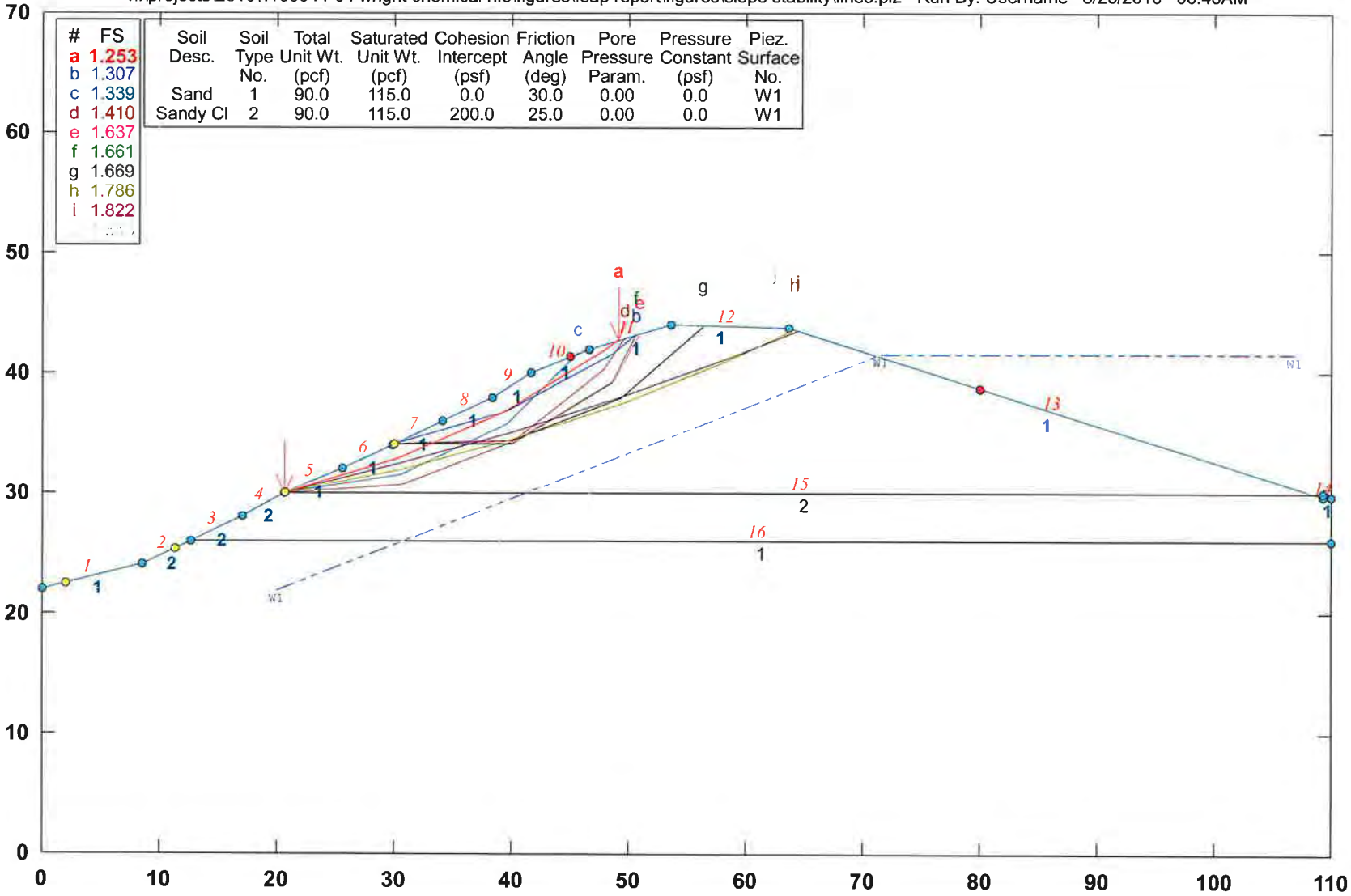
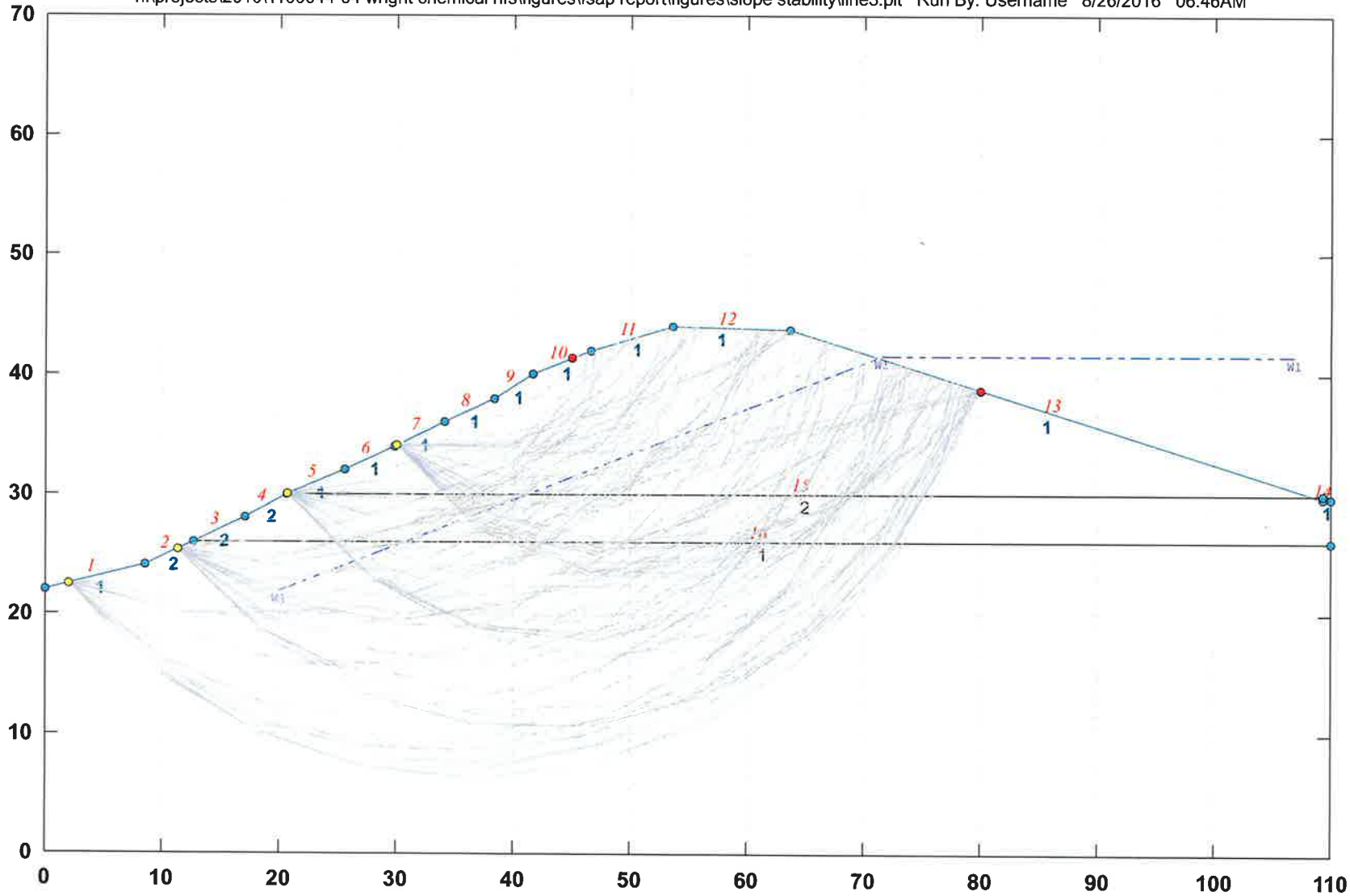


GSTABL7 v.2 FSmin=1.253

Safety Factors Are Calculated By The Modified Bishop Method

Wright Chemical Line 2 (Southwest Corner)

h:\projects\2010\1100044-04 wright chemical rifs\figures\fsap report\figures\slope stability\line3.plt Run By: Username 8/26/2016 06:46AM



```
                    *** GSTABL7 ***
              ** GSTABL7 by Garry H. Gregory, P.E. **
   ** Original Version 1.0, January 1996; Current Version 2.005, Sept. 2006 **
              (All Rights Reserved-Unauthorized Use Prohibited)
*****************************************************************************
                    SLOPE STABILITY ANALYSIS SYSTEM
        Modified Bishop, Simplified Janbu, or GLE Method of Slices.
        (Includes Spencer & Morgenstern-Price Type Analysis)
        Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
        Nonlinear Undrained Shear Strength, Curved Phi Envelope,
        Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
        Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.
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Analysis Run Date:        8/26/2016
Time of Run:              06:46AM
Run By:                   Username
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P REPORT\Figures\Slope Stability\line3.in
Output Filename:          H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSA
P REPORT\Figures\Slope Stability\line3.OUT
Unit System:              English
Plotted Output Filename:  H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSA
P REPORT\Figures\Slope Stability\line3.PLT
PROBLEM DESCRIPTION:  Wright Chemical
                      Line 2 (Southwest Corner)
BOUNDARY COORDINATES
   14 Top   Boundaries
   16 Total Boundaries
Boundary     X-Left     Y-Left    X-Right    Y-Right    Soil Type
   No.        (ft)       (ft)       (ft)       (ft)     Below Bnd
    1         0.00      22.00       8.49      24.00        1
    2         8.49      24.00      12.71      26.00        2
    3        12.71      26.00      17.07      28.00        2
    4        17.07      28.00      20.63      30.00        2
    5        20.63      30.00      25.56      32.00        1
    6        25.56      32.00      29.83      34.00        1
    7        29.83      34.00      34.15      36.00        1
    8        34.15      36.00      38.34      38.00        1
    9        38.34      38.00      41.67      40.00        1
   10        41.67      40.00      46.61      42.00        1
   11        46.61      42.00      53.57      44.00        1
   12        53.57      44.00      63.69      43.70        1
   13        63.69      43.70     109.33      29.64        1
   14       109.33      29.64     110.00      29.64        1
   15        20.63      30.00     109.33      29.92        2
   16        12.71      26.00     110.00      26.00        1
Default Y-Origin = 0.00(ft)
Default X-Plus Value = 0.00(ft)
Default Y-Plus Value = 0.00(ft)
ISOTROPIC SOIL PARAMETERS
 2 Type(s) of Soil
Soil  Total  Saturated  Cohesion Friction   Pore   Pressure   Piez.
Type Unit Wt. Unit Wt. Intercept   Angle  Pressure Constant Surface
 No.  (pcf)    (pcf)      (psf)     (deg)    Param.   (psf)     No.
  1    90.0    115.0       0.0      30.0     0.00      0.0      1
  2    90.0    115.0     200.0      25.0     0.00      0.0      1
1 PIEZOMETRIC SURFACE(S) SPECIFIED
Unit Weight of Water =  62.40 (pcf)
Piezometric Surface No.  1 Specified by  3 Coordinate Points
Pore Pressure Inclination Factor =  0.50
  Point      X-Water     Y-Water
   No.        (ft)        (ft)
    1         20.00       21.82
    2         71.55       41.59
    3        106.80       41.59
A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.
 160 Trial Surfaces Have Been Generated.
```

```
  40 Surface(s) Initiate(s) From Each Of     4 Points Equally Spaced
Along The Ground Surface Between  X =   2.00(ft)
                              and  X =  30.00(ft)
Each Surface Terminates Between   X =  45.00(ft)
                              and  X =  80.00(ft)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is  Y =      0.00(ft)
10.00(ft) Line Segments Define Each Trial Failure Surface.
Following Are Displayed The Ten Most Critical Of The Trial
      Failure Surfaces Evaluated. They Are
      Ordered - Most Critical First.
      * * Safety Factors Are Calculated By The Modified Bishop Method * *
      Total Number of Trial Surfaces Attempted =   160
      Number of Trial Surfaces With Valid FS =  160
      Statistical Data On All Valid FS Values:
         FS Max =   4.906   FS Min =   1.253   FS Ave =   2.941
         Standard Deviation =    0.857   Coefficient of Variation =   29.15 %
      Failure Surface Specified By  5 Coordinate Points
        Point      X-Surf      Y-Surf
         No.        (ft)        (ft)
          1        20.667      30.015
          2        30.255      32.855
          3        39.429      36.835
          4        48.054      41.895
          5        49.145      42.729
      Circle Center At X =     2.083 ; Y =   110.362 ; and Radius =    82.468
            Factor of Safety
           ***    1.253   ***
          Individual data on the    10  slices
                     Water  Water     Tie     Tie     Earthquake
                     Force  Force    Force   Force       Force   Surcharge
Slice  Width   Weight   Top    Bot    Norm    Tan     Hor     Ver    Load
 No.    (ft)    (lbs)   (lbs)  (lbs)  (lbs)   (lbs)   (lbs)   (lbs)  (lbs)
  1     4.9     118.0    0.0    0.0     0.      0.      0.0     0.     0.0
  2     4.3     347.2    0.0    0.0     0.      0.      0.0     0.     0.0
  3     0.4      50.0    0.0    0.0     0.      0.      0.0     0.     0.0
  4     3.9     490.3    0.0    0.0     0.      0.      0.0     0.     0.0
  5     4.2     583.2    0.0    0.0     0.      0.      0.0     0.     0.0
  6     1.1     169.4    0.0    0.0     0.      0.      0.0     0.     0.0
  7     2.2     370.1    0.0    0.0     0.      0.      0.0     0.     0.0
  8     4.9     622.9    0.0    0.0     0.      0.      0.0     0.     0.0
  9     1.4      95.6    0.0    0.0     0.      0.      0.0     0.     0.0
 10     1.1      25.5    0.0    0.0     0.      0.      0.0     0.     0.0
      Failure Surface Specified By  4 Coordinate Points
        Point      X-Surf      Y-Surf
         No.        (ft)        (ft)
          1        30.000      34.079
          2        39.604      36.866
          3        48.486      41.460
          4        50.608      43.149
      Circle Center At X =    21.474 ; Y =    81.398 ; and Radius =    48.082
            Factor of Safety
           ***    1.307   ***
      Failure Surface Specified By  4 Coordinate Points
        Point      X-Surf      Y-Surf
         No.        (ft)        (ft)
          1        20.667      30.015
          2        30.564      31.446
          3        39.561      35.812
          4        45.674      41.621
      Circle Center At X =    21.126 ; Y =    61.769 ; and Radius =    31.758
            Factor of Safety
           ***    1.339   ***
      Failure Surface Specified By  5 Coordinate Points
        Point      X-Surf      Y-Surf
         No.        (ft)        (ft)
          1        20.667      30.015
```

```
    2          30.646        30.660
    3          39.997        34.203
    4          47.899        40.332
    5          49.698        42.887
Circle Center At X =    23.505 ; Y =    63.623 ; and Radius =    33.727
       Factor of Safety
      ***    1.410   ***
Failure Surface Specified By  4 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1          30.000        34.079
    2          39.999        34.192
    3          48.611        39.276
    4          50.844        43.217
Circle Center At X =    34.803 ; Y =    51.464 ; and Radius =    18.037
       Factor of Safety
      ***    1.637   ***
Failure Surface Specified By  4 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1          30.000        34.079
    2          40.000        34.067
    3          48.566        39.226
    4          50.641        43.158
Circle Center At X =    35.019 ; Y =    50.671 ; and Radius =    17.335
       Factor of Safety
      ***    1.661   ***
Failure Surface Specified By  4 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1          30.000        34.079
    2          39.997        34.308
    3          49.335        37.888
    4          56.362        43.917
Circle Center At X =    34.344 ; Y =    62.674 ; and Radius =    28.924
       Factor of Safety
      ***    1.669   ***
Failure Surface Specified By  6 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1          20.667        30.015
    2          30.479        31.945
    3          40.158        34.458
    4          49.670        37.544
    5          58.980        41.193
    6          64.117        43.568
Circle Center At X =    -5.970 ; Y =   191.835 ; and Radius =   163.998
       Factor of Safety
      ***    1.786   ***
Failure Surface Specified By  6 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1          20.667        30.015
    2          30.375        32.413
    3          40.003        35.114
    4          49.541        38.118
    5          58.981        41.419
    6          64.361        43.493
Circle Center At X =   -49.055 ; Y =   333.597 ; and Radius =   311.485
       Factor of Safety
      ***    1.822   ***
Failure Surface Specified By  8 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1           2.000        22.471
    2          11.906        21.104
    3          21.902        21.379
```

```
    4          31.718       23.288
    5          41.089       26.779
    6          49.761       31.759
    7          57.500       38.092
    8          62.455       43.737
Circle Center At X =    15.252 ; Y =    81.362 ; and Radius =    60.364
       Factor of Safety
      ***    1.853   ***
          **** END OF GSTABL7 OUTPUT ****
```

ATTACHMENT H-4

SLOPE STABILITY ANALYSIS

FOR

LINE #2 & CASE #2

Wright Chemical Line 2 Surcharge (Southwest Corner)

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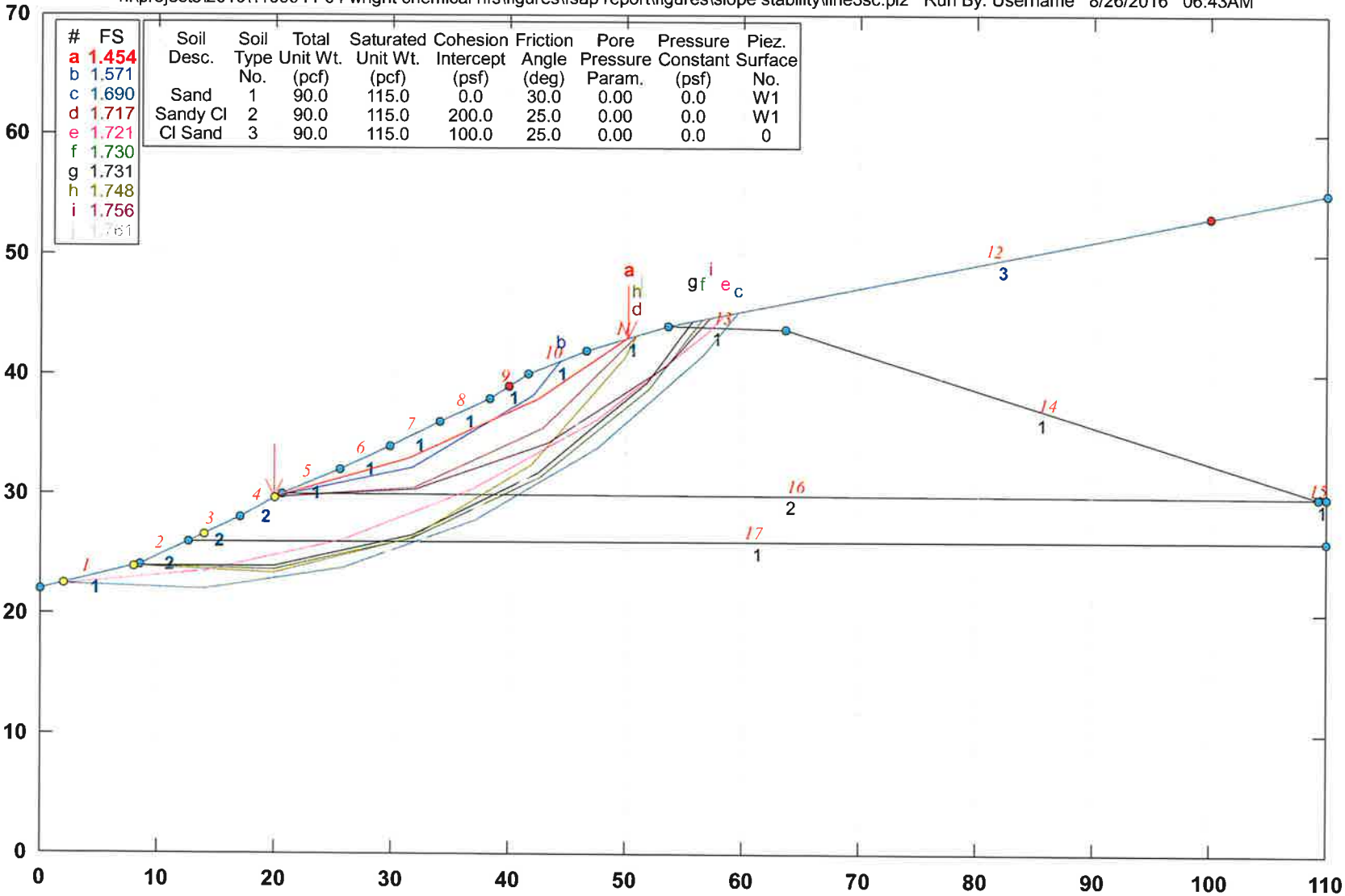

GSTABL7 v.2 FSmin=1.454

Safety Factors Are Calculated By The Modified Bishop Method

Wright Chemical Line 2 Surcharge (Southwest Corner)

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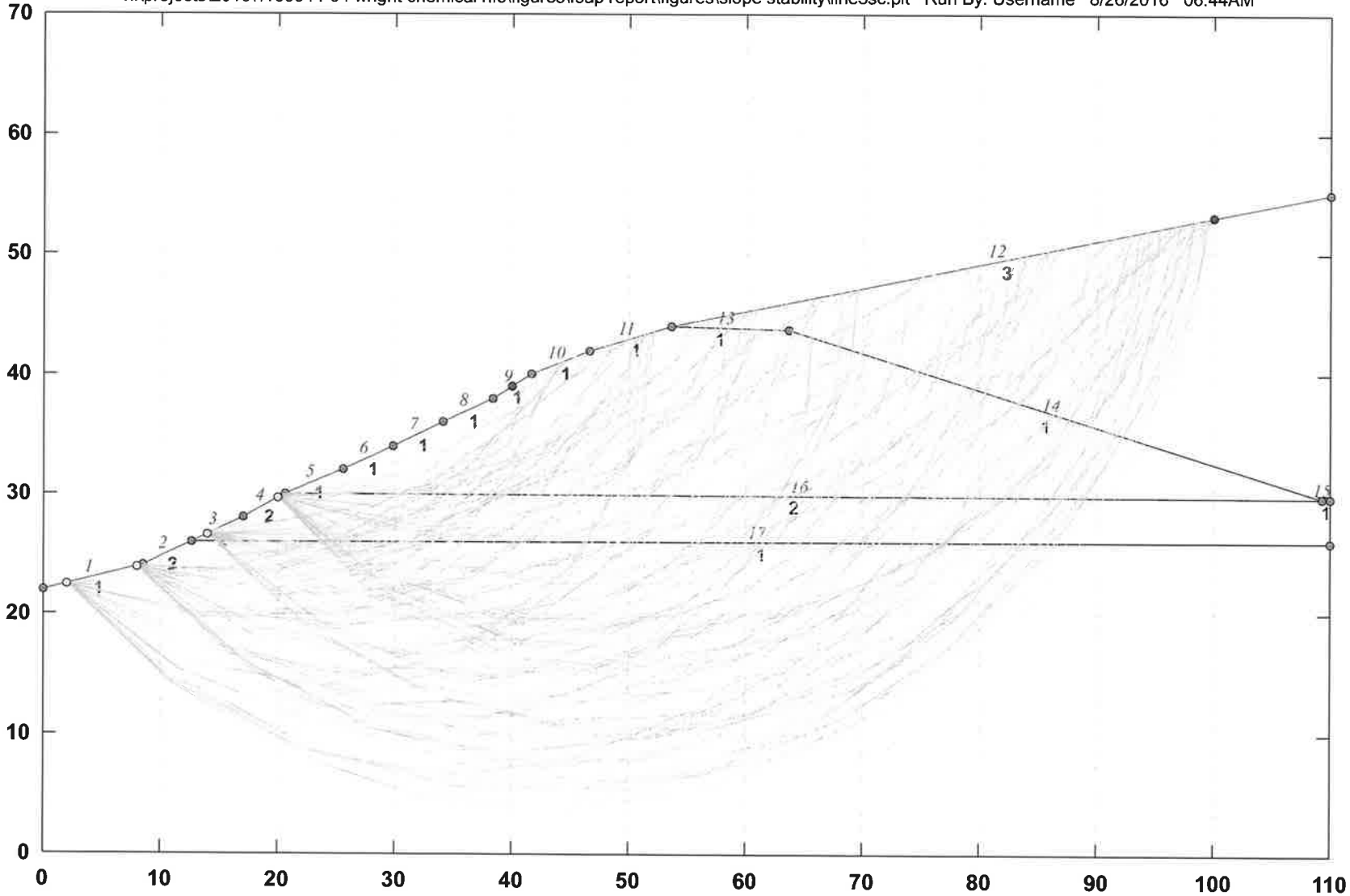

```
                    *** GSTABL7 ***
              ** GSTABL7 by Garry H. Gregory, P.E. **
   ** Original Version 1.0, January 1996; Current Version 2.005, Sept. 2006 **
           (All Rights Reserved-Unauthorized Use Prohibited)
*******************************************************************************
                  SLOPE STABILITY ANALYSIS SYSTEM
       Modified Bishop, Simplified Janbu, or GLE Method of Slices.
       (Includes Spencer & Morgenstern-Price Type Analysis)
       Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
       Nonlinear Undrained Shear Strength, Curved Phi Envelope,
       Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
       Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.
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Time of Run:              06:43AM
Run By:                   Username
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P REPORT\Figures\Slope Stability\line3sc.in
Output Filename:          H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSA
P REPORT\Figures\Slope Stability\line3sc.OUT
Unit System:              English
Plotted Output Filename:  H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSA
P REPORT\Figures\Slope Stability\line3sc.PLT
PROBLEM DESCRIPTION:  Wright Chemical
                      Line 2 Surcharge (Southwest Corner)
BOUNDARY COORDINATES
   12 Top   Boundaries
```

17 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	22.00	8.49	24.00	1
2	8.49	24.00	12.71	26.00	2
3	12.71	26.00	17.07	28.00	2
4	17.07	28.00	20.63	30.00	2
5	20.63	30.00	25.56	32.00	1
6	25.56	32.00	29.83	34.00	1
7	29.83	34.00	34.15	36.00	1
8	34.15	36.00	38.34	38.00	1
9	38.34	38.00	41.67	40.00	1
10	41.67	40.00	46.61	42.00	1
11	46.61	42.00	53.57	44.00	1
12	53.57	44.00	110.00	55.00	3
13	53.57	44.00	63.69	43.70	1
14	63.69	43.70	109.33	29.64	1
15	109.33	29.64	110.00	29.64	1
16	20.63	30.00	109.33	29.64	2
17	12.71	26.00	110.00	26.00	1

Default Y-Origin = 0.00(ft)
Default X-Plus Value = 0.00(ft)
Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	90.0	115.0	0.0	30.0	0.00	0.0	1
2	90.0	115.0	200.0	25.0	0.00	0.0	1
3	90.0	115.0	100.0	25.0	0.00	0.0	0

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.
160 Trial Surfaces Have Been Generated.
40 Surface(s) Initiate(s) From Each Of 4 Points Equally Spaced
Along The Ground Surface Between X = 2.00(ft)
and X = 20.00(ft)
Each Surface Terminates Between X = 40.00(ft)
and X = 100.00(ft)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(ft)
12.00(ft) Line Segments Define Each Trial Failure Surface.
Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Evaluated. They Are
Ordered - Most Critical First.
* * Safety Factors Are Calculated By The Modified Bishop Method * *
Total Number of Trial Surfaces Attempted = 160
Number of Trial Surfaces With Valid FS = 160
Statistical Data On All Valid FS Values:
FS Max = 4.109 FS Min = 1.454 FS Ave = 2.625
Standard Deviation = 0.626 Coefficient of Variation = 23.84 %
Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	20.000	29.646
2	31.531	32.968
3	42.440	37.966
4	50.184	43.027

Circle Center At X = 4.324 ; Y = 105.741 ; and Radius = 77.693
Factor of Safety
*** 1.454 ***
Individual data on the 11 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	0.6	4.9	0.0	0.0	0.	0.	0.0	0.0	0.0

2	0.6	11.0	0.0	0.0	0.	0.	0.0	0.0	0.0
3	4.3	194.2	0.0	0.0	0.	0.	0.0	0.0	0.0
4	4.3	437.1	0.0	0.0	0.	0.	0.0	0.0	0.0
5	1.7	255.8	0.0	0.0	0.	0.	0.0	0.0	0.0
6	2.6	430.4	0.0	0.0	0.	0.	0.0	0.0	0.0
7	4.2	706.1	0.0	0.0	0.	0.	0.0	0.0	0.0
8	3.3	644.2	0.0	0.0	0.	0.	0.0	0.0	0.0
9	0.8	164.1	0.0	0.0	0.	0.	0.0	0.0	0.0
10	4.2	685.7	0.0	0.0	0.	0.	0.0	0.0	0.0
11	3.6	210.5	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	20.000	29.646
2	31.742	32.123
3	42.034	38.293
4	44.395	41.103

Circle Center At X = 18.991 ; Y = 63.494 ; and Radius = 33.863

Factor of Safety

*** 1.571 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	2.000	22.471
2	13.992	22.035
3	25.857	23.830
4	37.183	27.795
5	47.578	33.791
6	56.680	41.611
7	59.516	45.159

Circle Center At X = 10.328 ; Y = 86.355 ; and Radius = 64.424

Factor of Safety

*** 1.690 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	20.000	29.646
2	31.963	30.592
3	42.901	35.527
4	50.852	43.219

Circle Center At X = 23.305 ; Y = 63.985 ; and Radius = 34.497

Factor of Safety

*** 1.717 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	2.000	22.471
2	13.960	23.446
3	25.663	26.100
4	36.875	30.377
5	47.371	36.195
6	56.941	43.435
7	58.445	44.950

Circle Center At X = 1.103 ; Y = 107.297 ; and Radius = 84.830

Factor of Safety

*** 1.721 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	8.000	23.885
2	19.998	23.677
3	31.729	26.202
4	42.579	31.329
5	51.980	38.788
6	56.581	44.587

Circle Center At X = 15.005 ; Y = 74.799 ; and Radius = 51.394

Factor of Safety

```
      ***    1.730   ***
Failure Surface Specified By  6 Coordinate Points
  Point       X-Surf      Y-Surf
   No.         (ft)        (ft)
    1           8.000      23.885
    2          20.000      23.874
    3          31.694      26.566
    4          42.481      31.823
    5          51.807      39.375
    6          55.751      44.425
Circle Center At X =    14.181 ; Y =    75.289 ; and Radius =    51.775
       Factor of Safety
      ***    1.731   ***
Failure Surface Specified By  6 Coordinate Points
  Point       X-Surf      Y-Surf
   No.         (ft)        (ft)
    1           8.000      23.885
    2          19.987      23.335
    3          31.621      26.278
    4          41.905      32.461
    5          49.961      41.356
    6          50.842      43.216
Circle Center At X =    15.921 ; Y =    63.469 ; and Radius =    40.370
       Factor of Safety
      ***    1.748   ***
Failure Surface Specified By  5 Coordinate Points
  Point       X-Surf      Y-Surf
   No.         (ft)        (ft)
    1          20.000      29.646
    2          31.974      30.442
    3          43.373      34.191
    4          53.481      40.659
    5          57.266      44.720
Circle Center At X =    22.840 ; Y =    77.413 ; and Radius =    47.851
       Factor of Safety
      ***    1.756   ***
Failure Surface Specified By  6 Coordinate Points
  Point       X-Surf      Y-Surf
   No.         (ft)        (ft)
    1           8.000      23.885
    2          19.962      22.932
    3          31.658      25.617
    4          42.006      31.692
    5          50.052      40.596
    6          51.315      43.352
Circle Center At X =    17.140 ; Y =    61.470 ; and Radius =    38.681
       Factor of Safety
      ***    1.761   ***
          **** END OF GSTABL7 OUTPUT ****
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ATTACHMENT H-5

SLOPE STABILITY ANALYSIS

FOR

LINE #3 & CASE #1

Wright Chemical Line 3 (Corner - Between MDB-1 / MDB-2)

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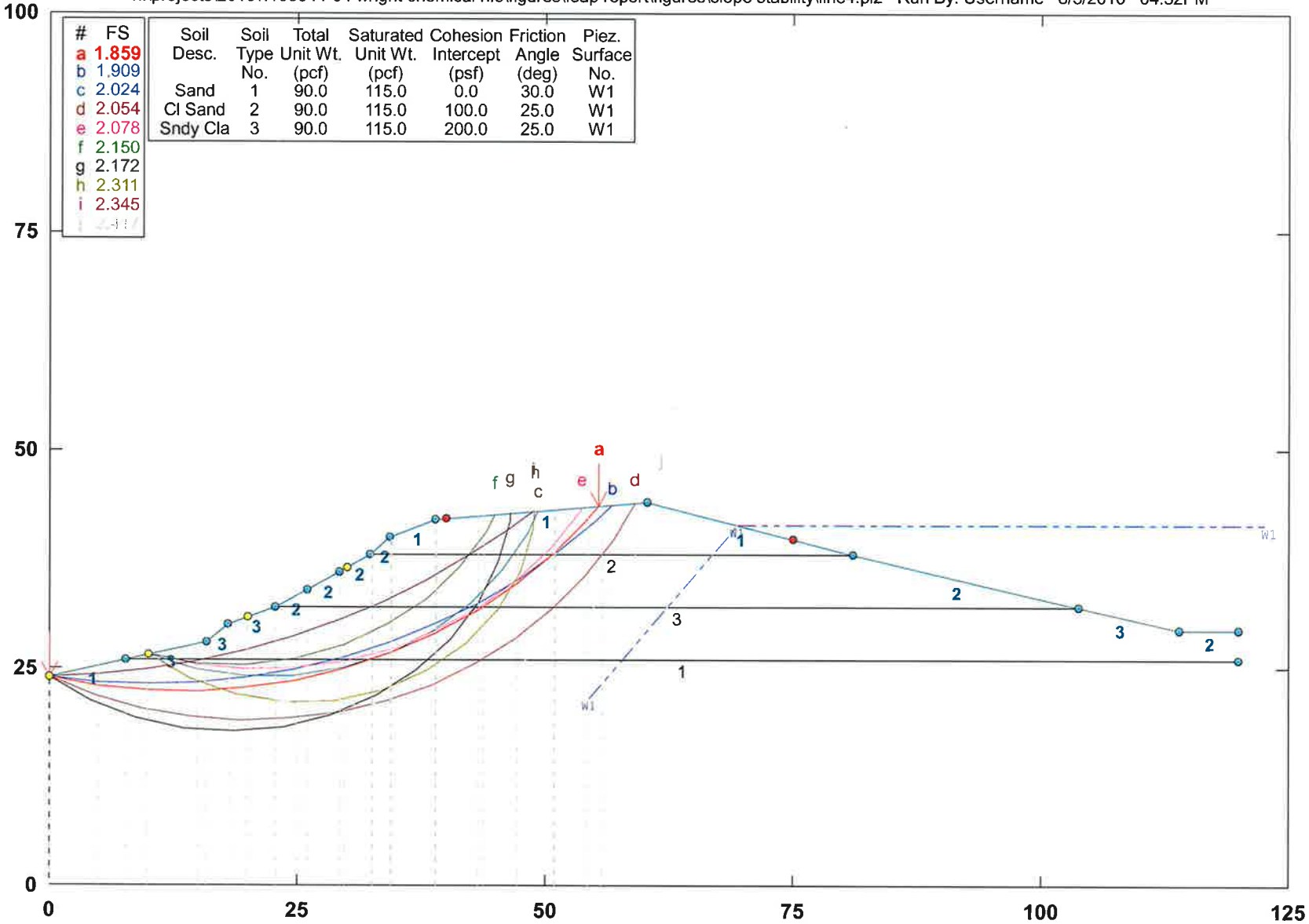

GSTABL7 v.2 FSmin=1.859

Safety Factors Are Calculated By The Modified Bishop Method

Wright Chemical Line 3 (Corner - Between MDB-1 / MDB-2)

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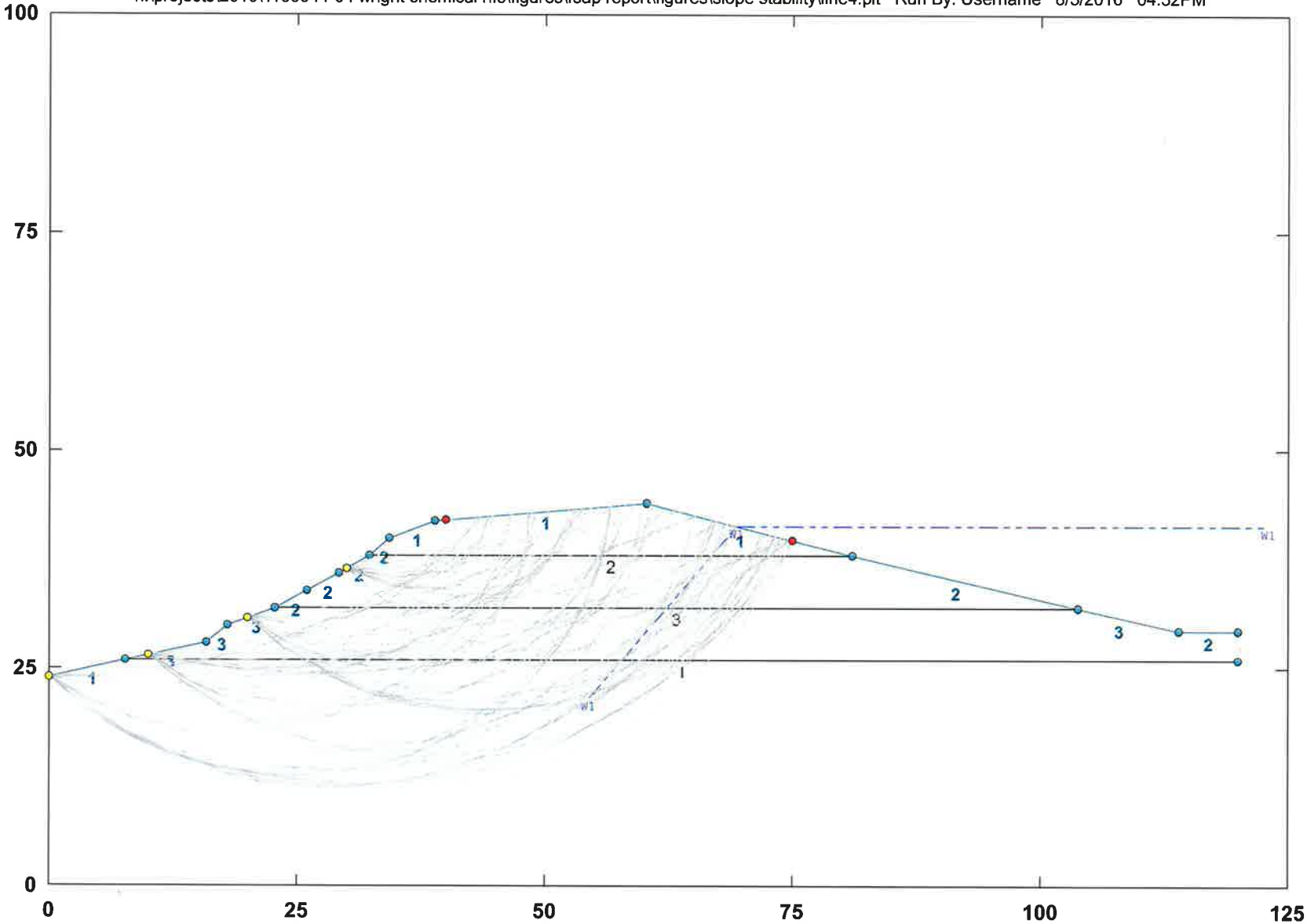

Wright Chemical Line 3 (Corner - Between MDB-1 / MDB-2)

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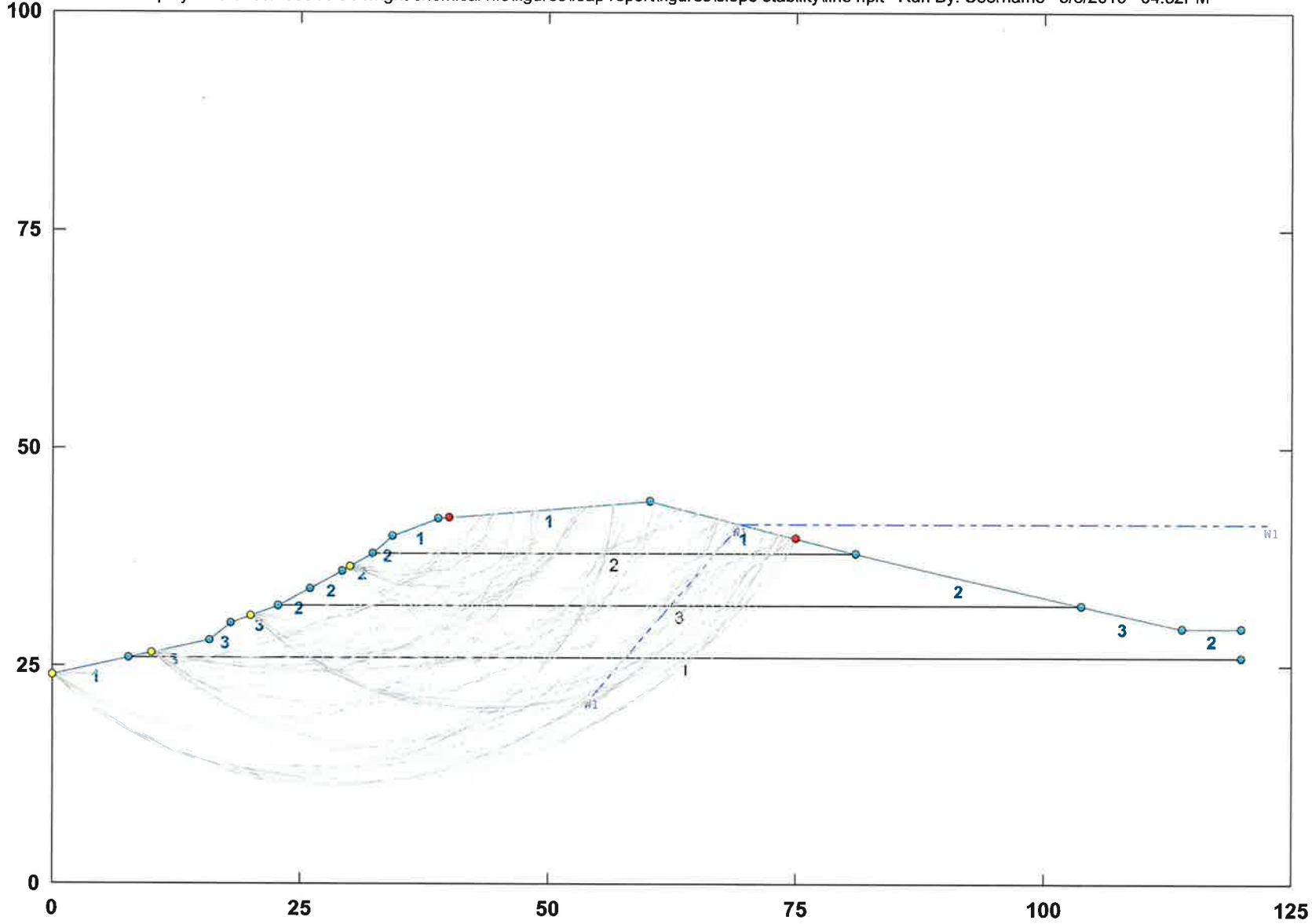

***** GSTABL7 *****

** GSTABL7 by Garry H. Gregory, P.E. **
** Original Version 1.0, January 1996; Current Version 2.005, Sept. 2006 **
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SLOPE STABILITY ANALYSIS SYSTEM
Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

Analysis Run Date: 8/3/2016
Time of Run: 04:32PM
Run By: Username
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Output Filename: H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSAP REPORT\Figures\Slope Stability\line4.OUT
Unit System: English
Plotted Output Filename: H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSAP REPORT\Figures\Slope Stability\line4.PLT

PROBLEM DESCRIPTION: Wright Chemical
Line 3 (Corner - Between MDB-1 / MDB-2)

BOUNDARY COORDINATES
14 Top Boundaries
17 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	24.00	7.66	26.00	1
2	7.66	26.00	15.77	28.00	3
3	15.77	28.00	18.03	30.00	3
4	18.03	30.00	22.70	32.00	3
5	22.70	32.00	25.91	34.00	2
6	25.91	34.00	29.19	36.00	2
7	29.19	36.00	32.36	38.00	2
8	32.36	38.00	34.33	40.00	2
9	34.33	40.00	38.85	42.00	1
10	38.85	42.00	60.26	44.00	1
11	60.26	44.00	81.07	38.00	1
12	81.07	38.00	103.83	32.00	2
13	103.83	32.00	113.97	29.32	3
14	113.97	29.32	120.00	29.32	2
15	32.36	38.00	81.07	38.00	2
16	22.70	32.00	103.83	32.00	3
17	7.66	26.00	120.00	26.00	1

Default Y-Origin = 0.00(ft)
Default X-Plus Value = 0.00(ft)
Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	90.0	115.0	0.0	30.0	0.00	0.0	1
2	90.0	115.0	100.0	25.0	0.00	0.0	1
3	90.0	115.0	200.0	25.0	0.00	0.0	1

1 PIEZOMETRIC SURFACE(S) SPECIFIED
Unit Weight of Water = 62.40 (pcf)
Piezometric Surface No. 1 Specified by 3 Coordinate Points
Pore Pressure Inclination Factor = 0.50

Point No.	X-Water (ft)	Y-Water (ft)
1	54.46	21.54
2	69.41	41.32
3	123.00	41.32

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.
80 Trial Surfaces Have Been Generated.
20 Surface(s) Initiate(s) From Each Of 4 Points Equally Spaced
Along The Ground Surface Between X = 0.00(ft)
and X = 30.00(ft)
Each Surface Terminates Between X = 40.00(ft)
and X = 75.00(ft)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(ft)
5.00(ft) Line Segments Define Each Trial Failure Surface.
Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Evaluated. They Are
Ordered - Most Critical First.
* * Safety Factors Are Calculated By The Modified Bishop Method * *
Total Number of Trial Surfaces Attempted = 80
Number of Trial Surfaces With Valid FS = 80
Statistical Data On All Valid FS Values:
FS Max = 15.194 FS Min = 1.859 FS Ave = 3.662
Standard Deviation = 2.100 Coefficient of Variation = 57.34 %
Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	0.000	24.000
2	4.893	22.972
3	9.862	22.413
4	14.861	22.328
5	19.846	22.719
6	24.771	23.581
7	29.592	24.906
8	34.265	26.684
9	38.749	28.898
10	43.002	31.527
11	46.986	34.548
12	50.665	37.934
13	54.006	41.654
14	55.406	43.547

Circle Center At X = 13.256 ; Y = 74.723 ; and Radius = 52.427
Factor of Safety
*** 1.859 ***
Individual data on the 25 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	4.9	648.8	5264.0	5564.3	0.	0.	0.0	0.0	0.0
2	2.8	898.2	2798.2	3214.9	0.	0.	0.0	0.0	0.0
3	2.2	945.7	2129.5	2597.0	0.	0.	0.0	0.0	0.0
4	5.0	2753.3	4549.8	5912.3	0.	0.	0.0	0.0	0.0
5	0.9	577.4	784.7	1078.5	0.	0.	0.0	0.0	0.0
6	2.3	1692.5	2320.1	2663.9	0.	0.	0.0	0.0	0.0
7	1.8	1616.5	1347.4	2122.2	0.	0.	0.0	0.0	0.0
8	2.9	2763.9	1924.2	3318.2	0.	0.	0.0	0.0	0.0
9	2.1	2201.9	1320.8	2351.0	0.	0.	0.0	0.0	0.0
10	1.1	1297.9	642.7	1296.2	0.	0.	0.0	0.0	0.0
11	3.3	4019.1	1515.0	3603.3	0.	0.	0.0	0.0	0.0
12	0.4	521.2	154.0	428.4	0.	0.	0.0	0.0	0.0
13	2.8	3722.5	856.4	2936.0	0.	0.	0.0	0.0	0.0
14	0.1	148.1	31.0	109.2	0.	0.	0.0	0.0	0.0
15	1.8	2622.5	367.6	1798.5	0.	0.	0.0	0.0	0.0
16	0.1	98.8	7.8	65.9	0.	0.	0.0	0.0	0.0
17	4.4	6692.6	103.2	4155.2	0.	0.	0.0	0.0	0.0
18	0.1	150.4	0.0	92.1	0.	0.	0.0	0.0	0.0
19	4.2	5614.8	0.0	3373.5	0.	0.	0.0	0.0	0.0
20	0.6	747.6	0.0	467.1	0.	0.	0.0	0.0	0.0
21	3.4	3496.9	0.0	2117.1	0.	0.	0.0	0.0	0.0
22	3.7	2682.8	0.0	1584.7	0.	0.	0.0	0.0	0.0

23	0.1	32.6	0.0	18.7	0.	0.	0.0	0.0	0.0
24	3.3	1137.2	0.0	457.6	0.	0.	0.0	0.0	0.0
25	1.4	111.0	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	0.000	24.000
2	4.964	23.400
3	9.959	23.191
4	14.956	23.376
5	19.923	23.953
6	24.829	24.919
7	29.643	26.267
8	34.337	27.989
9	38.882	30.075
10	43.248	32.511
11	47.409	35.283
12	51.340	38.374
13	55.015	41.763
14	56.786	43.675

Circle Center At X = 10.124 ; Y = 86.564 ; and Radius = 63.378

Factor of Safety

*** 1.909 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	10.000	26.577
2	14.716	24.916
3	19.647	24.087
4	24.647	24.116
5	29.568	25.000
6	34.265	26.715
7	38.598	29.209
8	42.440	32.409
9	45.677	36.220
10	48.213	40.529
11	49.128	42.960

Circle Center At X = 21.982 ; Y = 53.067 ; and Radius = 29.074

Factor of Safety

*** 2.024 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	0.000	24.000
2	4.541	21.908
3	9.296	20.360
4	14.198	19.376
5	19.181	18.971
6	24.178	19.149
7	29.120	19.908
8	33.940	21.239
9	38.572	23.122
10	42.953	25.532
11	47.023	28.436
12	50.726	31.795
13	54.013	35.563
14	56.838	39.688
15	59.044	43.886

Circle Center At X = 20.156 ; Y = 61.781 ; and Radius = 42.821

Factor of Safety

*** 2.054 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	10.000	26.577
2	14.857	25.391
3	19.829	24.860

4	24.827	24.994
5	29.764	25.789
6	34.551	27.232
7	39.104	29.297
8	43.344	31.948
9	47.194	35.138
10	50.587	38.811
11	53.463	42.901
12	53.717	43.389

Circle Center At X = 21.330 ; Y = 62.361 ; and Radius = 37.534

Factor of Safety

*** 2.078 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	10.000	26.577
2	14.896	25.561
3	19.893	25.395
4	24.845	26.084
5	29.608	27.607
6	34.040	29.920
7	38.014	32.956
8	41.411	36.624
9	44.133	40.819
10	44.879	42.563

Circle Center At X = 18.372 ; Y = 54.354 ; and Radius = 29.011

Factor of Safety

*** 2.150 ***

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	0.000	24.000
2	4.157	21.222
3	8.733	19.206
4	13.588	18.011
5	18.577	17.675
6	23.548	18.206
7	28.353	19.590
8	32.846	21.784
9	36.891	24.723
10	40.367	28.317
11	43.169	32.459
12	45.211	37.022
13	46.434	41.870
14	46.496	42.714

Circle Center At X = 18.002 ; Y = 46.391 ; and Radius = 28.730

Factor of Safety

*** 2.172 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	10.000	26.577
2	14.149	23.787
3	18.790	21.925
4	23.717	21.074
5	28.713	21.272
6	33.557	22.510
7	38.036	24.732
8	41.951	27.842
9	45.130	31.701
10	47.433	36.140
11	48.757	40.961
12	48.870	42.936

Circle Center At X = 25.256 ; Y = 44.686 ; and Radius = 23.679

Factor of Safety

*** 2.311 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	0.000	24.000
2	4.993	24.274
3	9.957	24.871
4	14.871	25.790
5	19.716	27.027
6	24.470	28.577
7	29.113	30.432
8	33.626	32.585
9	37.988	35.028
10	42.183	37.748
11	46.192	40.736
12	48.763	42.926

Circle Center At X = -1.653 ; Y = 100.541 ; and Radius = 76.559

Factor of Safety

*** 2.345 ***

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	10.000	26.577
2	14.317	24.054
3	18.955	22.186
4	23.815	21.013
5	28.794	20.558
6	33.787	20.834
7	38.686	21.832
8	43.388	23.533
9	47.793	25.899
10	51.806	28.881
11	55.343	32.415
12	58.328	36.426
13	60.698	40.829
14	61.698	43.585

Circle Center At X = 29.390 ; Y = 54.715 ; and Radius = 34.171

Factor of Safety

*** 2.417 ***

**** END OF GSTABL7 OUTPUT ****

ATTACHMENT H-6

SLOPE STABILITY ANALYSIS

FOR

LINE #3 & CASE #2

Wright Chemical Line 3 Surcharge (NW Btwn MDB-1 / MDB-2)

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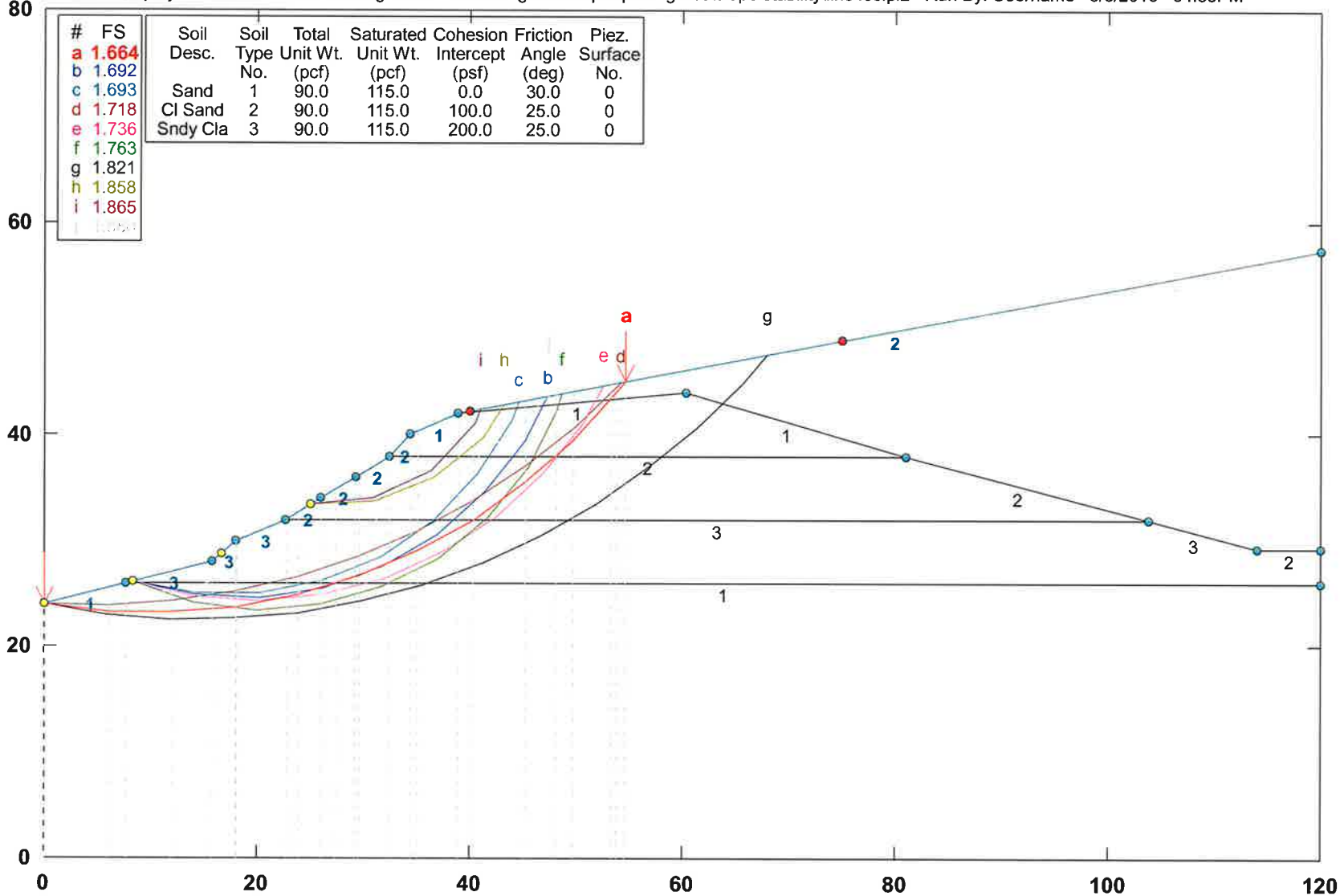


#	FS
a	1.664
b	1.692
c	1.693
d	1.718
e	1.736
f	1.763
g	1.821
h	1.858
i	1.865

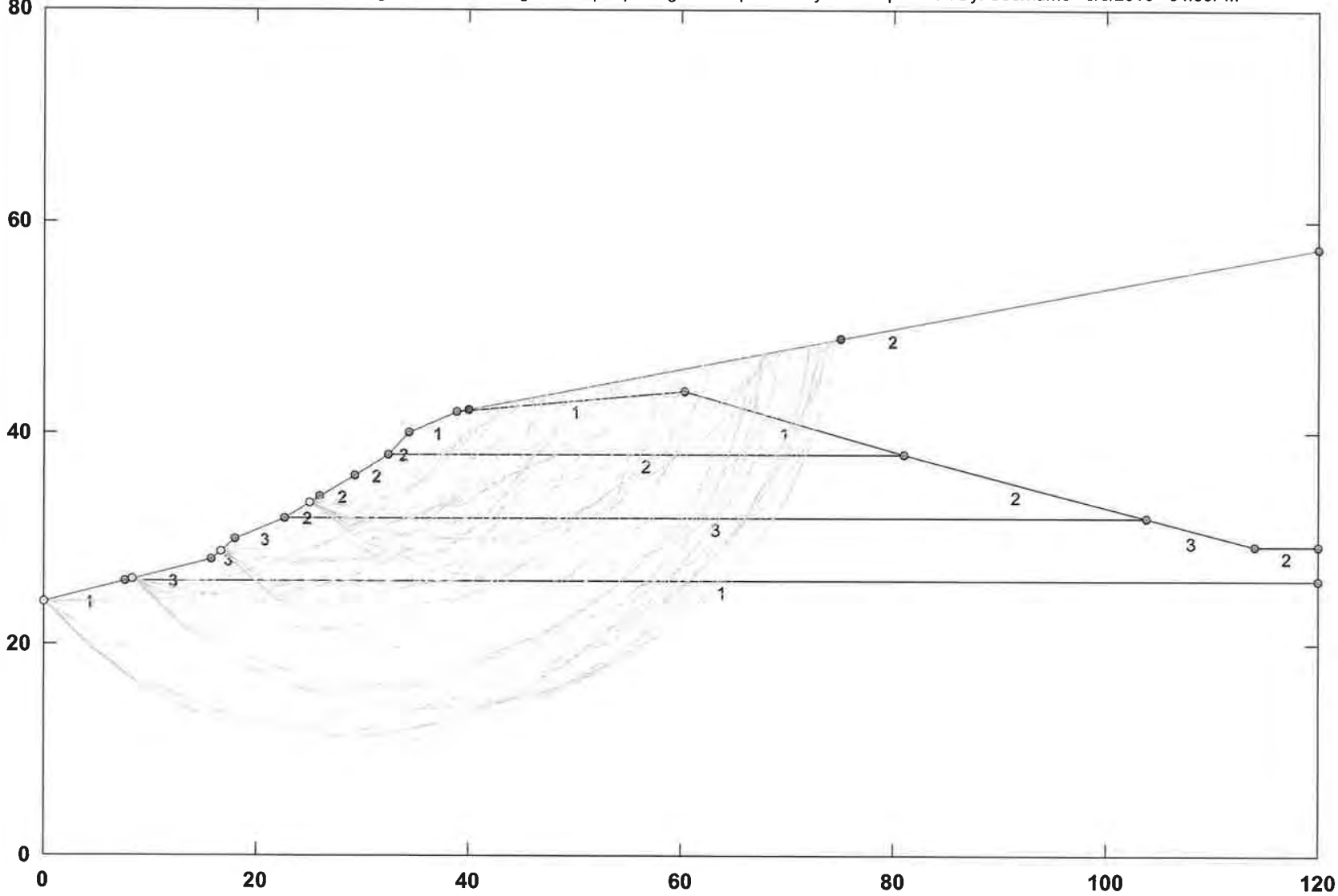
Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Sand	1	90.0	115.0	0.0	30.0	0
Cl Sand	2	90.0	115.0	100.0	25.0	0
Sndy Cla	3	90.0	115.0	200.0	25.0	0

GSTABL7 v.2 FSmin=1.664

Safety Factors Are Calculated By The Modified Bishop Method

Wright Chemical Line 3 Surcharge (NW Btwn MDB-1 / MDB-2)

h:\projects\2010\1100044-04 wright chemical rifs\figures\fsap report\figures\slope stability\line4sc.plt Run By: Username 8/3/2016 04:35PM



```
                    *** GSTABL7 ***
              ** GSTABL7 by Garry H. Gregory, P.E. **
   ** Original Version 1.0, January 1996; Current Version 2.005, Sept. 2006 **
              (All Rights Reserved-Unauthorized Use Prohibited)
*******************************************************************************
                    SLOPE STABILITY ANALYSIS SYSTEM
         Modified Bishop, Simplified Janbu, or GLE Method of Slices.
         (Includes Spencer & Morgenstern-Price Type Analysis)
         Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
         Nonlinear Undrained Shear Strength, Curved Phi Envelope,
         Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
         Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.
*******************************************************************************
   Analysis Run Date:        8/3/2016
   Time of Run:              04:35PM
   Run By:                   Username
   Input Data Filename:      H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSA
P REPORT\Figures\Slope Stability\line4sc.in
   Output Filename:          H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSA
P REPORT\Figures\Slope Stability\line4sc.OUT
   Unit System:              English
   Plotted Output Filename:  H:\Projects\2010\1100044-04 Wright Chemical RIFS\Figures\FSA
P REPORT\Figures\Slope Stability\line4sc.PLT
   PROBLEM DESCRIPTION:  Wright Chemical
                         Line 3 Surcharge (NW Btwn MDB-1 / MDB-2)
   BOUNDARY COORDINATES
      10 Top   Boundaries
      18 Total Boundaries
   Boundary     X-Left     Y-Left    X-Right    Y-Right    Soil Type
      No.        (ft)       (ft)       (ft)       (ft)     Below Bnd
       1         0.00      24.00       7.66      26.00        1
       2         7.66      26.00      15.77      28.00        3
       3        15.77      28.00      18.03      30.00        3
       4        18.03      30.00      22.70      32.00        3
       5        22.70      32.00      25.91      34.00        2
       6        25.91      34.00      29.19      36.00        2
       7        29.19      36.00      32.36      38.00        2
       8        32.36      38.00      34.33      40.00        2
       9        34.33      40.00      38.85      42.00        1
      10        38.85      42.00     120.00      57.50        2
      11        38.85      42.00      60.26      44.00        1
      12        60.26      44.00      81.07      38.00        1
      13        81.07      38.00     103.83      32.00        2
      14       103.83      32.00     113.97      29.32        3
      15       113.97      29.32     120.00      29.32        2
      16        32.36      38.00      81.07      38.00        2
      17        22.70      32.00     103.83      32.00        3
      18         7.66      26.00     120.00      26.00        1
   Default Y-Origin = 0.00(ft)
   Default X-Plus Value = 0.00(ft)
   Default Y-Plus Value = 0.00(ft)
  ISOTROPIC SOIL PARAMETERS
    3 Type(s) of Soil
   Soil  Total  Saturated  Cohesion Friction   Pore   Pressure   Piez.
   Type Unit Wt. Unit Wt. Intercept   Angle  Pressure Constant Surface
    No.  (pcf)    (pcf)     (psf)     (deg)    Param.   (psf)     No.
     1    90.0    115.0       0.0     30.0    0.00       0.0      0
     2    90.0    115.0     100.0     25.0    0.00       0.0      0
     3    90.0    115.0     200.0     25.0    0.00       0.0      0
   A Critical Failure Surface Searching Method, Using A Random
   Technique For Generating Circular Surfaces, Has Been Specified.
     80 Trial Surfaces Have Been Generated.
     20 Surface(s) Initiate(s) From Each Of     4 Points Equally Spaced
   Along The Ground Surface Between  X =   0.00(ft)
                                and  X =  25.00(ft)
   Each Surface Terminates Between   X =  40.00(ft)
                                and  X =  75.00(ft)
   Unless Further Limitations Were Imposed, The Minimum Elevation
```

At Which A Surface Extends Is Y = 0.00(ft)
6.00(ft) Line Segments Define Each Trial Failure Surface.
Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Evaluated. They Are
Ordered - Most Critical First.
* * Safety Factors Are Calculated By The Modified Bishop Method * *
Total Number of Trial Surfaces Attempted = 80
Number of Trial Surfaces With Valid FS = 80
Statistical Data On All Valid FS Values:
FS Max = 4.261 FS Min = 1.664 FS Ave = 2.564
Standard Deviation = 0.602 Coefficient of Variation = 23.48 %
Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	0.000	24.000
2	5.957	23.280
3	11.956	23.191
4	17.931	23.734
5	23.816	24.903
6	29.545	26.686
7	35.055	29.062
8	40.284	32.005
9	45.173	35.482
10	49.670	39.454
11	53.723	43.879
12	54.550	44.999

Circle Center At X = 9.818 ; Y = 79.849 ; and Radius = 56.705
Factor of Safety
*** 1.664 ***
Individual data on the 24 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	6.0	610.0	0.0	0.0	0.	0.	0.0	0.0	0.0
2	1.7	384.9	0.0	0.0	0.	0.	0.0	0.0	0.0
3	4.3	1278.7	0.0	0.0	0.	0.	0.0	0.0	0.0
4	3.8	1430.0	0.0	0.0	0.	0.	0.0	0.0	0.0
5	2.2	1035.0	0.0	0.0	0.	0.	0.0	0.0	0.0
6	0.1	55.2	0.0	0.0	0.	0.	0.0	0.0	0.0
7	4.7	2850.8	0.0	0.0	0.	0.	0.0	0.0	0.0
8	1.1	759.0	0.0	0.0	0.	0.	0.0	0.0	0.0
9	2.1	1529.9	0.0	0.0	0.	0.	0.0	0.0	0.0
10	1.4	1115.6	0.0	0.0	0.	0.	0.0	0.0	0.0
11	1.8	1522.0	0.0	0.0	0.	0.	0.0	0.0	0.0
12	0.4	303.2	0.0	0.0	0.	0.	0.0	0.0	0.0
13	2.8	2487.5	0.0	0.0	0.	0.	0.0	0.0	0.0
14	2.0	1892.8	0.0	0.0	0.	0.	0.0	0.0	0.0
15	0.7	734.2	0.0	0.0	0.	0.	0.0	0.0	0.0
16	3.8	3767.7	0.0	0.0	0.	0.	0.0	0.0	0.0
17	1.4	1351.8	0.0	0.0	0.	0.	0.0	0.0	0.0
18	0.0	7.5	0.0	0.0	0.	0.	0.0	0.0	0.0
19	4.9	3959.6	0.0	0.0	0.	0.	0.0	0.0	0.0
20	2.9	1728.7	0.0	0.0	0.	0.	0.0	0.0	0.0
21	1.6	767.8	0.0	0.0	0.	0.	0.0	0.0	0.0
22	3.6	964.5	0.0	0.0	0.	0.	0.0	0.0	0.0
23	0.5	52.2	0.0	0.0	0.	0.	0.0	0.0	0.0
24	0.8	35.8	0.0	0.0	0.	0.	0.0	0.0	0.0

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	8.333	26.166
2	14.185	24.841
3	20.182	24.640
4	26.109	25.573
5	31.754	27.604
6	36.917	30.662

```
    7          41.411        34.637
    8          45.077        39.388
    9          47.203        43.595
Circle Center At X =    18.237 ; Y =    56.309 ; and Radius =    31.729
       Factor of Safety
      ***    1.692   ***
Failure Surface Specified By  9 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1           8.333       26.166
    2          14.215       24.983
    3          20.215       24.998
    4          26.091       26.211
    5          31.607       28.574
    6          36.539       31.990
    7          40.689       36.323
    8          43.891       41.398
    9          44.529       43.085
Circle Center At X =    17.140 ; Y =    54.727 ; and Radius =    29.888
       Factor of Safety
      ***    1.693   ***
Failure Surface Specified By 11 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1           0.000       24.000
    2           5.999       23.870
    3          11.986       24.261
    4          17.917       25.170
    5          23.746       26.591
    6          29.430       28.512
    7          34.926       30.920
    8          40.192       33.795
    9          45.189       37.117
   10          49.878       40.860
   11          54.148       44.922
Circle Center At X =     4.494 ; Y =    92.915 ; and Radius =    69.061
       Factor of Safety
      ***    1.718   ***
Failure Surface Specified By 10 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1           8.333       26.166
    2          14.172       24.782
    3          20.157       24.363
    4          26.131       24.921
    5          31.935       26.440
    6          37.417       28.880
    7          42.430       32.177
    8          46.841       36.244
    9          50.535       40.972
   10          52.525       44.612
Circle Center At X =    19.732 ; Y =    61.018 ; and Radius =    36.668
       Factor of Safety
      ***    1.736   ***
Failure Surface Specified By 10 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (ft)         (ft)
    1           8.333       26.166
    2          14.009       24.220
    3          19.961       23.465
    4          25.943       23.932
    5          31.706       25.602
    6          37.010       28.407
    7          41.636       32.228
    8          45.391       36.908
    9          48.119       42.252
   10          48.559       43.854
```

Circle Center At X = 20.666 ; Y = 52.703 ; and Radius = 29.263

Factor of Safety

*** 1.763 ***

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	0.000	24.000
2	5.920	23.023
3	11.902	22.557
4	17.902	22.605
5	23.875	23.167
6	29.779	24.238
7	35.569	25.811
8	41.203	27.875
9	46.639	30.414
10	51.838	33.409
11	56.762	36.838
12	61.373	40.677
13	65.639	44.896
14	67.895	47.548

Circle Center At X = 14.354 ; Y = 92.267 ; and Radius = 69.760

Factor of Safety

*** 1.821 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	25.000	33.433
2	30.988	33.815
3	36.577	35.997
4	41.240	39.773
5	43.258	42.842

Circle Center At X = 26.765 ; Y = 52.881 ; and Radius = 19.528

Factor of Safety

*** 1.858 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	25.000	33.433
2	30.973	33.998
3	36.356	36.649
4	40.446	41.038
5	41.006	42.412

Circle Center At X = 26.448 ; Y = 49.981 ; and Radius = 16.611

Factor of Safety

*** 1.865 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	0.000	24.000
2	5.991	24.328
3	11.931	25.175
4	17.775	26.533
5	23.480	28.392
6	29.002	30.739
7	34.299	33.556
8	39.333	36.822
9	44.064	40.512
10	47.426	43.638

Circle Center At X = -0.728 ; Y = 92.845 ; and Radius = 68.848

Factor of Safety

*** 1.880 ***

**** END OF GSTABL7 OUTPUT ****

ATTACHMENT I

GROUNDWATER AND LEACHATE

LABORATORY RESULTS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

February 16, 2016

Mr. Mike Armour
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

RE: Project: Wright Chemical Site
Pace Project No.: 92282945

Dear Mr. Armour:
Enclosed are the analytical results for sample(s) received by the laboratory on January 13, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Nicole Gasiorowski

Nicole Gasiorowski
nicole.gasiorowski@pacelabs.com
Project Manager

Enclosures

cc: Dave Stoner
Dave Wallace

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: Wright Chemical Site
Pace Project No.: 92282945

Pennsylvania Certification IDs

Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Tampa Certification IDs

5460 Beaumont Center Blvd, Ste 520, Tampa, FL 33634
Florida Certification #: E84809

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
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

Asheville Certification IDs

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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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: Wright Chemical Site
Pace Project No.: 92282945

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92282945001	**MDB-1**	Water	01/13/16 13:35	01/13/16 18:00
92282945002	**MDB-2**	Water	01/13/16 15:15	01/13/16 18:00
92282945003	**MDB-3**	Water	01/13/16 15:30	01/13/16 18:00
92282945004	**MDB-4**	Water	01/13/16 16:00	01/13/16 18:00
92282945005	**MDB-4 DUP**	Water	01/13/16 16:10	01/13/16 18:00
92282945006	**MDB rinse blank**	Water	01/13/16 16:50	01/13/16 18:00
92282945007	**LS-1**	Water	01/13/16 10:00	01/13/16 18:00
92282945008	**trip blank**	Water	01/13/16 00:00	01/13/16 18:00

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SAMPLE ANALYTE COUNT

Project: Wright Chemical Site
Pace Project No.: 92282945

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92282945001	**MDB-1**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8270	RES	74	PASI-C
		EPA 8260	NB	60	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA
		EPA 8315	JH1	1	
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	WRC	1	PASI-A
92282945002	**MDB-2**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8270	RES	73	PASI-C
		EPA 8260	NB	60	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA
		EPA 8315	JH1	1	
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	WRC	1	PASI-A
92282945003	**MDB-3**	EPA 8081	SWB	22	PASI-C

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SAMPLE ANALYTE COUNT

Project: Wright Chemical Site
Pace Project No.: 92282945

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	CDF	22	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8270	RES	73	PASI-C
		EPA 8260	NB	60	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA
		EPA 8315	JH1	1	
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	WRC	1	PASI-A
92282945004	**MDB-4**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8270	RES	77	PASI-C
		EPA 8260	NB	61	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA
		EPA 8315	JH1	1	
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	WRC	1	PASI-A
92282945005	**MDB-4 DUP**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A

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SAMPLE ANALYTE COUNT

Project: Wright Chemical Site
Pace Project No.: 92282945

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	SH1	1	PASI-A
		EPA 8270	RES	78	PASI-C
		EPA 8260	NB	59	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA
		EPA 8315	JH1	1	
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	WRC	1	PASI-A
92282945006	**MDB rinse blank**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8270	RES	73	PASI-C
		EPA 8260	NB	59	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA
		EPA 8315	JH1	1	
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	WRC	1	PASI-A
92282945007	**LS-1**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	SH1	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: Wright Chemical Site
Pace Project No.: 92282945

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270	RES	83	PASI-C
		EPA 8260	NB	62	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA
		EPA 8315	JH1	1	
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	WRC	1	PASI-A
92282945008	**trip blank**	EPA 8260	NB	59	PASI-C

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 8081**
Description: 8081 Organochlorine Pesticides
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 8081. 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 3510 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.

QC Batch: OEXT/40313

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- DUP (Lab ID: 1650823)
  - Decachlorobiphenyl (S)

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- LS-1 (Lab ID: 92282945007)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (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.

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: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 8081**
Description: 8081 Organochlorine Pesticides
Client: Shield
Date: February 16, 2016

Analyte Comments:

QC Batch: OEXT/40313

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- LS-1 (Lab ID: 92282945007)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 6010. 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 3010A 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.

QC Batch: MPRP/20486

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92282945001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1648316)
  - Aluminum
  - Antimony
  - Iron
- MSD (Lab ID: 1648317)
  - Aluminum
  - Antimony
  - Iron

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 7470**
Description: 7470 Mercury
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 7470. 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 7470 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: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 8270. 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 3510 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: OEXT/40259

S0: Surrogate recovery outside laboratory control limits.

- DUP (Lab ID: 1648187)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Nitrobenzene-d5 (S)
  - Phenol-d6 (S)
- MDB-1 (Lab ID: 92282945001)
  - 2-Fluorophenol (S)
  - Nitrobenzene-d5 (S)
  - Phenol-d6 (S)
- MDB-3 (Lab ID: 92282945003)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Nitrobenzene-d5 (S)
  - Phenol-d6 (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: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Shield
Date: February 16, 2016

QC Batch: OEXT/40259

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1648185)
  - Benzaldehyde

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:

Analyte Comments:

QC Batch: OEXT/40259

1g: Sample re-extracted outside method hold time. Results of re-analysis confirmed original analysis performed within hold time.

- MDB-1 (Lab ID: 92282945001)
  - Nitrobenzene-d5 (S)
- MDB-3 (Lab ID: 92282945003)
  - Nitrobenzene-d5 (S)

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: Shield
Date: February 16, 2016

General Information:
8 samples were analyzed for EPA 8260. 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:

Analyte Comments:

QC Batch: MSV/35183

C9: Common Laboratory Contaminant.

- MDB rinse blank (Lab ID: 92282945006)
  - Methylene Chloride

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 900.0**
Description: 900.0 Gross Alpha/Beta
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 900.0. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 903.1. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 904.0. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **ASTM D5174-97**
Description: D517497 Total Uranium KPA
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for ASTM D5174-97. 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:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 8315**
Description: 8315 WTP HPLC
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 8315. 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 8315 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.

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 9040**
Description: 9040 pH
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 9040. 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.

H6: Analysis initiated outside of the 15 minute EPA required holding time.
- LS-1 (Lab ID: 92282945007)
- MDB rinse blank (Lab ID: 92282945006)
- MDB-1 (Lab ID: 92282945001)
- MDB-2 (Lab ID: 92282945002)
- MDB-3 (Lab ID: 92282945003)
- MDB-4 (Lab ID: 92282945004)
- MDB-4 DUP (Lab ID: 92282945005)

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: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 300.0. 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.

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:

Analyte Comments:

QC Batch: WETA/26112

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- LS-1 (Lab ID: 92282945007)
  - Fluoride
  - Sulfate

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 350.1**
Description: 350.1 Ammonia
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 350.1. 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.

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: WETA/26109

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92282945001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1648867)
  - Nitrogen, Ammonia
- MSD (Lab ID: 1648868)
  - Nitrogen, Ammonia

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 353.2. 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.

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: Wright Chemical Site
Pace Project No.: 92282945

Method: **EPA 365.1**
Description: 365.1 Phosphorus, Total
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for EPA 365.1. 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.

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: WETA/26144

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92282760001,92282945007

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1650307)
  - Phosphorus
- MSD (Lab ID: 1650308)
  - Phosphorus

Additional Comments:

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PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **SM 4500-Cl-E**
Description: 4500 Chloride
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for SM 4500-Cl-E. 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.

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: WETA/26139

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92282945001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1649429)
  - Chloride
- MSD (Lab ID: 1649430)
  - Chloride

Additional Comments:

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Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: Wright Chemical Site
Pace Project No.: 92282945

Method: **SM 4500-CN-E**
Description: 4500CNE Cyanide, Total
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for SM 4500-CN-E. 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.

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: Wright Chemical Site
Pace Project No.: 92282945

Method: **SM 4500-P E**
Description: SM4500P-E, Phosphate, Ortho
Client: Shield
Date: February 16, 2016

General Information:
7 samples were analyzed for SM 4500-P E. 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.

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:

Analyte Comments:

QC Batch: WETA/26090

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- MDB-3 (Lab ID: 92282945003)
  - Orthophosphate as P

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

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-1 **Lab ID: 92282945001** Collected: 01/13/16 13:35 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 16:14	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:14	1024-57-3	
Methoxychlor	ND	ug/L	0.15	0.15	1	01/19/16 13:00	01/21/16 16:14	72-43-5	
Toxaphene	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 16:14	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	50	%	20-130		1	01/19/16 13:00	01/21/16 16:14	877-09-8	
Decachlorobiphenyl (S)	61	%	20-130		1	01/19/16 13:00	01/21/16 16:14	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**18600**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 02:42	7429-90-5	M1
Antimony	ND	ug/L	5.0	3.9	1	01/15/16 18:00	01/20/16 02:42	7440-36-0	M1
Arsenic	**10.4**	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:42	7440-38-2	
Barium	**116**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:42	7440-39-3	
Beryllium	**0.89J**	ug/L	1.0	0.50	1	01/15/16 18:00	01/20/16 02:42	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	01/15/16 18:00	01/20/16 02:42	7440-43-9	
Calcium	**7940**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 02:42	7440-70-2	
Chromium	**27.2**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:42	7440-47-3	
Cobalt	**19.0**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:42	7440-48-4	
Copper	**12.2**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:42	7440-50-8	
Iron	**13400**	ug/L	50.0	25.0	1	01/15/16 18:00	01/20/16 02:42	7439-89-6	M1
Lead	**13.8**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:42	7439-92-1	
Magnesium	**1450**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 02:42	7439-95-4	
Manganese	**589**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:42	7439-96-5	
Nickel	**4.4J**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:42	7440-02-0	
Potassium	**6940**	ug/L	5000	2500	1	01/15/16 18:00	01/20/16 02:42	7440-09-7	
Selenium	ND	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:42	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:42	7440-22-4	
Sodium	**13500**	ug/L	5000	2500	1	01/15/16 18:00	01/20/16 02:42	7440-23-5	
Thallium	**8.5J**	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:42	7440-28-0	
Vanadium	**55.6**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:42	7440-62-2	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-1 **Lab ID: 92282945001** Collected: 01/13/16 13:35 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	**18.5**	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:42	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	**0.12J**	ug/L	0.20	0.10	1	01/18/16 13:00	01/25/16 14:02	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	01/15/16 01:00	01/20/16 16:02	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 16:02	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	01/15/16 01:00	01/20/16 16:02	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	01/15/16 01:00	01/20/16 16:02	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 16:02	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	01/15/16 01:00	01/20/16 16:02	100-52-7	L2,M0
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	01/15/16 01:00	01/20/16 16:02	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	01/15/16 01:00	01/20/16 16:02	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 16:02	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	01/15/16 01:00	01/20/16 16:02	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	01/15/16 01:00	01/20/16 16:02	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 16:02	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 16:02	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	01/15/16 01:00	01/20/16 16:02	85-68-7	
Caprolactam	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 16:02	105-60-2	M1
Carbazole	ND	ug/L	10.0	0.73	1	01/15/16 01:00	01/20/16 16:02	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	01/15/16 01:00	01/20/16 16:02	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	01/15/16 01:00	01/20/16 16:02	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:02	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 16:02	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 16:02	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 16:02	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 16:02	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 16:02	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	01/15/16 01:00	01/20/16 16:02	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 16:02	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	01/15/16 01:00	01/20/16 16:02	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:02	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 16:02	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 16:02	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 16:02	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 16:02	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 16:02	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	01/15/16 01:00	01/20/16 16:02	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	01/15/16 01:00	01/20/16 16:02	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:02	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	01/15/16 01:00	01/20/16 16:02	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	01/15/16 01:00	01/20/16 16:02	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 16:02	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 16:02	86-73-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-1 **Lab ID: 92282945001** Collected: 01/13/16 13:35 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 16:02	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 16:02	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 16:02	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 16:02	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	01/15/16 01:00	01/20/16 16:02	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 16:02	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 16:02	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:02	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:02		
Naphthalene	ND	ug/L	10.0	0.34	1	01/15/16 01:00	01/20/16 16:02	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	01/15/16 01:00	01/20/16 16:02	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	01/15/16 01:00	01/20/16 16:02	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	01/15/16 01:00	01/20/16 16:02	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:02	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:02	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	01/15/16 01:00	01/20/16 16:02	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 16:02	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 16:02	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	01/15/16 01:00	01/20/16 16:02	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	01/15/16 01:00	01/20/16 16:02	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	01/15/16 01:00	01/20/16 16:02	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:02	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	01/15/16 01:00	01/20/16 16:02	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:02	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	01/15/16 01:00	01/20/16 16:02	58-90-2	M1
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 16:02	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 16:02	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	4	%	21-110		1	01/15/16 01:00	01/20/16 16:02	4165-60-0	1g,S0
2-Fluorobiphenyl (S)	29	%	27-110		1	01/15/16 01:00	01/20/16 16:02	321-60-8	
Terphenyl-d14 (S)	82	%	31-107		1	01/15/16 01:00	01/20/16 16:02	1718-51-0	
Phenol-d6 (S)	7	%	10-110		1	01/15/16 01:00	01/20/16 16:02	13127-88-3	S0
2-Fluorophenol (S)	1	%	12-110		1	01/15/16 01:00	01/20/16 16:02	367-12-4	S0
2,4,6-Tribromophenol (S)	68	%	27-110		1	01/15/16 01:00	01/20/16 16:02	118-79-6	
Tentatively Identified Compounds									
1,3,5-Trithiane	**11.3**	ug/L			1	01/15/16 01:00	01/20/16 16:02	291-21-4	N
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		01/20/16 18:25	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		01/20/16 18:25	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		01/20/16 18:25	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/20/16 18:25	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		01/20/16 18:25	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		01/20/16 18:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		01/20/16 18:25	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		01/20/16 18:25	75-15-0	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-1 **Lab ID: 92282945001** Collected: 01/13/16 13:35 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/20/16 18:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		01/20/16 18:25	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		01/20/16 18:25	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		01/20/16 18:25	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/20/16 18:25	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		01/20/16 18:25	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		01/20/16 18:25	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		01/20/16 18:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/20/16 18:25	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		01/20/16 18:25	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		01/20/16 18:25	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/20/16 18:25	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		01/20/16 18:25	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		01/20/16 18:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		01/20/16 18:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/20/16 18:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/20/16 18:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/20/16 18:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/20/16 18:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/20/16 18:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/20/16 18:25	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		01/20/16 18:25	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/20/16 18:25	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		01/20/16 18:25	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		01/20/16 18:25	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		01/20/16 18:25	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		01/20/16 18:25	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		01/20/16 18:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		01/20/16 18:25	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/20/16 18:25	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		01/20/16 18:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		01/20/16 18:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/20/16 18:25	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/20/16 18:25	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		01/20/16 18:25	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		01/20/16 18:25	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/20/16 18:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/20/16 18:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/20/16 18:25	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/20/16 18:25	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		01/20/16 18:25	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/20/16 18:25	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/20/16 18:25	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/20/16 18:25	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		01/20/16 18:25	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-1 **Lab ID: 92282945001** Collected: 01/13/16 13:35 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		01/20/16 18:25	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/20/16 18:25	2037-26-5	
Tentatively Identified Compounds									
Unknown	**53.5**	ug/L			1		01/20/16 18:25		N
Unknown	**80.9**	ug/L			1		01/20/16 18:25		N
Cyclotetrasiloxane, octa	**226**	ug/L			1		01/20/16 18:25	556-67-2	N
Unknown	**133**	ug/L			1		01/20/16 18:25		N
Unknown	**15.4**	ug/L			1		01/20/16 18:25		N
8315 WTP HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	**93.5**	ug/L	50.0	25.0	1	01/15/16 14:30	01/17/16 20:15	50-00-0	N2
9040 pH	Analytical Method: EPA 9040								
pH	**6.4**	Std. Units	0.10	0.10	1		01/17/16 14:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.50	0.25	1		01/18/16 12:56	16984-48-8	
Sulfate	**110**	mg/L	10.0	5.0	5		01/18/16 17:18	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**84.7**	mg/L	1.0	0.50	10		01/18/16 06:18	7664-41-7	M6
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**11.0**	mg/L	0.10	0.050	5		01/15/16 09:28		
Nitrogen, Nitrite	ND	mg/L	0.10	0.050	5		01/15/16 09:28		
Nitrogen, NO2 plus NO3	**11.0**	mg/L	0.10	0.050	5		01/15/16 09:28		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**0.45**	mg/L	0.050	0.025	1		01/20/16 14:01	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**28.8**	mg/L	1.0	0.50	1		01/20/16 19:24	16887-00-6	M1
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0080	0.0040	1		01/16/16 15:14	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	ND	mg/L	0.050	0.025	1		01/15/16 01:20		

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-2 **Lab ID: 92282945002** Collected: 01/13/16 15:15 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 16:32	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:32	1024-57-3	
Methoxychlor	ND	ug/L	0.15	0.15	1	01/19/16 13:00	01/21/16 16:32	72-43-5	
Toxaphene	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 16:32	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	78	%	20-130		1	01/19/16 13:00	01/21/16 16:32	877-09-8	
Decachlorobiphenyl (S)	78	%	20-130		1	01/19/16 13:00	01/21/16 16:32	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**1500**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 02:50	7429-90-5	
Antimony	ND	ug/L	5.0	3.9	1	01/15/16 18:00	01/20/16 02:50	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:50	7440-38-2	
Barium	**131**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:50	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	01/15/16 18:00	01/20/16 02:50	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	01/15/16 18:00	01/20/16 02:50	7440-43-9	
Calcium	**23600**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 02:50	7440-70-2	
Chromium	**6.3**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:50	7440-47-3	
Cobalt	**178**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:50	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:50	7440-50-8	
Iron	**9060**	ug/L	50.0	25.0	1	01/15/16 18:00	01/20/16 02:50	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:50	7439-92-1	
Magnesium	**5300**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 02:50	7439-95-4	
Manganese	**6680**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:50	7439-96-5	
Nickel	**4.5J**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:50	7440-02-0	
Potassium	**6080**	ug/L	5000	2500	1	01/15/16 18:00	01/20/16 02:50	7440-09-7	
Selenium	ND	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:50	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:50	7440-22-4	
Sodium	**53500**	ug/L	5000	2500	1	01/15/16 18:00	01/20/16 02:50	7440-23-5	
Thallium	**10.8**	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:50	7440-28-0	
Vanadium	**2.9J**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:50	7440-62-2	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-2 **Lab ID: 92282945002** Collected: 01/13/16 15:15 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	**13.7**	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:50	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	ND	ug/L	0.20	0.10	1	01/18/16 13:00	01/25/16 14:10	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	01/15/16 01:00	01/20/16 14:55	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 14:55	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	01/15/16 01:00	01/20/16 14:55	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	01/15/16 01:00	01/20/16 14:55	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 14:55	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	01/15/16 01:00	01/20/16 14:55	100-52-7	L2
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	01/15/16 01:00	01/20/16 14:55	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	01/15/16 01:00	01/20/16 14:55	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 14:55	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	01/15/16 01:00	01/20/16 14:55	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	01/15/16 01:00	01/20/16 14:55	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 14:55	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 14:55	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	01/15/16 01:00	01/20/16 14:55	85-68-7	
Caprolactam	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 14:55	105-60-2	
Carbazole	ND	ug/L	10.0	0.73	1	01/15/16 01:00	01/20/16 14:55	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	01/15/16 01:00	01/20/16 14:55	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	01/15/16 01:00	01/20/16 14:55	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 14:55	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 14:55	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 14:55	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 14:55	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 14:55	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 14:55	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	01/15/16 01:00	01/20/16 14:55	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 14:55	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	01/15/16 01:00	01/20/16 14:55	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 14:55	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 14:55	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 14:55	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 14:55	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 14:55	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 14:55	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	01/15/16 01:00	01/20/16 14:55	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	01/15/16 01:00	01/20/16 14:55	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 14:55	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	01/15/16 01:00	01/20/16 14:55	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	01/15/16 01:00	01/20/16 14:55	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 14:55	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 14:55	86-73-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-2 **Lab ID: 92282945002** Collected: 01/13/16 15:15 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 14:55	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 14:55	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 14:55	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 14:55	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	01/15/16 01:00	01/20/16 14:55	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 14:55	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 14:55	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 14:55	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 14:55		
Naphthalene	ND	ug/L	10.0	0.34	1	01/15/16 01:00	01/20/16 14:55	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	01/15/16 01:00	01/20/16 14:55	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	01/15/16 01:00	01/20/16 14:55	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	01/15/16 01:00	01/20/16 14:55	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 14:55	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 14:55	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	01/15/16 01:00	01/20/16 14:55	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 14:55	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 14:55	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	01/15/16 01:00	01/20/16 14:55	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	01/15/16 01:00	01/20/16 14:55	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	01/15/16 01:00	01/20/16 14:55	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 14:55	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	01/15/16 01:00	01/20/16 14:55	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 14:55	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	01/15/16 01:00	01/20/16 14:55	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 14:55	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 14:55	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	57	%	21-110		1	01/15/16 01:00	01/20/16 14:55	4165-60-0	
2-Fluorobiphenyl (S)	54	%	27-110		1	01/15/16 01:00	01/20/16 14:55	321-60-8	
Terphenyl-d14 (S)	74	%	31-107		1	01/15/16 01:00	01/20/16 14:55	1718-51-0	
Phenol-d6 (S)	22	%	10-110		1	01/15/16 01:00	01/20/16 14:55	13127-88-3	
2-Fluorophenol (S)	27	%	12-110		1	01/15/16 01:00	01/20/16 14:55	367-12-4	
2,4,6-Tribromophenol (S)	63	%	27-110		1	01/15/16 01:00	01/20/16 14:55	118-79-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		01/16/16 08:34	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		01/16/16 08:34	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		01/16/16 08:34	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/16/16 08:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		01/16/16 08:34	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		01/16/16 08:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		01/16/16 08:34	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		01/16/16 08:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/16/16 08:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		01/16/16 08:34	108-90-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-2 **Lab ID: 92282945002** Collected: 01/13/16 15:15 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Chloroethane	ND	ug/L	1.0	0.54	1		01/16/16 08:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		01/16/16 08:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/16/16 08:34	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		01/16/16 08:34	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		01/16/16 08:34	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		01/16/16 08:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/16/16 08:34	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		01/16/16 08:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		01/16/16 08:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/16/16 08:34	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		01/16/16 08:34	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		01/16/16 08:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		01/16/16 08:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/16 08:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/16 08:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/16 08:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/16/16 08:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/16/16 08:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/16/16 08:34	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		01/16/16 08:34	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/16/16 08:34	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		01/16/16 08:34	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		01/16/16 08:34	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		01/16/16 08:34	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		01/16/16 08:34	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		01/16/16 08:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		01/16/16 08:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/16/16 08:34	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		01/16/16 08:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		01/16/16 08:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/16 08:34	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/16 08:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		01/16/16 08:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		01/16/16 08:34	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/16 08:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/16/16 08:34	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/16 08:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/16/16 08:34	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		01/16/16 08:34	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/16 08:34	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/16/16 08:34	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/16/16 08:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		01/16/16 08:34	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		01/16/16 08:34	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		01/16/16 08:34	2037-26-5	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-2 **Lab ID: 92282945002** Collected: 01/13/16 15:15 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Tentatively Identified Compounds									
Unknown	**37.9**	ug/L			1		01/16/16 08:34		N
Unknown	**48.1**	ug/L			1		01/16/16 08:34		N
Cyclotetrasiloxane, octa	**144**	ug/L			1		01/16/16 08:34	556-67-2	N
Unknown	**94.3**	ug/L			1		01/16/16 08:34		N
Unknown	**16.1**	ug/L			1		01/16/16 08:34		N
8315 WTP HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	**63.6**	ug/L	50.0	25.0	1	01/15/16 14:30	01/17/16 20:35	50-00-0	N2
9040 pH	Analytical Method: EPA 9040								
pH	**5.6**	Std. Units	0.10	0.10	1		01/17/16 14:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.50	0.25	1		01/18/16 13:55	16984-48-8	
Sulfate	**45.9**	mg/L	4.0	2.0	2		01/18/16 18:17	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**3.1**	mg/L	0.10	0.050	1		01/18/16 06:25	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**19.5**	mg/L	0.10	0.050	5		01/15/16 09:29		
Nitrogen, Nitrite	**0.84**	mg/L	0.10	0.050	5		01/15/16 09:29		
Nitrogen, NO2 plus NO3	**20.3**	mg/L	0.10	0.050	5		01/15/16 09:29		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	ND	mg/L	0.050	0.025	1		01/20/16 14:01	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**94.2**	mg/L	5.0	2.5	5		01/20/16 19:37	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	**0.0054J**	mg/L	0.0080	0.0040	1		01/16/16 15:19	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.060**	mg/L	0.050	0.025	1		01/15/16 01:20		

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-3 **Lab ID: 92282945003** Collected: 01/13/16 15:30 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 16:50	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 16:50	1024-57-3	
Methoxychlor	ND	ug/L	0.15	0.15	1	01/19/16 13:00	01/21/16 16:50	72-43-5	
Toxaphene	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 16:50	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	79	%	20-130		1	01/19/16 13:00	01/21/16 16:50	877-09-8	
Decachlorobiphenyl (S)	76	%	20-130		1	01/19/16 13:00	01/21/16 16:50	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**30300**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 02:53	7429-90-5	
Antimony	ND	ug/L	5.0	3.9	1	01/15/16 18:00	01/20/16 02:53	7440-36-0	
Arsenic	**22.7**	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:53	7440-38-2	
Barium	**74.0**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:53	7440-39-3	
Beryllium	**2.4**	ug/L	1.0	0.50	1	01/15/16 18:00	01/20/16 02:53	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	01/15/16 18:00	01/20/16 02:53	7440-43-9	
Calcium	**30800**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 02:53	7440-70-2	
Chromium	**22.4**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:53	7440-47-3	
Cobalt	**14.2**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:53	7440-48-4	
Copper	**14.7**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:53	7440-50-8	
Iron	**100000**	ug/L	50.0	25.0	1	01/15/16 18:00	01/20/16 02:53	7439-89-6	
Lead	**32.7**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:53	7439-92-1	
Magnesium	**4890**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 02:53	7439-95-4	
Manganese	**241**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:53	7439-96-5	
Nickel	**7.5**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:53	7440-02-0	
Potassium	**4950J**	ug/L	5000	2500	1	01/15/16 18:00	01/20/16 02:53	7440-09-7	
Selenium	**6.3J**	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:53	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:53	7440-22-4	
Sodium	**11600**	ug/L	5000	2500	1	01/15/16 18:00	01/20/16 02:53	7440-23-5	
Thallium	ND	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:53	7440-28-0	
Vanadium	**101**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 02:53	7440-62-2	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-3 **Lab ID: 92282945003** Collected: 01/13/16 15:30 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	**38.6**	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 02:53	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	**0.11J**	ug/L	0.20	0.10	1	01/18/16 13:00	01/25/16 14:12	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	01/15/16 01:00	01/20/16 16:35	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 16:35	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	01/15/16 01:00	01/20/16 16:35	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	01/15/16 01:00	01/20/16 16:35	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 16:35	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	01/15/16 01:00	01/20/16 16:35	100-52-7	L2
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	01/15/16 01:00	01/20/16 16:35	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	01/15/16 01:00	01/20/16 16:35	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 16:35	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	01/15/16 01:00	01/20/16 16:35	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	01/15/16 01:00	01/20/16 16:35	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 16:35	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 16:35	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	01/15/16 01:00	01/20/16 16:35	85-68-7	
Caprolactam	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 16:35	105-60-2	
Carbazole	ND	ug/L	10.0	0.73	1	01/15/16 01:00	01/20/16 16:35	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	01/15/16 01:00	01/20/16 16:35	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	01/15/16 01:00	01/20/16 16:35	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:35	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 16:35	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 16:35	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 16:35	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 16:35	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 16:35	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	01/15/16 01:00	01/20/16 16:35	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 16:35	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	01/15/16 01:00	01/20/16 16:35	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:35	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 16:35	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 16:35	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 16:35	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 16:35	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 16:35	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	01/15/16 01:00	01/20/16 16:35	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	01/15/16 01:00	01/20/16 16:35	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:35	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	01/15/16 01:00	01/20/16 16:35	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	01/15/16 01:00	01/20/16 16:35	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 16:35	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 16:35	86-73-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-3 **Lab ID: 92282945003** Collected: 01/13/16 15:30 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 16:35	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 16:35	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 16:35	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 16:35	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	01/15/16 01:00	01/20/16 16:35	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 16:35	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 16:35	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:35	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:35		
Naphthalene	ND	ug/L	10.0	0.34	1	01/15/16 01:00	01/20/16 16:35	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	01/15/16 01:00	01/20/16 16:35	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	01/15/16 01:00	01/20/16 16:35	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	01/15/16 01:00	01/20/16 16:35	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:35	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:35	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	01/15/16 01:00	01/20/16 16:35	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 16:35	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 16:35	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	01/15/16 01:00	01/20/16 16:35	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	01/15/16 01:00	01/20/16 16:35	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	01/15/16 01:00	01/20/16 16:35	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:35	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	01/15/16 01:00	01/20/16 16:35	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 16:35	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	01/15/16 01:00	01/20/16 16:35	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 16:35	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 16:35	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	10	%	21-110		1	01/15/16 01:00	01/20/16 16:35	4165-60-0	1g,S0
2-Fluorobiphenyl (S)	23	%	27-110		1	01/15/16 01:00	01/20/16 16:35	321-60-8	S0
Terphenyl-d14 (S)	39	%	31-107		1	01/15/16 01:00	01/20/16 16:35	1718-51-0	
Phenol-d6 (S)	6	%	10-110		1	01/15/16 01:00	01/20/16 16:35	13127-88-3	S0
2-Fluorophenol (S)	4	%	12-110		1	01/15/16 01:00	01/20/16 16:35	367-12-4	S0
2,4,6-Tribromophenol (S)	33	%	27-110		1	01/15/16 01:00	01/20/16 16:35	118-79-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		01/20/16 18:42	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		01/20/16 18:42	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		01/20/16 18:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/20/16 18:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		01/20/16 18:42	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		01/20/16 18:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		01/20/16 18:42	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		01/20/16 18:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/20/16 18:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		01/20/16 18:42	108-90-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-3 **Lab ID: 92282945003** Collected: 01/13/16 15:30 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Chloroethane	ND	ug/L	1.0	0.54	1		01/20/16 18:42	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		01/20/16 18:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/20/16 18:42	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		01/20/16 18:42	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		01/20/16 18:42	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		01/20/16 18:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/20/16 18:42	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		01/20/16 18:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		01/20/16 18:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/20/16 18:42	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		01/20/16 18:42	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		01/20/16 18:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		01/20/16 18:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/20/16 18:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/20/16 18:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/20/16 18:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/20/16 18:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/20/16 18:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/20/16 18:42	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		01/20/16 18:42	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/20/16 18:42	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		01/20/16 18:42	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		01/20/16 18:42	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		01/20/16 18:42	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		01/20/16 18:42	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		01/20/16 18:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		01/20/16 18:42	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/20/16 18:42	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		01/20/16 18:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		01/20/16 18:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/20/16 18:42	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/20/16 18:42	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		01/20/16 18:42	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		01/20/16 18:42	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/20/16 18:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/20/16 18:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/20/16 18:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/20/16 18:42	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		01/20/16 18:42	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/20/16 18:42	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/20/16 18:42	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/20/16 18:42	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		01/20/16 18:42	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		01/20/16 18:42	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/20/16 18:42	2037-26-5	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-3 **Lab ID: 92282945003** Collected: 01/13/16 15:30 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Tentatively Identified Compounds									
Unknown	**82.9**	ug/L			1		01/20/16 18:42		N
Unknown	**150**	ug/L			1		01/20/16 18:42		N
Cyclotetrasiloxane, octa	**234**	ug/L			1		01/20/16 18:42	556-67-2	N
Unknown	**139**	ug/L			1		01/20/16 18:42		N
Unknown	**16.5**	ug/L			1		01/20/16 18:42		N
8315 WTP HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	**66.6**	ug/L	50.0	25.0	1	01/15/16 14:30	01/17/16 20:55	50-00-0	N2
9040 pH	Analytical Method: EPA 9040								
pH	**7.1**	Std. Units	0.10	0.10	1		01/17/16 14:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.50	0.25	1		01/18/16 14:14	16984-48-8	
Sulfate	**31.0**	mg/L	2.0	1.0	1		01/18/16 14:14	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**131**	mg/L	5.0	2.5	50		01/18/16 06:28	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.020	0.010	1		01/15/16 09:14		
Nitrogen, Nitrite	**0.031**	mg/L	0.020	0.010	1		01/15/16 09:14		
Nitrogen, NO2 plus NO3	**0.011J**	mg/L	0.020	0.010	1		01/15/16 09:14		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**2.3**	mg/L	0.050	0.025	1		01/20/16 14:03	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**14.6**	mg/L	1.0	0.50	1		01/20/16 19:27	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0080	0.0040	1		01/16/16 15:20	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	ND	mg/L	0.25	0.12	5		01/15/16 01:20		D3

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 **Lab ID: 92282945004** Collected: 01/13/16 16:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 17:08	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:08	1024-57-3	
Methoxychlor	ND	ug/L	0.15	0.15	1	01/19/16 13:00	01/21/16 17:08	72-43-5	
Toxaphene	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 17:08	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	76	%	20-130		1	01/19/16 13:00	01/21/16 17:08	877-09-8	
Decachlorobiphenyl (S)	30	%	20-130		1	01/19/16 13:00	01/21/16 17:08	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**39300**	ug/L	500	250	5	01/15/16 18:00	01/20/16 13:41	7429-90-5	
Antimony	ND	ug/L	25.0	19.4	5	01/15/16 18:00	01/20/16 13:41	7440-36-0	
Arsenic	**48.8J**	ug/L	50.0	25.0	5	01/15/16 18:00	01/20/16 13:41	7440-38-2	
Barium	**140**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:41	7440-39-3	
Beryllium	**11.3**	ug/L	5.0	2.5	5	01/15/16 18:00	01/20/16 13:41	7440-41-7	
Cadmium	ND	ug/L	5.0	2.5	5	01/15/16 18:00	01/20/16 13:41	7440-43-9	
Calcium	**16100**	ug/L	500	250	5	01/15/16 18:00	01/20/16 13:41	7440-70-2	
Chromium	**86.2**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:41	7440-47-3	
Cobalt	**38.1**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:41	7440-48-4	
Copper	**27.4**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:41	7440-50-8	
Iron	**365000**	ug/L	250	125	5	01/15/16 18:00	01/20/16 13:41	7439-89-6	
Lead	**56.8**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:41	7439-92-1	
Magnesium	**4720**	ug/L	500	250	5	01/15/16 18:00	01/20/16 13:41	7439-95-4	
Manganese	**822**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:41	7439-96-5	
Nickel	**17.9J**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:41	7440-02-0	
Potassium	ND	ug/L	25000	12500	5	01/15/16 18:00	01/20/16 13:41	7440-09-7	
Selenium	ND	ug/L	50.0	25.0	5	01/15/16 18:00	01/20/16 13:41	7782-49-2	
Silver	ND	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:41	7440-22-4	
Sodium	**33900**	ug/L	25000	12500	5	01/15/16 18:00	01/20/16 13:41	7440-23-5	
Thallium	ND	ug/L	50.0	25.0	5	01/15/16 18:00	01/20/16 13:41	7440-28-0	
Vanadium	**275**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:41	7440-62-2	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 **Lab ID: 92282945004** Collected: 01/13/16 16:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	**79.4**	ug/L	50.0	25.0	5	01/15/16 18:00	01/20/16 13:41	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	**0.42**	ug/L	0.20	0.10	1	01/18/16 13:00	01/25/16 14:14	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	01/15/16 01:00	01/20/16 17:36	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 17:36	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	01/15/16 01:00	01/20/16 17:36	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	01/15/16 01:00	01/20/16 17:36	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 17:36	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	01/15/16 01:00	01/20/16 17:36	100-52-7	L2
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	01/15/16 01:00	01/20/16 17:36	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	01/15/16 01:00	01/20/16 17:36	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 17:36	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	01/15/16 01:00	01/20/16 17:36	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	01/15/16 01:00	01/20/16 17:36	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 17:36	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 17:36	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	01/15/16 01:00	01/20/16 17:36	85-68-7	
Caprolactam	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 17:36	105-60-2	
Carbazole	ND	ug/L	10.0	0.73	1	01/15/16 01:00	01/20/16 17:36	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	01/15/16 01:00	01/20/16 17:36	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	01/15/16 01:00	01/20/16 17:36	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 17:36	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 17:36	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 17:36	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 17:36	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 17:36	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 17:36	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	01/15/16 01:00	01/20/16 17:36	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 17:36	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	01/15/16 01:00	01/20/16 17:36	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 17:36	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 17:36	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 17:36	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 17:36	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 17:36	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 17:36	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	01/15/16 01:00	01/20/16 17:36	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	01/15/16 01:00	01/20/16 17:36	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 17:36	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	01/15/16 01:00	01/20/16 17:36	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	01/15/16 01:00	01/20/16 17:36	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 17:36	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 17:36	86-73-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 **Lab ID: 92282945004** Collected: 01/13/16 16:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 17:36	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 17:36	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 17:36	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 17:36	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	01/15/16 01:00	01/20/16 17:36	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 17:36	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 17:36	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 17:36	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 17:36		
Naphthalene	ND	ug/L	10.0	0.34	1	01/15/16 01:00	01/20/16 17:36	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	01/15/16 01:00	01/20/16 17:36	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	01/15/16 01:00	01/20/16 17:36	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	01/15/16 01:00	01/20/16 17:36	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 17:36	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 17:36	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	01/15/16 01:00	01/20/16 17:36	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 17:36	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 17:36	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	01/15/16 01:00	01/20/16 17:36	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	01/15/16 01:00	01/20/16 17:36	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	01/15/16 01:00	01/20/16 17:36	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 17:36	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	01/15/16 01:00	01/20/16 17:36	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 17:36	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	01/15/16 01:00	01/20/16 17:36	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 17:36	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 17:36	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	30	%	21-110		1	01/15/16 01:00	01/20/16 17:36	4165-60-0	
2-Fluorobiphenyl (S)	27	%	27-110		1	01/15/16 01:00	01/20/16 17:36	321-60-8	
Terphenyl-d14 (S)	38	%	31-107		1	01/15/16 01:00	01/20/16 17:36	1718-51-0	
Phenol-d6 (S)	15	%	10-110		1	01/15/16 01:00	01/20/16 17:36	13127-88-3	
2-Fluorophenol (S)	20	%	12-110		1	01/15/16 01:00	01/20/16 17:36	367-12-4	
2,4,6-Tribromophenol (S)	35	%	27-110		1	01/15/16 01:00	01/20/16 17:36	118-79-6	
Tentatively Identified Compounds									
Unknown	**44.0**	ug/L			1	01/15/16 01:00	01/20/16 17:36		N
Unknown	**7.2**	ug/L			1	01/15/16 01:00	01/20/16 17:36		N
1,4-Benzenediamine, N,N-	**6.3**	ug/L			1	01/15/16 01:00	01/20/16 17:36	93-05-0	N
n-Hexadecanoic acid	**10.9**	ug/L			1	01/15/16 01:00	01/20/16 17:36	57-10-3	N
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		01/20/16 18:59	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		01/20/16 18:59	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		01/20/16 18:59	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/20/16 18:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		01/20/16 18:59	75-25-2	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 **Lab ID: 92282945004** Collected: 01/13/16 16:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Bromomethane	ND	ug/L	2.0	0.29	1		01/20/16 18:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		01/20/16 18:59	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		01/20/16 18:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/20/16 18:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		01/20/16 18:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		01/20/16 18:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		01/20/16 18:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/20/16 18:59	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		01/20/16 18:59	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		01/20/16 18:59	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		01/20/16 18:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/20/16 18:59	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		01/20/16 18:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		01/20/16 18:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/20/16 18:59	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		01/20/16 18:59	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		01/20/16 18:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		01/20/16 18:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/20/16 18:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/20/16 18:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/20/16 18:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/20/16 18:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/20/16 18:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/20/16 18:59	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		01/20/16 18:59	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/20/16 18:59	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		01/20/16 18:59	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		01/20/16 18:59	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		01/20/16 18:59	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		01/20/16 18:59	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		01/20/16 18:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		01/20/16 18:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/20/16 18:59	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		01/20/16 18:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		01/20/16 18:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/20/16 18:59	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/20/16 18:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		01/20/16 18:59	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		01/20/16 18:59	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/20/16 18:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/20/16 18:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/20/16 18:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/20/16 18:59	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		01/20/16 18:59	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/20/16 18:59	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/20/16 18:59	179601-23-1	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 **Lab ID: 92282945004** Collected: 01/13/16 16:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
o-Xylene	ND	ug/L	1.0	0.23	1		01/20/16 18:59	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		01/20/16 18:59	460-00-4	p2
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		01/20/16 18:59	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		01/20/16 18:59	2037-26-5	
Tentatively Identified Compounds									
Unknown	**80.6**	ug/L			1		01/20/16 18:59		N
Unknown	**258**	ug/L			1		01/20/16 18:59		N
Sulfur dioxide	**7.2**	ug/L			1		01/20/16 18:59	7446-09-5	N
Cyclotetrasiloxane, octa	**152**	ug/L			1		01/20/16 18:59	556-67-2	N
Unknown	**93.7**	ug/L			1		01/20/16 18:59		N
Unknown	**11.8**	ug/L			1		01/20/16 18:59		N
8315 WTP HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	**628**	ug/L	250	125	1	01/15/16 14:30	01/17/16 21:34	50-00-0	N2
9040 pH	Analytical Method: EPA 9040								
pH	**7.8**	Std. Units	0.10	0.10	1		01/17/16 14:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**1.1**	mg/L	0.50	0.25	1		01/18/16 14:34	16984-48-8	
Sulfate	**61.4**	mg/L	10.0	5.0	5		01/18/16 18:56	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**281**	mg/L	5.0	2.5	50		01/18/16 06:30	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.14**	mg/L	0.020	0.010	1		01/15/16 09:16		
Nitrogen, Nitrite	**0.012J**	mg/L	0.020	0.010	1		01/15/16 09:16		
Nitrogen, NO2 plus NO3	**0.14**	mg/L	0.020	0.010	1		01/15/16 09:16		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**5.6**	mg/L	0.10	0.050	2		01/20/16 15:47	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**37.5**	mg/L	1.0	0.50	1		01/20/16 19:28	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0080	0.0040	1		01/16/16 15:20	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	**1.3**	mg/L	0.25	0.12	5		01/15/16 01:20		

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 DUP **Lab ID: 92282945005** Collected: 01/13/16 16:10 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 17:26	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:26	1024-57-3	
Methoxychlor	ND	ug/L	0.15	0.15	1	01/19/16 13:00	01/21/16 17:26	72-43-5	
Toxaphene	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 17:26	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	71	%	20-130		1	01/19/16 13:00	01/21/16 17:26	877-09-8	
Decachlorobiphenyl (S)	32	%	20-130		1	01/19/16 13:00	01/21/16 17:26	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**74000**	ug/L	500	250	5	01/15/16 18:00	01/20/16 13:44	7429-90-5	
Antimony	ND	ug/L	25.0	19.4	5	01/15/16 18:00	01/20/16 13:44	7440-36-0	
Arsenic	**104**	ug/L	50.0	25.0	5	01/15/16 18:00	01/20/16 13:44	7440-38-2	
Barium	**207**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:44	7440-39-3	
Beryllium	**19.6**	ug/L	5.0	2.5	5	01/15/16 18:00	01/20/16 13:44	7440-41-7	
Cadmium	ND	ug/L	5.0	2.5	5	01/15/16 18:00	01/20/16 13:44	7440-43-9	
Calcium	**19400**	ug/L	500	250	5	01/15/16 18:00	01/20/16 13:44	7440-70-2	
Chromium	**160**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:44	7440-47-3	
Cobalt	**63.8**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:44	7440-48-4	
Copper	**76.6**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:44	7440-50-8	
Iron	**480000**	ug/L	250	125	5	01/15/16 18:00	01/20/16 13:44	7439-89-6	
Lead	**118**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:44	7439-92-1	
Magnesium	**5410**	ug/L	500	250	5	01/15/16 18:00	01/20/16 13:44	7439-95-4	
Manganese	**870**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:44	7439-96-5	
Nickel	**34.3**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:44	7440-02-0	
Potassium	ND	ug/L	25000	12500	5	01/15/16 18:00	01/20/16 13:44	7440-09-7	
Selenium	ND	ug/L	50.0	25.0	5	01/15/16 18:00	01/20/16 13:44	7782-49-2	
Silver	ND	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:44	7440-22-4	
Sodium	**33000**	ug/L	25000	12500	5	01/15/16 18:00	01/20/16 13:44	7440-23-5	
Thallium	ND	ug/L	50.0	25.0	5	01/15/16 18:00	01/20/16 13:44	7440-28-0	
Vanadium	**478**	ug/L	25.0	12.5	5	01/15/16 18:00	01/20/16 13:44	7440-62-2	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 DUP **Lab ID: 92282945005** Collected: 01/13/16 16:10 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	**132**	ug/L	50.0	25.0	5	01/15/16 18:00	01/20/16 13:44	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	**0.72**	ug/L	0.20	0.10	1	01/18/16 13:00	01/25/16 14:17	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	01/15/16 01:00	01/20/16 18:04	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 18:04	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	01/15/16 01:00	01/20/16 18:04	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	01/15/16 01:00	01/20/16 18:04	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 18:04	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	01/15/16 01:00	01/20/16 18:04	100-52-7	L2
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	01/15/16 01:00	01/20/16 18:04	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	01/15/16 01:00	01/20/16 18:04	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 18:04	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	01/15/16 01:00	01/20/16 18:04	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	01/15/16 01:00	01/20/16 18:04	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 18:04	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 18:04	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	01/15/16 01:00	01/20/16 18:04	85-68-7	
Caprolactam	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 18:04	105-60-2	
Carbazole	ND	ug/L	10.0	0.73	1	01/15/16 01:00	01/20/16 18:04	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	01/15/16 01:00	01/20/16 18:04	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	01/15/16 01:00	01/20/16 18:04	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 18:04	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 18:04	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 18:04	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 18:04	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 18:04	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 18:04	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	01/15/16 01:00	01/20/16 18:04	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 18:04	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	01/15/16 01:00	01/20/16 18:04	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 18:04	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 18:04	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 18:04	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 18:04	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 18:04	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 18:04	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	01/15/16 01:00	01/20/16 18:04	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	01/15/16 01:00	01/20/16 18:04	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 18:04	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	01/15/16 01:00	01/20/16 18:04	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	01/15/16 01:00	01/20/16 18:04	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 18:04	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 18:04	86-73-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 DUP **Lab ID: 92282945005** Collected: 01/13/16 16:10 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 18:04	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 18:04	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 18:04	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 18:04	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	01/15/16 01:00	01/20/16 18:04	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 18:04	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 18:04	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 18:04	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 18:04		
Naphthalene	ND	ug/L	10.0	0.34	1	01/15/16 01:00	01/20/16 18:04	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	01/15/16 01:00	01/20/16 18:04	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	01/15/16 01:00	01/20/16 18:04	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	01/15/16 01:00	01/20/16 18:04	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 18:04	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 18:04	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	01/15/16 01:00	01/20/16 18:04	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 18:04	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 18:04	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	01/15/16 01:00	01/20/16 18:04	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	01/15/16 01:00	01/20/16 18:04	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	01/15/16 01:00	01/20/16 18:04	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 18:04	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	01/15/16 01:00	01/20/16 18:04	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 18:04	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	01/15/16 01:00	01/20/16 18:04	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 18:04	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 18:04	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	51	%	21-110		1	01/15/16 01:00	01/20/16 18:04	4165-60-0	
2-Fluorobiphenyl (S)	46	%	27-110		1	01/15/16 01:00	01/20/16 18:04	321-60-8	
Terphenyl-d14 (S)	45	%	31-107		1	01/15/16 01:00	01/20/16 18:04	1718-51-0	
Phenol-d6 (S)	24	%	10-110		1	01/15/16 01:00	01/20/16 18:04	13127-88-3	
2-Fluorophenol (S)	32	%	12-110		1	01/15/16 01:00	01/20/16 18:04	367-12-4	
2,4,6-Tribromophenol (S)	51	%	27-110		1	01/15/16 01:00	01/20/16 18:04	118-79-6	
Tentatively Identified Compounds									
Unknown	**8.8**	ug/L			1	01/15/16 01:00	01/20/16 18:04		N
Unknown	**99.3**	ug/L			1	01/15/16 01:00	01/20/16 18:04		N
Unknown	**16.1**	ug/L			1	01/15/16 01:00	01/20/16 18:04		N
1,3,5-Trithiane	**11.5**	ug/L			1	01/15/16 01:00	01/20/16 18:04	291-21-4	N
1,4-Benzenediamine, N,N-	**27.7**	ug/L			1	01/15/16 01:00	01/20/16 18:04	93-05-0	N
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		01/20/16 19:16	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		01/20/16 19:16	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		01/20/16 19:16	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/20/16 19:16	75-27-4	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 DUP **Lab ID: 92282945005** Collected: 01/13/16 16:10 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Bromoform	ND	ug/L	1.0	0.26	1		01/20/16 19:16	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		01/20/16 19:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		01/20/16 19:16	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		01/20/16 19:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/20/16 19:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		01/20/16 19:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		01/20/16 19:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		01/20/16 19:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/20/16 19:16	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		01/20/16 19:16	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		01/20/16 19:16	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		01/20/16 19:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/20/16 19:16	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		01/20/16 19:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		01/20/16 19:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/20/16 19:16	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		01/20/16 19:16	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		01/20/16 19:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		01/20/16 19:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/20/16 19:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/20/16 19:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/20/16 19:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/20/16 19:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/20/16 19:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/20/16 19:16	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		01/20/16 19:16	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/20/16 19:16	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		01/20/16 19:16	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		01/20/16 19:16	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		01/20/16 19:16	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		01/20/16 19:16	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		01/20/16 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		01/20/16 19:16	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/20/16 19:16	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		01/20/16 19:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		01/20/16 19:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/20/16 19:16	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/20/16 19:16	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		01/20/16 19:16	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		01/20/16 19:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/20/16 19:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/20/16 19:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/20/16 19:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/20/16 19:16	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		01/20/16 19:16	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/20/16 19:16	75-01-4	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 DUP **Lab ID: 92282945005** Collected: 01/13/16 16:10 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/20/16 19:16	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/20/16 19:16	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		01/20/16 19:16	460-00-4	p2
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		01/20/16 19:16	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		01/20/16 19:16	2037-26-5	
Tentatively Identified Compounds									
Unknown	**76.6**	ug/L			1		01/20/16 19:16		N
Unknown	**181**	ug/L			1		01/20/16 19:16		N
Cyclotetrasiloxane, octa	**44.0**	ug/L			1		01/20/16 19:16	556-67-2	N
Unknown	**23.4**	ug/L			1		01/20/16 19:16		N
8315 WTP HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	**692**	ug/L	250	125	1	01/15/16 14:30	01/17/16 21:54	50-00-0	N2
9040 pH	Analytical Method: EPA 9040								
pH	**7.8**	Std. Units	0.10	0.10	1		01/17/16 14:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**1.0**	mg/L	0.50	0.25	1		01/18/16 14:54	16984-48-8	
Sulfate	**61.3**	mg/L	10.0	5.0	5		01/18/16 19:15	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**296**	mg/L	5.0	2.5	50		01/18/16 06:33	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.021**	mg/L	0.020	0.010	1		01/15/16 09:17		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		01/15/16 09:17		
Nitrogen, NO2 plus NO3	**0.021**	mg/L	0.020	0.010	1		01/15/16 09:17		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**15.6**	mg/L	0.25	0.12	5		01/20/16 15:48	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**34.9**	mg/L	1.0	0.50	1		01/20/16 19:29	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	**0.012**	mg/L	0.0080	0.0040	1		01/16/16 15:21	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	**4.5**	mg/L	1.2	0.62	25		01/15/16 01:20		

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB rinse blank **Lab ID: 92282945006** Collected: 01/13/16 16:50 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 17:44	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	01/19/16 13:00	01/21/16 17:44	1024-57-3	
Methoxychlor	ND	ug/L	0.15	0.15	1	01/19/16 13:00	01/21/16 17:44	72-43-5	
Toxaphene	ND	ug/L	0.20	0.20	1	01/19/16 13:00	01/21/16 17:44	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	85	%	20-130		1	01/19/16 13:00	01/21/16 17:44	877-09-8	
Decachlorobiphenyl (S)	49	%	20-130		1	01/19/16 13:00	01/21/16 17:44	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	ND	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 03:03	7429-90-5	
Antimony	ND	ug/L	5.0	3.9	1	01/15/16 18:00	01/20/16 03:03	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 03:03	7440-38-2	
Barium	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:03	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	01/15/16 18:00	01/20/16 03:03	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	01/15/16 18:00	01/20/16 03:03	7440-43-9	
Calcium	ND	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 03:03	7440-70-2	
Chromium	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:03	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:03	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:03	7440-50-8	
Iron	**34.6J**	ug/L	50.0	25.0	1	01/15/16 18:00	01/20/16 03:03	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:03	7439-92-1	
Magnesium	ND	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 03:03	7439-95-4	
Manganese	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:03	7439-96-5	
Nickel	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:03	7440-02-0	
Potassium	ND	ug/L	5000	2500	1	01/15/16 18:00	01/20/16 03:03	7440-09-7	
Selenium	ND	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 03:03	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:03	7440-22-4	
Sodium	ND	ug/L	5000	2500	1	01/15/16 18:00	01/20/16 03:03	7440-23-5	
Thallium	ND	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 03:03	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:03	7440-62-2	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB rinse blank **Lab ID: 92282945006** Collected: 01/13/16 16:50 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	ND	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 03:03	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	ND	ug/L	0.20	0.10	1	01/18/16 13:00	01/25/16 14:19	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	01/15/16 01:00	01/21/16 14:26	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/21/16 14:26	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	01/15/16 01:00	01/21/16 14:26	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	01/15/16 01:00	01/21/16 14:26	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/21/16 14:26	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	01/15/16 01:00	01/21/16 14:26	100-52-7	L2
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	01/15/16 01:00	01/21/16 14:26	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	01/15/16 01:00	01/21/16 14:26	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/21/16 14:26	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	01/15/16 01:00	01/21/16 14:26	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	01/15/16 01:00	01/21/16 14:26	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/21/16 14:26	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/21/16 14:26	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	01/15/16 01:00	01/21/16 14:26	85-68-7	
Caprolactam	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/21/16 14:26	105-60-2	
Carbazole	ND	ug/L	10.0	0.73	1	01/15/16 01:00	01/21/16 14:26	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	01/15/16 01:00	01/21/16 14:26	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	01/15/16 01:00	01/21/16 14:26	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/21/16 14:26	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/21/16 14:26	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/21/16 14:26	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/21/16 14:26	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/21/16 14:26	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/21/16 14:26	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	01/15/16 01:00	01/21/16 14:26	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/21/16 14:26	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	01/15/16 01:00	01/21/16 14:26	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/21/16 14:26	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/21/16 14:26	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/21/16 14:26	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/21/16 14:26	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/21/16 14:26	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/21/16 14:26	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	01/15/16 01:00	01/21/16 14:26	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	01/15/16 01:00	01/21/16 14:26	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/21/16 14:26	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	01/15/16 01:00	01/21/16 14:26	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	01/15/16 01:00	01/21/16 14:26	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/21/16 14:26	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/21/16 14:26	86-73-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB rinse blank **Lab ID: 92282945006** Collected: 01/13/16 16:50 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/21/16 14:26	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/21/16 14:26	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/21/16 14:26	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/21/16 14:26	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	01/15/16 01:00	01/21/16 14:26	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/21/16 14:26	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/21/16 14:26	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/21/16 14:26	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/21/16 14:26		
Naphthalene	ND	ug/L	10.0	0.34	1	01/15/16 01:00	01/21/16 14:26	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	01/15/16 01:00	01/21/16 14:26	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	01/15/16 01:00	01/21/16 14:26	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	01/15/16 01:00	01/21/16 14:26	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/21/16 14:26	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/21/16 14:26	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	01/15/16 01:00	01/21/16 14:26	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/21/16 14:26	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/21/16 14:26	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	01/15/16 01:00	01/21/16 14:26	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	01/15/16 01:00	01/21/16 14:26	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	01/15/16 01:00	01/21/16 14:26	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/21/16 14:26	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	01/15/16 01:00	01/21/16 14:26	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/21/16 14:26	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	01/15/16 01:00	01/21/16 14:26	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/21/16 14:26	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/21/16 14:26	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	74	%	21-110		1	01/15/16 01:00	01/21/16 14:26	4165-60-0	
2-Fluorobiphenyl (S)	79	%	27-110		1	01/15/16 01:00	01/21/16 14:26	321-60-8	
Terphenyl-d14 (S)	99	%	31-107		1	01/15/16 01:00	01/21/16 14:26	1718-51-0	
Phenol-d6 (S)	27	%	10-110		1	01/15/16 01:00	01/21/16 14:26	13127-88-3	
2-Fluorophenol (S)	41	%	12-110		1	01/15/16 01:00	01/21/16 14:26	367-12-4	
2,4,6-Tribromophenol (S)	85	%	27-110		1	01/15/16 01:00	01/21/16 14:26	118-79-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		01/15/16 04:09	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		01/15/16 04:09	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		01/15/16 04:09	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/15/16 04:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		01/15/16 04:09	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		01/15/16 04:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		01/15/16 04:09	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		01/15/16 04:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/15/16 04:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		01/15/16 04:09	108-90-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB rinse blank **Lab ID: 92282945006** Collected: 01/13/16 16:50 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Chloroethane	ND	ug/L	1.0	0.54	1		01/15/16 04:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		01/15/16 04:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/15/16 04:09	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		01/15/16 04:09	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		01/15/16 04:09	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		01/15/16 04:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/15/16 04:09	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		01/15/16 04:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		01/15/16 04:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/15/16 04:09	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		01/15/16 04:09	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		01/15/16 04:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		01/15/16 04:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/16 04:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/16 04:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/16 04:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/15/16 04:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/15/16 04:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/15/16 04:09	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		01/15/16 04:09	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/15/16 04:09	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		01/15/16 04:09	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		01/15/16 04:09	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		01/15/16 04:09	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		01/15/16 04:09	108-87-2	
Methylene Chloride	**1.5J**	ug/L	2.0	0.97	1		01/15/16 04:09	75-09-2	C9
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		01/15/16 04:09	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/15/16 04:09	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		01/15/16 04:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		01/15/16 04:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/16 04:09	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/16 04:09	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		01/15/16 04:09	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		01/15/16 04:09	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/16 04:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/15/16 04:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/16 04:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/15/16 04:09	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		01/15/16 04:09	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/16 04:09	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/15/16 04:09	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/15/16 04:09	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/15/16 04:09	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		01/15/16 04:09	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		01/15/16 04:09	2037-26-5	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB rinse blank **Lab ID: 92282945006** Collected: 01/13/16 16:50 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Tentatively Identified Compounds									
Unknown	**11.0**	ug/L			1		01/15/16 04:09		N
Cyclotetrasiloxane, octa	**222**	ug/L			1		01/15/16 04:09	556-67-2	N
Unknown	**140**	ug/L			1		01/15/16 04:09		N
Unknown	**25.5**	ug/L			1		01/15/16 04:09		N
8315 WTP HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	ND	ug/L	50.0	25.0	1	01/15/16 14:30	01/17/16 22:14	50-00-0	N2
9040 pH	Analytical Method: EPA 9040								
pH	**6.3**	Std. Units	0.10	0.10	1		01/17/16 14:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.50	0.25	1		01/18/16 15:13	16984-48-8	
Sulfate	ND	mg/L	2.0	1.0	1		01/18/16 15:13	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.10	0.050	1		01/18/16 06:35	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.045**	mg/L	0.020	0.010	1		01/15/16 09:18		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		01/15/16 09:18		
Nitrogen, NO2 plus NO3	**0.045**	mg/L	0.020	0.010	1		01/15/16 09:18		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	ND	mg/L	0.050	0.025	1		01/20/16 14:06	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	ND	mg/L	1.0	0.50	1		01/20/16 19:29	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0080	0.0040	1		01/16/16 15:22	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	ND	mg/L	0.050	0.025	1		01/15/16 01:20		

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: LS-1 **Lab ID: 92282945007** Collected: 01/13/16 10:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	309-00-2	
alpha-BHC	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	319-84-6	
beta-BHC	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	319-85-7	
delta-BHC	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	58-89-9	
Chlordane (Technical)	ND	ug/L	2.0	2.0	10	01/19/16 13:00	01/24/16 17:35	57-74-9	
4,4'-DDD	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	72-54-8	
4,4'-DDE	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	72-55-9	
4,4'-DDT	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	50-29-3	
Dieldrin	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	60-57-1	
Endosulfan I	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	959-98-8	
Endosulfan II	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	1031-07-8	
Endrin	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	72-20-8	
Endrin aldehyde	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	7421-93-4	
Endrin ketone	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	53494-70-5	
Heptachlor	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	76-44-8	
Heptachlor epoxide	ND	ug/L	0.50	0.50	10	01/19/16 13:00	01/24/16 17:35	1024-57-3	
Methoxychlor	ND	ug/L	1.5	1.5	10	01/19/16 13:00	01/24/16 17:35	72-43-5	
Toxaphene	ND	ug/L	2.0	2.0	10	01/19/16 13:00	01/24/16 17:35	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	0	%	20-130		10	01/19/16 13:00	01/24/16 17:35	877-09-8	D3,S4
Decachlorobiphenyl (S)	0	%	20-130		10	01/19/16 13:00	01/24/16 17:35	2051-24-3	D3,S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**372**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 03:06	7429-90-5	
Antimony	**11.7**	ug/L	5.0	3.9	1	01/15/16 18:00	01/20/16 03:06	7440-36-0	
Arsenic	**379**	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 03:06	7440-38-2	
Barium	**7.9**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:06	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	01/15/16 18:00	01/20/16 03:06	7440-41-7	
Cadmium	**2.7**	ug/L	1.0	0.50	1	01/15/16 18:00	01/20/16 03:06	7440-43-9	
Calcium	**13700**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 03:06	7440-70-2	
Chromium	**25.1**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:06	7440-47-3	
Cobalt	**45.2**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:06	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:06	7440-50-8	
Iron	**452**	ug/L	50.0	25.0	1	01/15/16 18:00	01/20/16 03:06	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:06	7439-92-1	
Magnesium	**2280**	ug/L	100	50.0	1	01/15/16 18:00	01/20/16 03:06	7439-95-4	
Manganese	**88.1**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:06	7439-96-5	
Nickel	**39.4**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:06	7440-02-0	
Potassium	**36700**	ug/L	5000	2500	1	01/15/16 18:00	01/20/16 03:06	7440-09-7	
Selenium	ND	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 03:06	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:06	7440-22-4	
Sodium	**142000**	ug/L	25000	12500	5	01/15/16 18:00	01/20/16 13:47	7440-23-5	
Thallium	ND	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 03:06	7440-28-0	
Vanadium	**40.6**	ug/L	5.0	2.5	1	01/15/16 18:00	01/20/16 03:06	7440-62-2	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: LS-1 **Lab ID: 92282945007** Collected: 01/13/16 10:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	**5.6J**	ug/L	10.0	5.0	1	01/15/16 18:00	01/20/16 03:06	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	ND	ug/L	0.20	0.10	1	01/18/16 13:00	01/25/16 14:26	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	01/15/16 01:00	01/20/16 19:00	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 19:00	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	01/15/16 01:00	01/20/16 19:00	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	01/15/16 01:00	01/20/16 19:00	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 19:00	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	01/15/16 01:00	01/20/16 19:00	100-52-7	L2
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	01/15/16 01:00	01/20/16 19:00	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	01/15/16 01:00	01/20/16 19:00	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 19:00	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	01/15/16 01:00	01/20/16 19:00	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	01/15/16 01:00	01/20/16 19:00	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 19:00	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 19:00	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	01/15/16 01:00	01/20/16 19:00	85-68-7	
Caprolactam	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 19:00	105-60-2	
Carbazole	ND	ug/L	10.0	0.73	1	01/15/16 01:00	01/20/16 19:00	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	01/15/16 01:00	01/20/16 19:00	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	01/15/16 01:00	01/20/16 19:00	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 19:00	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 19:00	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 19:00	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 19:00	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 19:00	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 19:00	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	01/15/16 01:00	01/20/16 19:00	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 19:00	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	01/15/16 01:00	01/20/16 19:00	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 19:00	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 19:00	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 19:00	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 19:00	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 19:00	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	01/15/16 01:00	01/20/16 19:00	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	01/15/16 01:00	01/20/16 19:00	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	01/15/16 01:00	01/20/16 19:00	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 19:00	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	01/15/16 01:00	01/20/16 19:00	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	01/15/16 01:00	01/20/16 19:00	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 19:00	206-44-0	
Fluorene	**1.0J**	ug/L	10.0	0.21	1	01/15/16 01:00	01/20/16 19:00	86-73-7	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: LS-1 **Lab ID: 92282945007** Collected: 01/13/16 10:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 19:00	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	01/15/16 01:00	01/20/16 19:00	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 19:00	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	01/15/16 01:00	01/20/16 19:00	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	01/15/16 01:00	01/20/16 19:00	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	01/15/16 01:00	01/20/16 19:00	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	01/15/16 01:00	01/20/16 19:00	91-57-6	
2-Methylphenol(o-Cresol)	**18.4**	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 19:00	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 19:00		
Naphthalene	ND	ug/L	10.0	0.34	1	01/15/16 01:00	01/20/16 19:00	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	01/15/16 01:00	01/20/16 19:00	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	01/15/16 01:00	01/20/16 19:00	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	01/15/16 01:00	01/20/16 19:00	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 19:00	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 19:00	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	01/15/16 01:00	01/20/16 19:00	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	01/15/16 01:00	01/20/16 19:00	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	01/15/16 01:00	01/20/16 19:00	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	01/15/16 01:00	01/20/16 19:00	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	01/15/16 01:00	01/20/16 19:00	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	01/15/16 01:00	01/20/16 19:00	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 19:00	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	01/15/16 01:00	01/20/16 19:00	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	01/15/16 01:00	01/20/16 19:00	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	01/15/16 01:00	01/20/16 19:00	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	01/15/16 01:00	01/20/16 19:00	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	01/15/16 01:00	01/20/16 19:00	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	71	%	21-110		1	01/15/16 01:00	01/20/16 19:00	4165-60-0	
2-Fluorobiphenyl (S)	59	%	27-110		1	01/15/16 01:00	01/20/16 19:00	321-60-8	
Terphenyl-d14 (S)	58	%	31-107		1	01/15/16 01:00	01/20/16 19:00	1718-51-0	
Phenol-d6 (S)	57	%	10-110		1	01/15/16 01:00	01/20/16 19:00	13127-88-3	
2-Fluorophenol (S)	53	%	12-110		1	01/15/16 01:00	01/20/16 19:00	367-12-4	
2,4,6-Tribromophenol (S)	73	%	27-110		1	01/15/16 01:00	01/20/16 19:00	118-79-6	
Tentatively Identified Compounds									
Unknown	**455**	ug/L			1	01/15/16 01:00	01/20/16 19:00		N
Unknown	**78.4**	ug/L			1	01/15/16 01:00	01/20/16 19:00		N
Unknown	**91.8**	ug/L			1	01/15/16 01:00	01/20/16 19:00		N
Unknown	**502**	ug/L			1	01/15/16 01:00	01/20/16 19:00		N
Unknown	**242**	ug/L			1	01/15/16 01:00	01/20/16 19:00		N
Unknown	**101**	ug/L			1	01/15/16 01:00	01/20/16 19:00		N
Unknown	**206**	ug/L			1	01/15/16 01:00	01/20/16 19:00		N
1,3,5-Trithiane	**691**	ug/L			1	01/15/16 01:00	01/20/16 19:00	291-21-4	N
Unknown	**166**	ug/L			1	01/15/16 01:00	01/20/16 19:00		N
Unknown	**51.0**	ug/L			1	01/15/16 01:00	01/20/16 19:00		N

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: LS-1 **Lab ID: 92282945007** Collected: 01/13/16 10:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	**10.1J**	ug/L	25.0	10.0	1		01/20/16 19:33	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		01/20/16 19:33	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		01/20/16 19:33	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/20/16 19:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		01/20/16 19:33	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		01/20/16 19:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		01/20/16 19:33	78-93-3	
Carbon disulfide	**1.5J**	ug/L	2.0	1.2	1		01/20/16 19:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/20/16 19:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		01/20/16 19:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		01/20/16 19:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		01/20/16 19:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/20/16 19:33	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		01/20/16 19:33	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		01/20/16 19:33	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		01/20/16 19:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/20/16 19:33	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		01/20/16 19:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		01/20/16 19:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/20/16 19:33	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		01/20/16 19:33	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		01/20/16 19:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		01/20/16 19:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/20/16 19:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/20/16 19:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/20/16 19:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/20/16 19:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/20/16 19:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/20/16 19:33	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		01/20/16 19:33	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/20/16 19:33	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		01/20/16 19:33	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		01/20/16 19:33	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		01/20/16 19:33	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		01/20/16 19:33	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		01/20/16 19:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		01/20/16 19:33	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/20/16 19:33	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		01/20/16 19:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		01/20/16 19:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/20/16 19:33	127-18-4	
Toluene	**1.6**	ug/L	1.0	0.26	1		01/20/16 19:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		01/20/16 19:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		01/20/16 19:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/20/16 19:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/20/16 19:33	79-00-5	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: LS-1 **Lab ID: 92282945007** Collected: 01/13/16 10:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	ND	ug/L	1.0	0.47	1		01/20/16 19:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/20/16 19:33	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		01/20/16 19:33	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/20/16 19:33	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/20/16 19:33	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/20/16 19:33	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		01/20/16 19:33	460-00-4	p2
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		01/20/16 19:33	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		01/20/16 19:33	2037-26-5	
Tentatively Identified Compounds									
Unknown	**4200**	ug/L			1		01/20/16 19:33		N
Unknown Aldol Condensate	**136**	ug/L			1		01/20/16 19:33		N
Unknown Alcohol	**9.5**	ug/L			1		01/20/16 19:33		N
3-Pentanone, 2-methyl-	**5.6**	ug/L			1		01/20/16 19:33	565-69-5	N
Cyclotetrasiloxane, octa	**198**	ug/L			1		01/20/16 19:33	556-67-2	N
Unknown	**93.9**	ug/L			1		01/20/16 19:33		N
Unknown	**11.2**	ug/L			1		01/20/16 19:33		N
8315 WTP HPLC	Analytical Method: EPA 8315 Preparation Method: EPA 8315								
Formaldehyde	**39.7J**	ug/L	50.0	25.0	1	01/15/16 14:30	01/17/16 22:34	50-00-0	N2
9040 pH	Analytical Method: EPA 9040								
pH	**8.0**	Std. Units	0.10	0.10	1		01/17/16 14:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**3.9J**	mg/L	5.0	2.5	10		01/19/16 09:45	16984-48-8	D3
Sulfate	**19.8J**	mg/L	20.0	10.0	10		01/19/16 09:45	14808-79-8	D3
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**2510**	mg/L	50.0	25.0	500		01/18/16 06:38	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.020	0.010	1		01/15/16 09:11		
Nitrogen, Nitrite	**0.093**	mg/L	0.020	0.010	1		01/15/16 09:11		
Nitrogen, NO2 plus NO3	**0.010J**	mg/L	0.020	0.010	1		01/15/16 09:11		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**88.3**	mg/L	2.5	1.2	50		01/20/16 15:48	7723-14-0	M6
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**141**	mg/L	5.0	2.5	5		01/20/16 19:37	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	**0.011**	mg/L	0.0080	0.0040	1		01/16/16 15:23	57-12-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: LS-1 **Lab ID: 92282945007** Collected: 01/13/16 10:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	**102**	mg/L	12.5	6.2	250		01/15/16 01:20		

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: trip blank **Lab ID: 92282945008** Collected: 01/13/16 00:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		01/15/16 03:52	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		01/15/16 03:52	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		01/15/16 03:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/15/16 03:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		01/15/16 03:52	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		01/15/16 03:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		01/15/16 03:52	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		01/15/16 03:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/15/16 03:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		01/15/16 03:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		01/15/16 03:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		01/15/16 03:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/15/16 03:52	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		01/15/16 03:52	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		01/15/16 03:52	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		01/15/16 03:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/15/16 03:52	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		01/15/16 03:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		01/15/16 03:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/15/16 03:52	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		01/15/16 03:52	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		01/15/16 03:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		01/15/16 03:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/16 03:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/16 03:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/16 03:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/15/16 03:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/15/16 03:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/15/16 03:52	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		01/15/16 03:52	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/15/16 03:52	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		01/15/16 03:52	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		01/15/16 03:52	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		01/15/16 03:52	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		01/15/16 03:52	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		01/15/16 03:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		01/15/16 03:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/15/16 03:52	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		01/15/16 03:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		01/15/16 03:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/16 03:52	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/16 03:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		01/15/16 03:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		01/15/16 03:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/16 03:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/15/16 03:52	79-00-5	

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ANALYTICAL RESULTS

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: trip blank **Lab ID: 92282945008** Collected: 01/13/16 00:00 Received: 01/13/16 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/16 03:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/15/16 03:52	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		01/15/16 03:52	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/16 03:52	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/15/16 03:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/15/16 03:52	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/15/16 03:52	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		01/15/16 03:52	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		01/15/16 03:52	2037-26-5	
Tentatively Identified Compounds									
Unknown	**12.4**	ug/L			1		01/15/16 03:52		N
Cyclotetrasiloxane, octa	**237**	ug/L			1		01/15/16 03:52	556-67-2	N
Unknown	**145**	ug/L			1		01/15/16 03:52		N
Unknown	**26.5**	ug/L			1		01/15/16 03:52		N

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: MERP/8870 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1648997 Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.10	01/25/16 13:58	

LABORATORY CONTROL SAMPLE: 1648998

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.7	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1648999 1649000

Parameter	Units	92282945001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	0.12J	2.5	2.5	2.6	2.7	101	104	75-125	3	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: MPRP/20486 Analysis Method: EPA 6010
QC Batch Method: EPA 3010A Analysis Description: 6010 MET
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1648314 Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	50.0	01/20/16 02:27	
Antimony	ug/L	ND	5.0	3.9	01/20/16 02:27	
Arsenic	ug/L	ND	10.0	5.0	01/20/16 02:27	
Barium	ug/L	ND	5.0	2.5	01/20/16 02:27	
Beryllium	ug/L	ND	1.0	0.50	01/20/16 02:27	
Cadmium	ug/L	ND	1.0	0.50	01/20/16 02:27	
Calcium	ug/L	ND	100	50.0	01/20/16 02:27	
Chromium	ug/L	ND	5.0	2.5	01/20/16 02:27	
Cobalt	ug/L	ND	5.0	2.5	01/20/16 02:27	
Copper	ug/L	ND	5.0	2.5	01/20/16 02:27	
Iron	ug/L	ND	50.0	25.0	01/20/16 02:27	
Lead	ug/L	ND	5.0	2.5	01/20/16 02:27	
Magnesium	ug/L	ND	100	50.0	01/20/16 02:27	
Manganese	ug/L	ND	5.0	2.5	01/20/16 02:27	
Nickel	ug/L	ND	5.0	2.5	01/20/16 02:27	
Potassium	ug/L	ND	5000	2500	01/20/16 02:27	
Selenium	ug/L	ND	10.0	5.0	01/20/16 02:27	
Silver	ug/L	ND	5.0	2.5	01/20/16 02:27	
Sodium	ug/L	ND	5000	2500	01/20/16 02:27	
Thallium	ug/L	ND	10.0	5.0	01/20/16 02:27	
Vanadium	ug/L	ND	5.0	2.5	01/20/16 02:27	
Zinc	ug/L	ND	10.0	5.0	01/20/16 02:27	

LABORATORY CONTROL SAMPLE: 1648315

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	4800	96	80-120	
Antimony	ug/L	500	525	105	80-120	
Arsenic	ug/L	500	517	103	80-120	
Barium	ug/L	500	516	103	80-120	
Beryllium	ug/L	500	506	101	80-120	
Cadmium	ug/L	500	523	105	80-120	
Calcium	ug/L	5000	4710	94	80-120	
Chromium	ug/L	500	506	101	80-120	
Cobalt	ug/L	500	518	104	80-120	
Copper	ug/L	500	525	105	80-120	
Iron	ug/L	5000	4800	96	80-120	
Lead	ug/L	500	516	103	80-120	
Magnesium	ug/L	5000	4740	95	80-120	
Manganese	ug/L	500	502	100	80-120	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

LABORATORY CONTROL SAMPLE: 1648315

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel	ug/L	500	519	104	80-120	
Potassium	ug/L	5000	4980J	100	80-120	
Selenium	ug/L	500	521	104	80-120	
Silver	ug/L	250	255	102	80-120	
Sodium	ug/L	5000	4970J	99	80-120	
Thallium	ug/L	500	524	105	80-120	
Vanadium	ug/L	500	510	102	80-120	
Zinc	ug/L	500	509	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1648316 1648317

Parameter	Units	92282945001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	18600	5000	5000	45300	46000	535	548	75-125	1	20	M1
Antimony	ug/L	ND	500	500	356	346	71	69	75-125	3	20	M1
Arsenic	ug/L	10.4	500	500	447	437	87	85	75-125	2	20	
Barium	ug/L	116	500	500	573	561	92	89	75-125	2	20	
Beryllium	ug/L	0.89J	500	500	438	427	87	85	75-125	2	20	
Cadmium	ug/L	ND	500	500	448	439	89	88	75-125	2	20	
Calcium	ug/L	7940	5000	5000	12100	11700	84	76	75-125	3	20	
Chromium	ug/L	27.2	500	500	493	485	93	92	75-125	2	20	
Cobalt	ug/L	19.0	500	500	461	452	88	87	75-125	2	20	
Copper	ug/L	12.2	500	500	477	468	93	91	75-125	2	20	
Iron	ug/L	13400	5000	5000	25100	25500	236	244	75-125	2	20	M1
Lead	ug/L	13.8	500	500	451	444	87	86	75-125	2	20	
Magnesium	ug/L	1450	5000	5000	5820	5700	87	85	75-125	2	20	
Manganese	ug/L	589	500	500	1060	1030	93	88	75-125	3	20	
Nickel	ug/L	4.4J	500	500	441	433	87	86	75-125	2	20	
Potassium	ug/L	6940	5000	5000	11700	11400	95	89	75-125	3	20	
Selenium	ug/L	ND	500	500	444	438	89	87	75-125	1	20	
Silver	ug/L	ND	250	250	220	219	88	87	75-125	1	20	
Sodium	ug/L	13500	5000	5000	18000	17400	90	79	75-125	3	20	
Thallium	ug/L	8.5J	500	500	442	446	87	88	75-125	1	20	
Vanadium	ug/L	55.6	500	500	528	520	95	93	75-125	2	20	
Zinc	ug/L	18.5	500	500	459	450	88	86	75-125	2	20	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: MSV/35183 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92282945006, 92282945008

METHOD BLANK: 1647658 | Matrix: Water
Associated Lab Samples: 92282945006, 92282945008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	01/15/16 02:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	01/15/16 02:26	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	01/15/16 02:26	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	01/15/16 02:26	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	01/15/16 02:26	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	01/15/16 02:26	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	01/15/16 02:26	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	01/15/16 02:26	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	01/15/16 02:26	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	01/15/16 02:26	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	01/15/16 02:26	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	01/15/16 02:26	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	01/15/16 02:26	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	01/15/16 02:26	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	01/15/16 02:26	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	01/15/16 02:26	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	01/15/16 02:26	
2-Hexanone	ug/L	ND	5.0	0.46	01/15/16 02:26	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	01/15/16 02:26	
Acetone	ug/L	ND	25.0	10.0	01/15/16 02:26	
Benzene	ug/L	ND	1.0	0.25	01/15/16 02:26	
Bromochloromethane	ug/L	ND	1.0	0.17	01/15/16 02:26	
Bromodichloromethane	ug/L	ND	1.0	0.18	01/15/16 02:26	
Bromoform	ug/L	ND	1.0	0.26	01/15/16 02:26	
Bromomethane	ug/L	ND	2.0	0.29	01/15/16 02:26	
Carbon disulfide	ug/L	ND	2.0	1.2	01/15/16 02:26	
Carbon tetrachloride	ug/L	ND	1.0	0.25	01/15/16 02:26	
Chlorobenzene	ug/L	ND	1.0	0.23	01/15/16 02:26	
Chloroethane	ug/L	ND	1.0	0.54	01/15/16 02:26	
Chloroform	ug/L	ND	1.0	0.14	01/15/16 02:26	
Chloromethane	ug/L	ND	1.0	0.11	01/15/16 02:26	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	01/15/16 02:26	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	01/15/16 02:26	
Cyclohexane	ug/L	ND	1.0	0.36	01/15/16 02:26	
Dibromochloromethane	ug/L	ND	1.0	0.21	01/15/16 02:26	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	01/15/16 02:26	
Ethylbenzene	ug/L	ND	1.0	0.30	01/15/16 02:26	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	01/15/16 02:26	
m&p-Xylene	ug/L	ND	2.0	0.66	01/15/16 02:26	
Methyl acetate	ug/L	ND	10.0	0.82	01/15/16 02:26	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	01/15/16 02:26	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

METHOD BLANK: 1647658 Matrix: Water
Associated Lab Samples: 92282945006, 92282945008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	01/15/16 02:26	
Methylene Chloride	ug/L	ND	2.0	0.97	01/15/16 02:26	
o-Xylene	ug/L	ND	1.0	0.23	01/15/16 02:26	
Styrene	ug/L	ND	1.0	0.26	01/15/16 02:26	
Tetrachloroethene	ug/L	ND	1.0	0.46	01/15/16 02:26	
Toluene	ug/L	ND	1.0	0.26	01/15/16 02:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	01/15/16 02:26	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	01/15/16 02:26	
Trichloroethene	ug/L	ND	1.0	0.47	01/15/16 02:26	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	01/15/16 02:26	
Vinyl chloride	ug/L	ND	1.0	0.62	01/15/16 02:26	
1,2-Dichloroethane-d4 (S)	%	100	70-130		01/15/16 02:26	
4-Bromofluorobenzene (S)	%	106	70-130		01/15/16 02:26	
Toluene-d8 (S)	%	100	70-130		01/15/16 02:26	

LABORATORY CONTROL SAMPLE: 1647659

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.7	97	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	48.7	97	70-130	
1,1,2-Trichloroethane	ug/L	50	45.7	91	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	50.4	101	70-130	
1,1-Dichloroethane	ug/L	50	48.8	98	70-130	
1,1-Dichloroethene	ug/L	50	50.7	101	70-132	
1,2,3-Trichlorobenzene	ug/L	50	55.6	111	70-135	
1,2,4-Trichlorobenzene	ug/L	50	51.4	103	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	49.4	99	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.6	101	70-130	
1,2-Dichlorobenzene	ug/L	50	48.6	97	70-130	
1,2-Dichloroethane	ug/L	50	44.8	90	70-130	
1,2-Dichloropropane	ug/L	50	48.2	96	70-130	
1,3-Dichlorobenzene	ug/L	50	50.8	102	70-130	
1,4-Dichlorobenzene	ug/L	50	49.7	99	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	930	93	71-125	
2-Butanone (MEK)	ug/L	100	102	102	70-145	
2-Hexanone	ug/L	100	100	100	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	101	101	70-140	
Acetone	ug/L	100	109	109	50-175	
Benzene	ug/L	50	49.4	99	70-130	
Bromochloromethane	ug/L	50	49.5	99	70-130	
Bromodichloromethane	ug/L	50	47.8	96	70-130	
Bromoform	ug/L	50	44.0	88	70-130	
Bromomethane	ug/L	50	47.1	94	54-130	
Carbon disulfide	ug/L	50	51.7	103	70-131	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

LABORATORY CONTROL SAMPLE: 1647659

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	49.6	99	70-132	
Chlorobenzene	ug/L	50	48.1	96	70-130	
Chloroethane	ug/L	50	44.9	90	64-134	
Chloroform	ug/L	50	47.0	94	70-130	
Chloromethane	ug/L	50	46.8	94	64-130	
cis-1,2-Dichloroethene	ug/L	50	47.6	95	70-131	
cis-1,3-Dichloropropene	ug/L	50	49.1	98	70-130	
Cyclohexane	ug/L	50	45.8	92	70-130	
Dibromochloromethane	ug/L	50	45.8	92	70-130	
Dichlorodifluoromethane	ug/L	50	46.6	93	56-130	
Ethylbenzene	ug/L	50	48.7	97	70-130	
Isopropylbenzene (Cumene)	ug/L	50	48.8	98	70-130	
m&p-Xylene	ug/L	100	97.2	97	70-130	
Methyl acetate	ug/L	50	52.4	105	70-130	
Methyl-tert-butyl ether	ug/L	50	48.6	97	70-130	
Methylcyclohexane	ug/L	50	46.1	92	70-130	
Methylene Chloride	ug/L	50	50.8	102	63-130	
o-Xylene	ug/L	50	49.0	98	70-130	
Styrene	ug/L	50	49.4	99	70-130	
Tetrachloroethene	ug/L	50	50.0	100	70-130	
Toluene	ug/L	50	48.9	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	49.9	100	70-130	
trans-1,3-Dichloropropene	ug/L	50	49.2	98	70-132	
Trichloroethene	ug/L	50	46.7	93	70-130	
Trichlorofluoromethane	ug/L	50	50.2	100	62-133	
Vinyl chloride	ug/L	50	47.7	95	50-150	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Toluene-d8 (S)	%			99	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: MSV/35204
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92282945002

METHOD BLANK: 1648509
Matrix: Water
Associated Lab Samples: 92282945002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	01/16/16 00:32	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	01/16/16 00:32	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	01/16/16 00:32	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	01/16/16 00:32	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	01/16/16 00:32	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	01/16/16 00:32	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	01/16/16 00:32	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	01/16/16 00:32	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	01/16/16 00:32	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	01/16/16 00:32	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	01/16/16 00:32	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	01/16/16 00:32	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	01/16/16 00:32	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	01/16/16 00:32	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	01/16/16 00:32	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	01/16/16 00:32	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	01/16/16 00:32	
2-Hexanone	ug/L	ND	5.0	0.46	01/16/16 00:32	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	01/16/16 00:32	
Acetone	ug/L	ND	25.0	10.0	01/16/16 00:32	
Benzene	ug/L	ND	1.0	0.25	01/16/16 00:32	
Bromochloromethane	ug/L	ND	1.0	0.17	01/16/16 00:32	
Bromodichloromethane	ug/L	ND	1.0	0.18	01/16/16 00:32	
Bromoform	ug/L	ND	1.0	0.26	01/16/16 00:32	
Bromomethane	ug/L	ND	2.0	0.29	01/16/16 00:32	
Carbon disulfide	ug/L	ND	2.0	1.2	01/16/16 00:32	
Carbon tetrachloride	ug/L	ND	1.0	0.25	01/16/16 00:32	
Chlorobenzene	ug/L	ND	1.0	0.23	01/16/16 00:32	
Chloroethane	ug/L	ND	1.0	0.54	01/16/16 00:32	
Chloroform	ug/L	ND	1.0	0.14	01/16/16 00:32	
Chloromethane	ug/L	ND	1.0	0.11	01/16/16 00:32	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	01/16/16 00:32	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	01/16/16 00:32	
Cyclohexane	ug/L	ND	1.0	0.36	01/16/16 00:32	
Dibromochloromethane	ug/L	ND	1.0	0.21	01/16/16 00:32	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	01/16/16 00:32	
Ethylbenzene	ug/L	ND	1.0	0.30	01/16/16 00:32	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	01/16/16 00:32	
m&p-Xylene	ug/L	ND	2.0	0.66	01/16/16 00:32	
Methyl acetate	ug/L	ND	10.0	0.82	01/16/16 00:32	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	01/16/16 00:32	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

METHOD BLANK: 1648509 Matrix: Water
Associated Lab Samples: 92282945002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	01/16/16 00:32	
Methylene Chloride	ug/L	ND	2.0	0.97	01/16/16 00:32	
o-Xylene	ug/L	ND	1.0	0.23	01/16/16 00:32	
Styrene	ug/L	ND	1.0	0.26	01/16/16 00:32	
Tetrachloroethene	ug/L	ND	1.0	0.46	01/16/16 00:32	
Toluene	ug/L	ND	1.0	0.26	01/16/16 00:32	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	01/16/16 00:32	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	01/16/16 00:32	
Trichloroethene	ug/L	ND	1.0	0.47	01/16/16 00:32	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	01/16/16 00:32	
Vinyl chloride	ug/L	ND	1.0	0.62	01/16/16 00:32	
1,2-Dichloroethane-d4 (S)	%	98	70-130		01/16/16 00:32	
4-Bromofluorobenzene (S)	%	102	70-130		01/16/16 00:32	
Toluene-d8 (S)	%	101	70-130		01/16/16 00:32	

LABORATORY CONTROL SAMPLE: 1648510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	44.9	90	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	43.2	86	70-130	
1,1,2-Trichloroethane	ug/L	50	42.3	85	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	45.7	91	70-130	
1,1-Dichloroethane	ug/L	50	44.2	88	70-130	
1,1-Dichloroethene	ug/L	50	45.9	92	70-132	
1,2,3-Trichlorobenzene	ug/L	50	50.1	100	70-135	
1,2,4-Trichlorobenzene	ug/L	50	48.2	96	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	44.6	89	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	47.4	95	70-130	
1,2-Dichlorobenzene	ug/L	50	45.2	90	70-130	
1,2-Dichloroethane	ug/L	50	45.4	91	70-130	
1,2-Dichloropropane	ug/L	50	43.7	87	70-130	
1,3-Dichlorobenzene	ug/L	50	46.2	92	70-130	
1,4-Dichlorobenzene	ug/L	50	45.4	91	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	931	93	71-125	
2-Butanone (MEK)	ug/L	100	85.2	85	70-145	
2-Hexanone	ug/L	100	84.6	85	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.8	95	70-140	
Acetone	ug/L	100	89.3	89	50-175	
Benzene	ug/L	50	44.9	90	70-130	
Bromochloromethane	ug/L	50	53.8	108	70-130	
Bromodichloromethane	ug/L	50	43.8	88	70-130	
Bromoform	ug/L	50	42.4	85	70-130	
Bromomethane	ug/L	50	47.5	95	54-130	
Carbon disulfide	ug/L	50	47.9	96	70-131	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

LABORATORY CONTROL SAMPLE: 1648510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	44.9	90	70-132	
Chlorobenzene	ug/L	50	44.3	89	70-130	
Chloroethane	ug/L	50	43.1	86	64-134	
Chloroform	ug/L	50	43.7	87	70-130	
Chloromethane	ug/L	50	42.8	86	64-130	
cis-1,2-Dichloroethene	ug/L	50	43.0	86	70-131	
cis-1,3-Dichloropropene	ug/L	50	44.4	89	70-130	
Cyclohexane	ug/L	50	41.6	83	70-130	
Dibromochloromethane	ug/L	50	43.0	86	70-130	
Dichlorodifluoromethane	ug/L	50	45.0	90	56-130	
Ethylbenzene	ug/L	50	44.0	88	70-130	
Isopropylbenzene (Cumene)	ug/L	50	44.4	89	70-130	
m&p-Xylene	ug/L	100	88.6	89	70-130	
Methyl acetate	ug/L	50	47.8	96	70-130	
Methyl-tert-butyl ether	ug/L	50	45.3	91	70-130	
Methylcyclohexane	ug/L	50	42.9	86	70-130	
Methylene Chloride	ug/L	50	47.4	95	63-130	
o-Xylene	ug/L	50	44.3	89	70-130	
Styrene	ug/L	50	44.9	90	70-130	
Tetrachloroethene	ug/L	50	45.3	91	70-130	
Toluene	ug/L	50	44.4	89	70-130	
trans-1,2-Dichloroethene	ug/L	50	44.1	88	70-130	
trans-1,3-Dichloropropene	ug/L	50	44.9	90	70-132	
Trichloroethene	ug/L	50	42.4	85	70-130	
Trichlorofluoromethane	ug/L	50	48.8	98	62-133	
Vinyl chloride	ug/L	50	45.4	91	50-150	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			106	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 1648511

Parameter	Units	92283115021 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	20	21.5	108	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.5	93	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	18.1	90	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	21.2	106	70-130	
1,1-Dichloroethane	ug/L	ND	20	20.5	103	70-130	
1,1-Dichloroethene	ug/L	ND	20	22.6	113	70-166	
1,2,3-Trichlorobenzene	ug/L	ND	20	19.5	98	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	19.2	96	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	19.8	99	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20.5	103	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	19.9	99	70-130	
1,2-Dichloroethane	ug/L	ND	20	19.6	98	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

MATRIX SPIKE SAMPLE: 1648511

Parameter	Units	92283115021 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	ug/L	ND	20	20.3	101	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	20.3	101	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	19.6	98	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	351	88	70-130	
2-Butanone (MEK)	ug/L	ND	40	38.3	96	70-130	
2-Hexanone	ug/L	ND	40	38.4	96	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	42.4	106	70-130	
Acetone	ug/L	ND	40	40.6	101	70-130	
Benzene	ug/L	ND	20	21.1	106	70-148	
Bromochloromethane	ug/L	ND	20	20.6	103	70-130	
Bromodichloromethane	ug/L	ND	20	20.3	102	70-130	
Bromoform	ug/L	ND	20	16.3	82	70-130	
Bromomethane	ug/L	ND	20	19.8	99	70-130	
Carbon disulfide	ug/L	ND	20	22.1	110	70-130	
Carbon tetrachloride	ug/L	ND	20	21.8	109	70-130	
Chlorobenzene	ug/L	ND	20	19.6	98	70-146	
Chloroethane	ug/L	ND	20	20.7	103	70-130	
Chloroform	ug/L	ND	20	20.0	100	70-130	
Chloromethane	ug/L	ND	20	21.3	107	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	20.3	102	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	19.0	95	70-130	
Cyclohexane	ug/L	ND	20	21.2	106	70-130	
Dibromochloromethane	ug/L	ND	20	18.6	93	70-130	
Dichlorodifluoromethane	ug/L	ND	20	21.4	107	70-130	
Ethylbenzene	ug/L	ND	20	20.1	100	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	20	20.1	101	70-130	
m&p-Xylene	ug/L	ND	40	39.8	100	70-130	
Methyl acetate	ug/L	ND	20	19.0	95	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	19.4	97	70-130	
Methylcyclohexane	ug/L	ND	20	20.1	100	70-130	
Methylene Chloride	ug/L	ND	20	21.6	108	70-130	
o-Xylene	ug/L	ND	20	19.6	98	70-130	
Styrene	ug/L	ND	20	19.8	99	70-130	
Tetrachloroethene	ug/L	ND	20	20.4	102	70-130	
Toluene	ug/L	ND	20	20.6	103	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	21.0	105	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	18.8	94	70-130	
Trichloroethene	ug/L	ND	20	19.6	98	69-151	
Trichlorofluoromethane	ug/L	ND	20	24.2	121	70-130	
Vinyl chloride	ug/L	ND	20	22.0	110	70-130	
1,2-Dichloroethane-d4 (S)	%				99	70-130	
4-Bromofluorobenzene (S)	%				105	70-130	
Toluene-d8 (S)	%				99	70-130	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

SAMPLE DUPLICATE: 1648512

Parameter	Units	92283115022 Result	Dup Result	RPD	Max RPD	Qualifiers
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	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	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	
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	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	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	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Cyclohexane	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl acetate	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylcyclohexane	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

SAMPLE DUPLICATE: 1648512

Parameter	Units	92283115022 Result	Dup Result	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	103	103	0		
4-Bromofluorobenzene (S)	%	104	101	3		
Toluene-d8 (S)	%	100	100	1		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: MSV/35231 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92282945001, 92282945003, 92282945004, 92282945005, 92282945007

METHOD BLANK: 1650668 Matrix: Water
Associated Lab Samples: 92282945001, 92282945003, 92282945004, 92282945005, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	01/20/16 13:17	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	01/20/16 13:17	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	01/20/16 13:17	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	01/20/16 13:17	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	01/20/16 13:17	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	01/20/16 13:17	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	01/20/16 13:17	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	01/20/16 13:17	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	01/20/16 13:17	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	01/20/16 13:17	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	01/20/16 13:17	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	01/20/16 13:17	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	01/20/16 13:17	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	01/20/16 13:17	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	01/20/16 13:17	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	01/20/16 13:17	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	01/20/16 13:17	
2-Hexanone	ug/L	ND	5.0	0.46	01/20/16 13:17	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	01/20/16 13:17	
Acetone	ug/L	ND	25.0	10.0	01/20/16 13:17	
Benzene	ug/L	ND	1.0	0.25	01/20/16 13:17	
Bromochloromethane	ug/L	ND	1.0	0.17	01/20/16 13:17	
Bromodichloromethane	ug/L	ND	1.0	0.18	01/20/16 13:17	
Bromoform	ug/L	ND	1.0	0.26	01/20/16 13:17	
Bromomethane	ug/L	ND	2.0	0.29	01/20/16 13:17	
Carbon disulfide	ug/L	ND	2.0	1.2	01/20/16 13:17	
Carbon tetrachloride	ug/L	ND	1.0	0.25	01/20/16 13:17	
Chlorobenzene	ug/L	ND	1.0	0.23	01/20/16 13:17	
Chloroethane	ug/L	ND	1.0	0.54	01/20/16 13:17	
Chloroform	ug/L	ND	1.0	0.14	01/20/16 13:17	
Chloromethane	ug/L	ND	1.0	0.11	01/20/16 13:17	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	01/20/16 13:17	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	01/20/16 13:17	
Cyclohexane	ug/L	ND	1.0	0.36	01/20/16 13:17	
Dibromochloromethane	ug/L	ND	1.0	0.21	01/20/16 13:17	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	01/20/16 13:17	
Ethylbenzene	ug/L	ND	1.0	0.30	01/20/16 13:17	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	01/20/16 13:17	
m&p-Xylene	ug/L	ND	2.0	0.66	01/20/16 13:17	
Methyl acetate	ug/L	ND	10.0	0.82	01/20/16 13:17	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	01/20/16 13:17	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

METHOD BLANK: 1650668 Matrix: Water
Associated Lab Samples: 92282945001, 92282945003, 92282945004, 92282945005, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	01/20/16 13:17	
Methylene Chloride	ug/L	ND	2.0	0.97	01/20/16 13:17	
o-Xylene	ug/L	ND	1.0	0.23	01/20/16 13:17	
Styrene	ug/L	ND	1.0	0.26	01/20/16 13:17	
Tetrachloroethene	ug/L	ND	1.0	0.46	01/20/16 13:17	
Toluene	ug/L	ND	1.0	0.26	01/20/16 13:17	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	01/20/16 13:17	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	01/20/16 13:17	
Trichloroethene	ug/L	ND	1.0	0.47	01/20/16 13:17	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	01/20/16 13:17	
Vinyl chloride	ug/L	ND	1.0	0.62	01/20/16 13:17	
1,2-Dichloroethane-d4 (S)	%	101	70-130		01/20/16 13:17	
4-Bromofluorobenzene (S)	%	105	70-130		01/20/16 13:17	
Toluene-d8 (S)	%	101	70-130		01/20/16 13:17	

LABORATORY CONTROL SAMPLE: 1650669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	47.3	95	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.5	91	70-130	
1,1,2-Trichloroethane	ug/L	50	42.8	86	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	49.4	99	70-130	
1,1-Dichloroethane	ug/L	50	44.8	90	70-130	
1,1-Dichloroethene	ug/L	50	49.4	99	70-132	
1,2,3-Trichlorobenzene	ug/L	50	48.9	98	70-135	
1,2,4-Trichlorobenzene	ug/L	50	48.9	98	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	45.1	90	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	48.1	96	70-130	
1,2-Dichlorobenzene	ug/L	50	45.4	91	70-130	
1,2-Dichloroethane	ug/L	50	46.6	93	70-130	
1,2-Dichloropropane	ug/L	50	45.7	91	70-130	
1,3-Dichlorobenzene	ug/L	50	46.3	93	70-130	
1,4-Dichlorobenzene	ug/L	50	44.8	90	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	1200	120	71-125	
2-Butanone (MEK)	ug/L	100	94.5	95	70-145	
2-Hexanone	ug/L	100	91.5	92	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	70-140	
Acetone	ug/L	100	99.8	100	50-175	
Benzene	ug/L	50	46.5	93	70-130	
Bromochloromethane	ug/L	50	53.7	107	70-130	
Bromodichloromethane	ug/L	50	45.0	90	70-130	
Bromoform	ug/L	50	43.6	87	70-130	
Bromomethane	ug/L	50	30.0	60	54-130	
Carbon disulfide	ug/L	50	51.3	103	70-131	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

LABORATORY CONTROL SAMPLE: 1650669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	47.7	95	70-132	
Chlorobenzene	ug/L	50	45.9	92	70-130	
Chloroethane	ug/L	50	45.3	91	64-134	
Chloroform	ug/L	50	43.9	88	70-130	
Chloromethane	ug/L	50	38.8	78	64-130	
cis-1,2-Dichloroethene	ug/L	50	44.8	90	70-131	
cis-1,3-Dichloropropene	ug/L	50	45.4	91	70-130	
Cyclohexane	ug/L	50	45.9	92	70-130	
Dibromochloromethane	ug/L	50	44.6	89	70-130	
Dichlorodifluoromethane	ug/L	50	50.3	101	56-130	
Ethylbenzene	ug/L	50	45.7	91	70-130	
Isopropylbenzene (Cumene)	ug/L	50	46.8	94	70-130	
m&p-Xylene	ug/L	100	92.3	92	70-130	
Methyl acetate	ug/L	50	49.0	98	70-130	
Methyl-tert-butyl ether	ug/L	50	45.8	92	70-130	
Methylcyclohexane	ug/L	50	46.7	93	70-130	
Methylene Chloride	ug/L	50	50.8	102	63-130	
o-Xylene	ug/L	50	46.0	92	70-130	
Styrene	ug/L	50	46.0	92	70-130	
Tetrachloroethene	ug/L	50	47.9	96	70-130	
Toluene	ug/L	50	46.4	93	70-130	
trans-1,2-Dichloroethene	ug/L	50	47.0	94	70-130	
trans-1,3-Dichloropropene	ug/L	50	45.9	92	70-132	
Trichloroethene	ug/L	50	45.0	90	70-130	
Trichlorofluoromethane	ug/L	50	52.6	105	62-133	
Vinyl chloride	ug/L	50	47.9	96	50-150	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			109	70-130	
Toluene-d8 (S)	%			101	70-130	

SAMPLE DUPLICATE: 1650671

Parameter	Units	92283115020 Result	Dup Result	RPD	Max RPD	Qualifiers
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	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	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	
1,2-Dichloroethane	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

SAMPLE DUPLICATE: 1650671

Parameter	Units	92283115020 Result	Dup Result	RPD	Max RPD	Qualifiers
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	ND		30	
Benzene	ug/L	3350	3270	2	30	
Bromochloromethane	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	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Cyclohexane	ug/L	266	232	13	30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	3700	3640	2	30	
Isopropylbenzene (Cumene)	ug/L	184	174	6	30	
m&p-Xylene	ug/L	127	126	1	30	
Methyl acetate	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	121	122	1	30	
Methylcyclohexane	ug/L	267	242J		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	6.6J		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	63.6	61.6	3	30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	99	101	2		
4-Bromofluorobenzene (S)	%	107	108	0		
Toluene-d8 (S)	%	100	100	0		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: OEXT/40313 Analysis Method: EPA 8081
QC Batch Method: EPA 3510 Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1650820 Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	0.050	01/24/16 19:58	
4,4'-DDE	ug/L	ND	0.050	0.050	01/24/16 19:58	
4,4'-DDT	ug/L	ND	0.050	0.050	01/24/16 19:58	
Aldrin	ug/L	ND	0.050	0.050	01/24/16 19:58	
alpha-BHC	ug/L	ND	0.050	0.050	01/24/16 19:58	
beta-BHC	ug/L	ND	0.050	0.050	01/24/16 19:58	
Chlordane (Technical)	ug/L	ND	0.20	0.20	01/24/16 19:58	
delta-BHC	ug/L	ND	0.050	0.050	01/24/16 19:58	
Dieldrin	ug/L	ND	0.050	0.050	01/24/16 19:58	
Endosulfan I	ug/L	ND	0.050	0.050	01/24/16 19:58	
Endosulfan II	ug/L	ND	0.050	0.050	01/24/16 19:58	
Endosulfan sulfate	ug/L	ND	0.050	0.050	01/24/16 19:58	
Endrin	ug/L	ND	0.050	0.050	01/24/16 19:58	
Endrin aldehyde	ug/L	ND	0.050	0.050	01/24/16 19:58	
Endrin ketone	ug/L	ND	0.050	0.050	01/24/16 19:58	
gamma-BHC (Lindane)	ug/L	ND	0.050	0.050	01/24/16 19:58	
Heptachlor	ug/L	ND	0.050	0.050	01/24/16 19:58	
Heptachlor epoxide	ug/L	ND	0.050	0.050	01/24/16 19:58	
Methoxychlor	ug/L	ND	0.15	0.15	01/24/16 19:58	
Toxaphene	ug/L	ND	0.20	0.20	01/24/16 19:58	
Decachlorobiphenyl (S)	%	82	20-130		01/24/16 19:58	
Tetrachloro-m-xylene (S)	%	86	20-130		01/24/16 19:58	

LABORATORY CONTROL SAMPLE: 1650821

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	.25	0.25	103	20-150	
4,4'-DDE	ug/L	.25	0.25	100	20-150	
4,4'-DDT	ug/L	.25	0.23	93	20-150	
Aldrin	ug/L	.25	0.24	96	20-150	
alpha-BHC	ug/L	.25	0.25	101	20-150	
beta-BHC	ug/L	.25	0.25	99	20-150	
delta-BHC	ug/L	.25	0.26	107	20-150	
Dieldrin	ug/L	.25	0.26	104	20-150	
Endosulfan I	ug/L	.25	0.26	103	20-150	
Endosulfan II	ug/L	.25	0.26	105	20-150	
Endosulfan sulfate	ug/L	.25	0.25	101	20-150	
Endrin	ug/L	.25	0.26	104	20-150	
Endrin aldehyde	ug/L	.25	0.22	90	20-150	
Endrin ketone	ug/L	.25	0.25	102	20-150	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

LABORATORY CONTROL SAMPLE: 1650821

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
gamma-BHC (Lindane)	ug/L	.25	0.25	101	20-150	
Heptachlor	ug/L	.25	0.23	94	20-150	
Heptachlor epoxide	ug/L	.25	0.26	104	20-150	
Methoxychlor	ug/L	.74	0.68	92	20-150	
Decachlorobiphenyl (S)	%			87	20-130	
Tetrachloro-m-xylene (S)	%			97	20-130	

MATRIX SPIKE SAMPLE: 1650822

Parameter	Units	92283197001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	ND	.25	0.23	94	20-150	
4,4'-DDE	ug/L	ND	.25	0.23	91	20-150	
4,4'-DDT	ug/L	ND	.25	0.21	86	20-150	
Aldrin	ug/L	ND	.25	0.22	90	20-150	
alpha-BHC	ug/L	ND	.25	0.23	94	20-150	
beta-BHC	ug/L	ND	.25	0.24	96	20-150	
delta-BHC	ug/L	ND	.25	0.24	97	20-150	
Dieldrin	ug/L	ND	.25	0.24	97	20-150	
Endosulfan I	ug/L	ND	.25	0.24	97	20-150	
Endosulfan II	ug/L	ND	.25	0.24	98	20-150	
Endosulfan sulfate	ug/L	ND	.25	0.23	95	20-150	
Endrin	ug/L	ND	.25	0.24	97	20-150	
Endrin aldehyde	ug/L	ND	.25	0.21	86	20-150	
Endrin ketone	ug/L	ND	.25	0.23	94	20-150	
gamma-BHC (Lindane)	ug/L	ND	.25	0.23	94	20-150	
Heptachlor	ug/L	ND	.25	0.21	86	20-150	
Heptachlor epoxide	ug/L	ND	.25	0.24	97	20-150	
Methoxychlor	ug/L	ND	.74	0.65	88	20-150	
Decachlorobiphenyl (S)	%				55	20-130	
Tetrachloro-m-xylene (S)	%				93	20-130	

SAMPLE DUPLICATE: 1650823

Parameter	Units	92283280004 Result	Dup Result	RPD	Max RPD	Qualifiers
4,4'-DDD	ug/L	ND	ND		30	
4,4'-DDE	ug/L	ND	ND		30	
4,4'-DDT	ug/L	ND	ND		30	
Aldrin	ug/L	ND	ND		30	
alpha-BHC	ug/L	ND	ND		30	
beta-BHC	ug/L	ND	ND		30	
Chlordane (Technical)	ug/L	ND	ND		30	
delta-BHC	ug/L	ND	ND		30	
Dieldrin	ug/L	ND	ND		30	
Endosulfan I	ug/L	ND	ND		30	

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(704)875-9092

QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

SAMPLE DUPLICATE: 1650823

Parameter	Units	92283280004 Result	Dup Result	RPD	Max RPD	Qualifiers
Endosulfan II	ug/L	ND	ND		30	
Endosulfan sulfate	ug/L	ND	ND		30	
Endrin	ug/L	ND	ND		30	
Endrin aldehyde	ug/L	ND	ND		30	
Endrin ketone	ug/L	ND	ND		30	
gamma-BHC (Lindane)	ug/L	ND	ND		30	
Heptachlor	ug/L	ND	ND		30	
Heptachlor epoxide	ug/L	ND	ND		30	
Methoxychlor	ug/L	ND	ND		30	
Toxaphene	ug/L	ND	ND		30	
Decachlorobiphenyl (S)	%	73	265	113		S3
Tetrachloro-m-xylene (S)	%	58	64	9		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: OEXT/40259 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 Water MSSV
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1648184 Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	1.7	01/20/16 17:03	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	1.6	01/20/16 17:03	
2,3,4,6-Tetrachlorophenol	ug/L	ND	10.0	2.3	01/20/16 17:03	
2,4,5-Trichlorophenol	ug/L	ND	10.0	2.2	01/20/16 17:03	
2,4,6-Trichlorophenol	ug/L	ND	10.0	1.9	01/20/16 17:03	
2,4-Dichlorophenol	ug/L	ND	10.0	1.7	01/20/16 17:03	
2,4-Dimethylphenol	ug/L	ND	10.0	2.2	01/20/16 17:03	
2,4-Dinitrophenol	ug/L	ND	50.0	6.5	01/20/16 17:03	
2,4-Dinitrotoluene	ug/L	ND	10.0	1.2	01/20/16 17:03	
2,6-Dinitrotoluene	ug/L	ND	10.0	1.7	01/20/16 17:03	
2-Chloronaphthalene	ug/L	ND	10.0	2.2	01/20/16 17:03	
2-Chlorophenol	ug/L	ND	10.0	1.5	01/20/16 17:03	
2-Methylnaphthalene	ug/L	ND	10.0	0.28	01/20/16 17:03	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	1.7	01/20/16 17:03	
2-Nitroaniline	ug/L	ND	50.0	2.8	01/20/16 17:03	
2-Nitrophenol	ug/L	ND	10.0	1.7	01/20/16 17:03	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	1.7	01/20/16 17:03	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	1.4	01/20/16 17:03	
3-Nitroaniline	ug/L	ND	50.0	2.4	01/20/16 17:03	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	1.7	01/20/16 17:03	
4-Bromophenylphenyl ether	ug/L	ND	10.0	1.3	01/20/16 17:03	
4-Chloro-3-methylphenol	ug/L	ND	20.0	4.2	01/20/16 17:03	
4-Chloroaniline	ug/L	ND	20.0	3.4	01/20/16 17:03	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	2.1	01/20/16 17:03	
4-Nitroaniline	ug/L	ND	20.0	2.5	01/20/16 17:03	
4-Nitrophenol	ug/L	ND	50.0	5.8	01/20/16 17:03	
Acenaphthene	ug/L	ND	10.0	0.25	01/20/16 17:03	
Acenaphthylene	ug/L	ND	10.0	0.21	01/20/16 17:03	
Acetophenone	ug/L	ND	10.0	2.0	01/20/16 17:03	
Anthracene	ug/L	ND	10.0	0.14	01/20/16 17:03	
Atrazine	ug/L	ND	20.0	1.7	01/20/16 17:03	
Benzaldehyde	ug/L	ND	20.0	4.7	01/20/16 17:03	
Benzo(a)anthracene	ug/L	ND	10.0	0.33	01/20/16 17:03	
Benzo(a)pyrene	ug/L	ND	10.0	0.30	01/20/16 17:03	
Benzo(b)fluoranthene	ug/L	ND	10.0	0.28	01/20/16 17:03	
Benzo(g,h,i)perylene	ug/L	ND	10.0	0.38	01/20/16 17:03	
Benzo(k)fluoranthene	ug/L	ND	10.0	0.43	01/20/16 17:03	
Biphenyl (Diphenyl)	ug/L	ND	10.0	1.9	01/20/16 17:03	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	1.7	01/20/16 17:03	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	1.5	01/20/16 17:03	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	0.85	01/20/16 17:03	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

METHOD BLANK: 1648184 Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Butylbenzylphthalate	ug/L	ND	10.0	0.75	01/20/16 17:03	
Caprolactam	ug/L	ND	10.0	1.8	01/20/16 17:03	
Carbazole	ug/L	ND	10.0	0.73	01/20/16 17:03	
Chrysene	ug/L	ND	10.0	0.21	01/20/16 17:03	
Di-n-butylphthalate	ug/L	ND	10.0	1.1	01/20/16 17:03	
Di-n-octylphthalate	ug/L	ND	10.0	0.86	01/20/16 17:03	
Dibenz(a,h)anthracene	ug/L	ND	10.0	0.55	01/20/16 17:03	
Dibenzofuran	ug/L	ND	10.0	1.8	01/20/16 17:03	
Diethylphthalate	ug/L	ND	10.0	1.3	01/20/16 17:03	
Dimethylphthalate	ug/L	ND	10.0	1.5	01/20/16 17:03	
Fluoranthene	ug/L	ND	10.0	0.21	01/20/16 17:03	
Fluorene	ug/L	ND	10.0	0.21	01/20/16 17:03	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	1.8	01/20/16 17:03	
Hexachlorobenzene	ug/L	ND	10.0	1.1	01/20/16 17:03	
Hexachlorocyclopentadiene	ug/L	ND	10.0	1.8	01/20/16 17:03	
Hexachloroethane	ug/L	ND	10.0	1.5	01/20/16 17:03	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	0.29	01/20/16 17:03	
Isophorone	ug/L	ND	10.0	1.8	01/20/16 17:03	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	2.1	01/20/16 17:03	
N-Nitrosodiphenylamine	ug/L	ND	10.0	1.3	01/20/16 17:03	
Naphthalene	ug/L	ND	10.0	0.34	01/20/16 17:03	
Nitrobenzene	ug/L	ND	10.0	1.7	01/20/16 17:03	
Pentachlorophenol	ug/L	ND	25.0	2.3	01/20/16 17:03	
Phenanthrene	ug/L	ND	10.0	0.22	01/20/16 17:03	
Phenol	ug/L	ND	10.0	1.7	01/20/16 17:03	
Pyrene	ug/L	ND	10.0	0.19	01/20/16 17:03	
2,4,6-Tribromophenol (S)	%	62	27-110		01/20/16 17:03	
2-Fluorobiphenyl (S)	%	48	27-110		01/20/16 17:03	
2-Fluorophenol (S)	%	29	12-110		01/20/16 17:03	
Nitrobenzene-d5 (S)	%	53	21-110		01/20/16 17:03	
Phenol-d6 (S)	%	20	10-110		01/20/16 17:03	
Terphenyl-d14 (S)	%	76	31-107		01/20/16 17:03	

LABORATORY CONTROL SAMPLE: 1648185

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	28.5	57	16-129	
2,2'-Oxybis(1-chloropropane)	ug/L	50	22.8	46	18-120	
2,3,4,6-Tetrachlorophenol	ug/L	50	93.6	187	54-276	
2,4,5-Trichlorophenol	ug/L	50	40.9	82	43-113	
2,4,6-Trichlorophenol	ug/L	50	37.2	74	42-120	
2,4-Dichlorophenol	ug/L	50	34.8	70	30-120	
2,4-Dimethylphenol	ug/L	50	33.6	67	29-111	
2,4-Dinitrophenol	ug/L	250	197	79	19-132	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

LABORATORY CONTROL SAMPLE: 1648185

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/L	50	46.3	93	58-128	
2,6-Dinitrotoluene	ug/L	50	43.3	87	54-129	
2-Chloronaphthalene	ug/L	50	38.2	76	43-117	
2-Chlorophenol	ug/L	50	27.3	55	37-120	
2-Methylnaphthalene	ug/L	50	33.2	66	33-120	
2-Methylphenol(o-Cresol)	ug/L	50	30.7	61	31-120	
2-Nitroaniline	ug/L	100	74.3	74	48-121	
2-Nitrophenol	ug/L	50	32.4	65	25-116	
3&4-Methylphenol(m&p Cresol)	ug/L	50	28.6	57	23-120	
3,3'-Dichlorobenzidine	ug/L	250	88.4	35	10-154	
3-Nitroaniline	ug/L	100	79.9	80	43-115	
4,6-Dinitro-2-methylphenol	ug/L	100	83.1	83	44-124	
4-Bromophenylphenyl ether	ug/L	50	38.3	77	34-113	
4-Chloro-3-methylphenol	ug/L	100	83.4	83	31-110	
4-Chloroaniline	ug/L	100	61.6	62	20-120	
4-Chlorophenylphenyl ether	ug/L	50	36.3	73	34-116	
4-Nitroaniline	ug/L	100	87.4	87	46-128	
4-Nitrophenol	ug/L	250	114	46	11-120	
Acenaphthene	ug/L	50	36.1	72	48-114	
Acenaphthylene	ug/L	50	37.1	74	48-112	
Acetophenone	ug/L	50	32.3	65	24-120	
Anthracene	ug/L	50	44.6	89	57-118	
Atrazine	ug/L	50	55.6	111	33-160	
Benzaldehyde	ug/L	50	ND	9	10-120	L0
Benzo(a)anthracene	ug/L	50	47.2	94	56-121	
Benzo(a)pyrene	ug/L	50	48.6	97	55-127	
Benzo(b)fluoranthene	ug/L	50	53.2	106	53-128	
Benzo(g,h,i)perylene	ug/L	50	48.4	97	54-125	
Benzo(k)fluoranthene	ug/L	50	54.8	110	51-123	
Biphenyl (Diphenyl)	ug/L	50	31.5	63	38-120	
bis(2-Chloroethoxy)methane	ug/L	50	30.8	62	32-120	
bis(2-Chloroethyl) ether	ug/L	50	25.9	52	33-111	
bis(2-Ethylhexyl)phthalate	ug/L	50	52.0	104	50-145	
Butylbenzylphthalate	ug/L	50	54.6	109	54-138	
Caprolactam	ug/L	50	14.1	28	10-115	
Carbazole	ug/L	50	42.8	86	59-119	
Chrysene	ug/L	50	45.2	90	58-127	
Di-n-butylphthalate	ug/L	50	51.0	102	56-125	
Di-n-octylphthalate	ug/L	50	50.9	102	50-134	
Dibenz(a,h)anthracene	ug/L	50	51.1	102	53-129	
Dibenzofuran	ug/L	50	36.3	73	45-120	
Diethylphthalate	ug/L	50	45.9	92	53-120	
Dimethylphthalate	ug/L	50	41.7	83	55-116	
Fluoranthene	ug/L	50	51.3	103	57-125	
Fluorene	ug/L	50	41.2	82	53-118	
Hexachloro-1,3-butadiene	ug/L	50	24.4	49	23-120	
Hexachlorobenzene	ug/L	50	44.9	90	49-116	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

LABORATORY CONTROL SAMPLE: 1648185

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachlorocyclopentadiene	ug/L	50	25.9	52	26-158	
Hexachloroethane	ug/L	50	20.4	41	30-114	
Indeno(1,2,3-cd)pyrene	ug/L	50	50.9	102	55-128	
Isophorone	ug/L	50	34.2	68	31-118	
N-Nitroso-di-n-propylamine	ug/L	50	33.8	68	32-119	
N-Nitrosodiphenylamine	ug/L	50	37.9	76	43-120	
Naphthalene	ug/L	50	29.4	59	32-120	
Nitrobenzene	ug/L	50	30.5	61	33-110	
Pentachlorophenol	ug/L	250	85.4	34	10-137	
Phenanthrene	ug/L	50	41.1	82	57-117	
Phenol	ug/L	50	15.8	32	10-120	
Pyrene	ug/L	50	46.5	93	55-122	
2,4,6-Tribromophenol (S)	%			85	27-110	
2-Fluorobiphenyl (S)	%			62	27-110	
2-Fluorophenol (S)	%			31	12-110	
Nitrobenzene-d5 (S)	%			62	21-110	
Phenol-d6 (S)	%			26	10-110	
Terphenyl-d14 (S)	%			87	31-107	

MATRIX SPIKE SAMPLE: 1648186

Parameter	Units	92282945001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	50	34.4	69	50-150	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	50	30.0	60	50-150	
2,3,4,6-Tetrachlorophenol	ug/L	ND	50	87.7	175	50-150	
2,4,5-Trichlorophenol	ug/L	ND	50	42.8	86	19-105	
2,4,6-Trichlorophenol	ug/L	ND	50	41.4	83	13-108	
2,4-Dichlorophenol	ug/L	ND	50	37.9	76	29-111	
2,4-Dimethylphenol	ug/L	ND	50	36.7	73	21-103	
2,4-Dinitrophenol	ug/L	ND	250	183	73	10-109	
2,4-Dinitrotoluene	ug/L	ND	50	43.2	86	27-104	
2,6-Dinitrotoluene	ug/L	ND	50	42.1	84	28-101	
2-Chloronaphthalene	ug/L	ND	50	43.2	86	14-102	
2-Chlorophenol	ug/L	ND	50	34.9	70	16-110	
2-Methylnaphthalene	ug/L	ND	50	36.3	73	13-110	
2-Methylphenol(o-Cresol)	ug/L	ND	50	36.6	73	19-110	
2-Nitroaniline	ug/L	ND	100	72.3	72	26-103	
2-Nitrophenol	ug/L	ND	50	36.4	73	20-110	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	34.5	69	20-110	
3,3'-Dichlorobenzidine	ug/L	ND	250	79.5	32	25-112	
3-Nitroaniline	ug/L	ND	100	75.4	75	29-110	
4,6-Dinitro-2-methylphenol	ug/L	ND	100	78.9	79	10-117	
4-Bromophenylphenyl ether	ug/L	ND	50	38.2	76	20-105	
4-Chloro-3-methylphenol	ug/L	ND	100	86.7	87	22-110	
4-Chloroaniline	ug/L	ND	100	64.6	65	20-100	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

MATRIX SPIKE SAMPLE: 1648186

Parameter	Units	92282945001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
4-Chlorophenylphenyl ether	ug/L	ND	50	37.8	76	19-102	
4-Nitroaniline	ug/L	ND	100	80.5	81	29-110	
4-Nitrophenol	ug/L	ND	250	121	48	10-110	
Acenaphthene	ug/L	ND	50	39.5	79	17-100	
Acenaphthylene	ug/L	ND	50	41.2	82	21-100	
Acetophenone	ug/L	ND	50	37.4	75	50-150	
Anthracene	ug/L	ND	50	42.8	86	24-109	
Atrazine	ug/L	ND	50	53.5	107	50-150	
Benzaldehyde	ug/L	ND	50	ND	7	50-150	
Benzo(a)anthracene	ug/L	ND	50	43.4	87	22-117	
Benzo(a)pyrene	ug/L	ND	50	45.3	91	23-104	
Benzo(b)fluoranthene	ug/L	ND	50	48.8	98	23-103	
Benzo(g,h,i)perylene	ug/L	ND	50	44.0	88	18-111	
Benzo(k)fluoranthene	ug/L	ND	50	50.6	101	22-113	
Biphenyl (Diphenyl)	ug/L	ND	50	35.5	71	50-150	
bis(2-Chloroethoxy)methane	ug/L	ND	50	33.9	68	22-110	
bis(2-Chloroethyl) ether	ug/L	ND	50	34.5	69	16-110	
bis(2-Ethylhexyl)phthalate	ug/L	ND	50	47.7	95	23-102	
Butylbenzylphthalate	ug/L	ND	50	49.6	99	25-110	
Caprolactam	ug/L	ND	50	13.5	27	50-150	
Carbazole	ug/L	ND	50	40.1	80	50-150	
Chrysene	ug/L	ND	50	42.3	85	23-115	
Di-n-butylphthalate	ug/L	ND	50	47.8	96	26-110	
Di-n-octylphthalate	ug/L	ND	50	48.5	97	22-110	
Dibenz(a,h)anthracene	ug/L	ND	50	47.1	94	21-112	
Dibenzofuran	ug/L	ND	50	39.5	79	19-102	
Diethylphthalate	ug/L	ND	50	43.1	86	29-110	
Dimethylphthalate	ug/L	ND	50	40.8	82	27-110	
Fluoranthene	ug/L	ND	50	48.4	97	23-112	
Fluorene	ug/L	ND	50	42.7	85	22-104	
Hexachloro-1,3-butadiene	ug/L	ND	50	34.8	70	10-110	
Hexachlorobenzene	ug/L	ND	50	44.1	88	21-116	
Hexachlorocyclopentadiene	ug/L	ND	50	29.8	60	10-110	
Hexachloroethane	ug/L	ND	50	35.8	72	10-110	
Indeno(1,2,3-cd)pyrene	ug/L	ND	50	47.0	94	20-113	
Isophorone	ug/L	ND	50	36.6	73	50-150	
N-Nitroso-di-n-propylamine	ug/L	ND	50	38.9	78	21-105	
N-Nitrosodiphenylamine	ug/L	ND	50	37.1	74	23-107	
Naphthalene	ug/L	ND	50	35.4	71	10-110	
Nitrobenzene	ug/L	ND	50	35.2	70	20-110	
Pentachlorophenol	ug/L	ND	250	79.6	32	10-118	
Phenanthrene	ug/L	ND	50	39.9	80	24-106	
Phenol	ug/L	ND	50	20.4	41	12-110	
Pyrene	ug/L	ND	50	42.1	84	24-114	
2,4,6-Tribromophenol (S)	%				82	27-110	
2-Fluorobiphenyl (S)	%				71	27-110	
2-Fluorophenol (S)	%				45	12-110	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

MATRIX SPIKE SAMPLE: 1648186

Parameter	Units	92282945001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrobenzene-d5 (S)	%				72	21-110	
Phenol-d6 (S)	%				34	10-110	
Terphenyl-d14 (S)	%				77	31-107	

SAMPLE DUPLICATE: 1648187

Parameter	Units	92282945002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	ND		30	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	ND		30	
2,3,4,6-Tetrachlorophenol	ug/L	ND	ND		30	
2,4,5-Trichlorophenol	ug/L	ND	ND		30	
2,4,6-Trichlorophenol	ug/L	ND	ND		30	
2,4-Dichlorophenol	ug/L	ND	ND		30	
2,4-Dimethylphenol	ug/L	ND	ND		30	
2,4-Dinitrophenol	ug/L	ND	ND		30	
2,4-Dinitrotoluene	ug/L	ND	ND		30	
2,6-Dinitrotoluene	ug/L	ND	ND		30	
2-Chloronaphthalene	ug/L	ND	ND		30	
2-Chlorophenol	ug/L	ND	ND		30	
2-Methylnaphthalene	ug/L	ND	ND		30	
2-Methylphenol(o-Cresol)	ug/L	ND	ND		30	
2-Nitroaniline	ug/L	ND	ND		30	
2-Nitrophenol	ug/L	ND	ND		30	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	ND		30	
3,3'-Dichlorobenzidine	ug/L	ND	ND		30	
3-Nitroaniline	ug/L	ND	ND		30	
4,6-Dinitro-2-methylphenol	ug/L	ND	ND		30	
4-Bromophenylphenyl ether	ug/L	ND	ND		30	
4-Chloro-3-methylphenol	ug/L	ND	ND		30	
4-Chloroaniline	ug/L	ND	ND		30	
4-Chlorophenylphenyl ether	ug/L	ND	ND		30	
4-Nitroaniline	ug/L	ND	ND		30	
4-Nitrophenol	ug/L	ND	ND		30	
Acenaphthene	ug/L	ND	ND		30	
Acenaphthylene	ug/L	ND	ND		30	
Acetophenone	ug/L	ND	ND		30	
Anthracene	ug/L	ND	ND		30	
Atrazine	ug/L	ND	ND		30	
Benzaldehyde	ug/L	ND	ND		30	
Benzo(a)anthracene	ug/L	ND	ND		30	
Benzo(a)pyrene	ug/L	ND	ND		30	
Benzo(b)fluoranthene	ug/L	ND	ND		30	
Benzo(g,h,i)perylene	ug/L	ND	ND		30	
Benzo(k)fluoranthene	ug/L	ND	ND		30	
Biphenyl (Diphenyl)	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

SAMPLE DUPLICATE: 1648187

Parameter	Units	92282945002 Result	Dup Result	RPD	Max RPD	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	ND	ND		30	
bis(2-Chloroethyl) ether	ug/L	ND	ND		30	
bis(2-Ethylhexyl)phthalate	ug/L	ND	ND		30	
Butylbenzylphthalate	ug/L	ND	ND		30	
Caprolactam	ug/L	ND	ND		30	
Carbazole	ug/L	ND	ND		30	
Chrysene	ug/L	ND	ND		30	
Di-n-butylphthalate	ug/L	ND	ND		30	
Di-n-octylphthalate	ug/L	ND	ND		30	
Dibenz(a,h)anthracene	ug/L	ND	ND		30	
Dibenzofuran	ug/L	ND	ND		30	
Diethylphthalate	ug/L	ND	ND		30	
Dimethylphthalate	ug/L	ND	ND		30	
Fluoranthene	ug/L	ND	ND		30	
Fluorene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Hexachlorobenzene	ug/L	ND	ND		30	
Hexachlorocyclopentadiene	ug/L	ND	ND		30	
Hexachloroethane	ug/L	ND	ND		30	
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND		30	
Isophorone	ug/L	ND	ND		30	
N-Nitroso-di-n-propylamine	ug/L	ND	ND		30	
N-Nitrosodiphenylamine	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
Nitrobenzene	ug/L	ND	ND		30	
Pentachlorophenol	ug/L	ND	ND		30	
Phenanthrene	ug/L	ND	ND		30	
Phenol	ug/L	ND	ND		30	
Pyrene	ug/L	ND	ND		30	
2,4,6-Tribromophenol (S)	%	63	50	24		
2-Fluorobiphenyl (S)	%	54	19	95		S0
2-Fluorophenol (S)	%	27	1	185		S0
Nitrobenzene-d5 (S)	%	57	0			S0
Phenol-d6 (S)	%	22	2	166		S0
Terphenyl-d14 (S)	%	74	63	16		

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: TAMP/8430 Analysis Method: EPA 8315
QC Batch Method: EPA 8315 Analysis Description: 8318 HPLC
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1454937 Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Formaldehyde	ug/L	ND	50.0	25.0	01/17/16 17:54	N2

LABORATORY CONTROL SAMPLE: 1454938

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Formaldehyde	ug/L	500	451	90.2	70-130	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1454939 1454940

Parameter	Units	92282945002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Formaldehyde	ug/L	63.6	500	500	524	545	92.1	96.3	70-130	4	40	N2

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: WET/42529 | Analysis Method: EPA 9040
QC Batch Method: EPA 9040 | Analysis Description: 9040 pH
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

SAMPLE DUPLICATE: 1648520

Parameter	Units	92282945001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	6.4	6.4	1	9	H6

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: WETA/26112 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1648914 | Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.50	0.25	01/18/16 11:39	
Sulfate	mg/L	ND	2.0	1.0	01/18/16 11:39	

LABORATORY CONTROL SAMPLE: 1648915

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.3	92	90-110	
Sulfate	mg/L	20	18.4	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1648916 1648917

Parameter	Units	92282945001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	2.4	2.5	91	92	90-110	1	10	
Sulfate	mg/L	110	20	20	132	130	109	101	90-110	1	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: WETA/26109 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1648865 Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.050	01/18/16 05:47	

LABORATORY CONTROL SAMPLE: 1648866

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1648867 1648868

Parameter	Units	92282945001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	84.7	5	5	88.9	89.0	84	86	90-110	0	7	M6

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: WETA/26092 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1647970 | Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	0.010	01/15/16 09:08	
Nitrogen, Nitrite	mg/L	ND	0.020	0.010	01/15/16 09:08	
Nitrogen, NO2 plus NO3	mg/L	ND	0.020	0.010	01/15/16 09:08	

LABORATORY CONTROL SAMPLE: 1647971

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.4	96	90-110	
Nitrogen, Nitrite	mg/L	1	0.95	95	90-110	
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1647974 1647975

Parameter	Units	92282945006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	0.045	2.5	2.5	2.4	2.4	94	94	90-110	0	10	
Nitrogen, Nitrite	mg/L	ND	1	1	0.99	0.99	99	99	90-110	1	10	
Nitrogen, NO2 plus NO3	mg/L	0.045	2.5	2.5	2.4	2.4	94	94	90-110	0	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: WETA/26144 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Phosphorus, Total
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1650303 | Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	0.025	01/20/16 13:55	

LABORATORY CONTROL SAMPLE: 1650304

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.6	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1650305 1650306

Parameter	Units	92282760001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	7.1	2.5	2.5	9.4	9.5	94	97	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1650307 1650308

Parameter	Units	92282945007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	88.3	2.5	2.5	94.0	97.6	225	369	90-110	4	10	M6

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: WETA/26139 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1649427 Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	01/20/16 19:22	

LABORATORY CONTROL SAMPLE: 1649428

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.7	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1649429 1649430

Parameter	Units	92282945001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	28.8	40	40	50.9	51.0	55	55	90-110	0	10	M1

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: WETA/26095 | Analysis Method: SM 4500-CN-E
QC Batch Method: SM 4500-CN-E | Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1648459 | Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0080	0.0040	01/16/16 15:13	

LABORATORY CONTROL SAMPLE: 1648460

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.11	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1648461 1648462

Parameter	Units	92282945001 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	.1	.1	0.10	0.10	98	97	75-125	1	10	

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QUALITY CONTROL DATA

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: WETA/26090 | Analysis Method: SM 4500-P E
QC Batch Method: SM 4500-P E | Analysis Description: SM4500P-E Phosphorus, Ortho
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1647892 | Matrix: Water
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.050	0.025	01/15/16 01:20	

LABORATORY CONTROL SAMPLE: 1647893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.25	0.24	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1647894 1647895

Parameter	Units	92282945007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	102	125	125	220	220	95	95	90-110	0	10	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-1 **Lab ID: 92282945001** Collected: 01/13/16 13:35 Received: 01/13/16 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**62.6 ± 15.2 (9.27)** **C:NA T:NA**	pCi/L	01/26/16 19:40	12587-46-1	
Gross Beta	EPA 900.0	**42.6 ± 9.09 (6.00)** **C:NA T:NA**	pCi/L	01/26/16 19:40	12587-47-2	
Radium-226	EPA 903.1	**1.18 ± 0.646 (0.791)** **C:NA T:96%**	pCi/L	02/02/16 12:44	13982-63-3	
Radium-228	EPA 904.0	**2.93 ± 0.809 (0.869)** **C:83% T:78%**	pCi/L	02/02/16 16:38	15262-20-1	
Total Uranium	ASTM D5174-97	**1.61 ± 0.030 (0.193)** **C:NA T:NA**	ug/L	02/09/16 16:20	7440-61-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-2 **Lab ID: 92282945002** Collected: 01/13/16 15:15 Received: 01/13/16 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**291 ± 71.1 (61.9)** **C:NA T:NA**	pCi/L	01/26/16 19:40	12587-46-1	
Gross Beta	EPA 900.0	**170 ± 35.8 (22.6)** **C:NA T:NA**	pCi/L	01/26/16 19:40	12587-47-2	
Radium-226	EPA 903.1	**3.78 ± 1.05 (0.667)** **C:NA T:98%**	pCi/L	02/02/16 12:44	13982-63-3	
Radium-228	EPA 904.0	**3.55 ± 0.899 (0.816)** **C:78% T:87%**	pCi/L	02/02/16 16:38	15262-20-1	
Total Uranium	ASTM D5174-97	**4.35 ± 0.293 (0.193)** **C:NA T:NA**	ug/L	02/09/16 16:23	7440-61-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-3 **Lab ID: 92282945003** Collected: 01/13/16 15:30 Received: 01/13/16 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**125 ± 31.3 (23.2)** **C:NA T:NA**	pCi/L	01/26/16 19:40	12587-46-1	
Gross Beta	EPA 900.0	**83.1 ± 18.2 (12.8)** **C:NA T:NA**	pCi/L	01/26/16 19:40	12587-47-2	
Radium-226	EPA 903.1	**0.747 ± 0.498 (0.618)** **C:NA T:90%**	pCi/L	02/02/16 12:44	13982-63-3	
Radium-228	EPA 904.0	**2.18 ± 0.667 (0.824)** **C:84% T:83%**	pCi/L	02/02/16 16:38	15262-20-1	
Total Uranium	ASTM D5174-97	**4.23 ± 0.078 (0.385)** **C:NA T:NA**	ug/L	02/09/16 16:25	7440-61-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 **Lab ID: 92282945004** Collected: 01/13/16 16:00 Received: 01/13/16 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**105 ± 26.3 (21.3)** **C:NA T:NA**	pCi/L	01/26/16 19:40	12587-46-1	
Gross Beta	EPA 900.0	**71.9 ± 14.8 (8.83)** **C:NA T:NA**	pCi/L	01/26/16 19:40	12587-47-2	
Radium-226	EPA 903.1	**3.11 ± 1.27 (1.10)** **C:NA T:29%**	pCi/L	02/02/16 12:56	13982-63-3	
Radium-228	EPA 904.0	**2.74 ± 0.846 (1.09)** **C:84% T:56%**	pCi/L	02/02/16 16:39	15262-20-1	
Total Uranium	ASTM D5174-97	**1.89 ± 0.040 (0.385)** **C:NA T:NA**	ug/L	02/09/16 16:28	7440-61-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB-4 DUP **Lab ID: 92282945005** Collected: 01/13/16 16:10 Received: 01/13/16 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**74.8 ± 94.1 (171)** **C:NA T:NA**	pCi/L	01/26/16 19:40	12587-46-1	
Gross Beta	EPA 900.0	**216 ± 107 (175)** **C:NA T:NA**	pCi/L	01/26/16 19:40	12587-47-2	
Radium-226	EPA 903.1	**3.77 ± 1.07 (0.654)** **C:NA T:87%**	pCi/L	02/02/16 18:02	13982-63-3	
Radium-228	EPA 904.0	**2.08 ± 0.970 (1.65)** **C:86% T:39%**	pCi/L	02/02/16 16:39	15262-20-1	
Total Uranium	ASTM D5174-97	**1.27 ± 0.030 (0.385)** **C:NA T:NA**	ug/L	02/09/16 16:31	7440-61-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: MDB rinse blank **Lab ID: 92282945006** Collected: 01/13/16 16:50 Received: 01/13/16 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**-0.020 ± 0.403 (1.04)** **C:NA T:NA**	pCi/L	01/26/16 19:26	12587-46-1	
Gross Beta	EPA 900.0	**-0.466 ± 0.629 (1.53)** **C:NA T:NA**	pCi/L	01/26/16 19:26	12587-47-2	
Radium-226	EPA 903.1	**0.293 ± 0.446 (0.767)** **C:NA T:89%**	pCi/L	02/02/16 18:02	13982-63-3	
Radium-228	EPA 904.0	**0.150 ± 0.314 (0.694)** **C:82% T:85%**	pCi/L	02/02/16 16:39	15262-20-1	
Total Uranium	ASTM D5174-97	**-0.003 ± 0.000 (0.193)** **C:NA T:NA**	ug/L	02/09/16 16:34	7440-61-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

Sample: LS-1 **Lab ID: 92282945007** Collected: 01/13/16 10:00 Received: 01/13/16 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**-3.83 ± 5.85 (11.8)** **C:NA T:NA**	pCi/L	01/29/16 19:04	12587-46-1	
Gross Beta	EPA 900.0	**19.5 ± 6.43 (8.78)** **C:NA T:NA**	pCi/L	01/29/16 19:04	12587-47-2	
Radium-226	EPA 903.1	**0.621 ± 0.712 (0.420)** **C:NA T:107%**	pCi/L	02/02/16 11:36	13982-63-3	
Radium-228	EPA 904.0	**0.807 ± 1.33 (2.89)** **C:89% T:78%**	pCi/L	02/08/16 12:34	15262-20-1	
Total Uranium	ASTM D5174-97	**0.210 ± 0.014 (0.385)** **C:NA T:NA**	ug/L	02/09/16 16:36	7440-61-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: RADC/27655 Analysis Method: ASTM D5174-97
QC Batch Method: ASTM D5174-97 Analysis Description: D5174.97 Total Uranium KPA
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006, 92282945007

METHOD BLANK: 1013921 Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Total Uranium	0.035 ± 0.002 (0.193) C:NA T:NA	ug/L	01/28/16 16:55	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: RADC/27673 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006

METHOD BLANK: 1013943 Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0157 ± 0.286 (0.663) C:89% T:90%	pCi/L	02/02/16 16:37	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: RADC/27756 | Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 | Analysis Description: 903.1 Radium-226
Associated Lab Samples: 92282945007

METHOD BLANK: 1017602 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.474 (0.984) C:NA T:100%	pCi/L	02/02/16 10:59	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: RADC/27839 | Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 | Analysis Description: 904.0 Radium 228
Associated Lab Samples: 92282945007

METHOD BLANK: 1020929 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.392 ± 0.317 (0.632) C:92% T:86%	pCi/L	02/08/16 12:52	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: RADC/27715 Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0 Analysis Description: 900.0 Gross Alpha/Beta
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006

METHOD BLANK: 1015574 Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.296 ± 0.256 (0.970) C:NA T:NA	pCi/L	01/27/16 07:33	
Gross Beta	-0.475 ± 0.627 (1.57) C:NA T:NA	pCi/L	01/27/16 07:33	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: RADC/27773 | Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0 | Analysis Description: 900.0 Gross Alpha/Beta
Associated Lab Samples: 92282945007

METHOD BLANK: 1017627 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.059 ± 0.411 (1.14) C:NA T:NA	pCi/L	01/31/16 12:22	
Gross Beta	0.001 ± 0.699 (1.74) C:NA T:NA	pCi/L	01/31/16 12:22	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Wright Chemical Site
Pace Project No.: 92282945

QC Batch: RADC/27671 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 92282945001, 92282945002, 92282945003, 92282945004, 92282945005, 92282945006

METHOD BLANK: 1013941 Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0565 ± 0.258 (0.525) C:NA T:92%	pCi/L	02/02/16 12:11	

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QUALIFIERS

Project: Wright Chemical Site
Pace Project No.: 92282945

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.

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, Styrene, and Vinyl chloride.

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1g	Sample re-extracted outside method hold time. Results of re-analysis confirmed original analysis performed within hold time.
C9	Common Laboratory Contaminant.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
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.

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QUALIFIERS

Project: Wright Chemical Site
Pace Project No.: 92282945

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N	Tentatively identified compound (TIC) based on mass spectral library search. Result is estimated.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
p2	Post-analysis pH measurement indicates pH > 2.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Wright Chemical Site
Pace Project No.: 92282945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92282945001	**MDB-1**	EPA 3510	OEXT/40313	EPA 8081	GCSV/23871
92282945002	**MDB-2**	EPA 3510	OEXT/40313	EPA 8081	GCSV/23871
92282945003	**MDB-3**	EPA 3510	OEXT/40313	EPA 8081	GCSV/23871
92282945004	**MDB-4**	EPA 3510	OEXT/40313	EPA 8081	GCSV/23871
92282945005	**MDB-4 DUP**	EPA 3510	OEXT/40313	EPA 8081	GCSV/23871
92282945006	**MDB rinse blank**	EPA 3510	OEXT/40313	EPA 8081	GCSV/23871
92282945007	**LS-1**	EPA 3510	OEXT/40313	EPA 8081	GCSV/23871
92282945001	**MDB-1**	EPA 3010A	MPRP/20486	EPA 6010	ICP/18485
92282945002	**MDB-2**	EPA 3010A	MPRP/20486	EPA 6010	ICP/18485
92282945003	**MDB-3**	EPA 3010A	MPRP/20486	EPA 6010	ICP/18485
92282945004	**MDB-4**	EPA 3010A	MPRP/20486	EPA 6010	ICP/18485
92282945005	**MDB-4 DUP**	EPA 3010A	MPRP/20486	EPA 6010	ICP/18485
92282945006	**MDB rinse blank**	EPA 3010A	MPRP/20486	EPA 6010	ICP/18485
92282945007	**LS-1**	EPA 3010A	MPRP/20486	EPA 6010	ICP/18485
92282945001	**MDB-1**	EPA 7470	MERP/8870	EPA 7470	MERC/8521
92282945002	**MDB-2**	EPA 7470	MERP/8870	EPA 7470	MERC/8521
92282945003	**MDB-3**	EPA 7470	MERP/8870	EPA 7470	MERC/8521
92282945004	**MDB-4**	EPA 7470	MERP/8870	EPA 7470	MERC/8521
92282945005	**MDB-4 DUP**	EPA 7470	MERP/8870	EPA 7470	MERC/8521
92282945006	**MDB rinse blank**	EPA 7470	MERP/8870	EPA 7470	MERC/8521
92282945007	**LS-1**	EPA 7470	MERP/8870	EPA 7470	MERC/8521
92282945001	**MDB-1**	EPA 3510	OEXT/40259	EPA 8270	MSSV/11784
92282945002	**MDB-2**	EPA 3510	OEXT/40259	EPA 8270	MSSV/11784
92282945003	**MDB-3**	EPA 3510	OEXT/40259	EPA 8270	MSSV/11784
92282945004	**MDB-4**	EPA 3510	OEXT/40259	EPA 8270	MSSV/11784
92282945005	**MDB-4 DUP**	EPA 3510	OEXT/40259	EPA 8270	MSSV/11784
92282945006	**MDB rinse blank**	EPA 3510	OEXT/40259	EPA 8270	MSSV/11784
92282945007	**LS-1**	EPA 3510	OEXT/40259	EPA 8270	MSSV/11784
92282945001	**MDB-1**	EPA 8260	MSV/35231		
92282945002	**MDB-2**	EPA 8260	MSV/35204		
92282945003	**MDB-3**	EPA 8260	MSV/35231		
92282945004	**MDB-4**	EPA 8260	MSV/35231		
92282945005	**MDB-4 DUP**	EPA 8260	MSV/35231		
92282945006	**MDB rinse blank**	EPA 8260	MSV/35183		
92282945007	**LS-1**	EPA 8260	MSV/35231		
92282945008	**trip blank**	EPA 8260	MSV/35183		
92282945001	**MDB-1**	EPA 900.0	RADC/27715		
92282945002	**MDB-2**	EPA 900.0	RADC/27715		
92282945003	**MDB-3**	EPA 900.0	RADC/27715		
92282945004	**MDB-4**	EPA 900.0	RADC/27715		
92282945005	**MDB-4 DUP**	EPA 900.0	RADC/27715		
92282945006	**MDB rinse blank**	EPA 900.0	RADC/27715		
92282945007	**LS-1**	EPA 900.0	RADC/27773		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Wright Chemical Site
Pace Project No.: 92282945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92282945001	**MDB-1**	EPA 903.1	RADC/27671		
92282945002	**MDB-2**	EPA 903.1	RADC/27671		
92282945003	**MDB-3**	EPA 903.1	RADC/27671		
92282945004	**MDB-4**	EPA 903.1	RADC/27671		
92282945005	**MDB-4 DUP**	EPA 903.1	RADC/27671		
92282945006	**MDB rinse blank**	EPA 903.1	RADC/27671		
92282945007	**LS-1**	EPA 903.1	RADC/27756		
92282945001	**MDB-1**	EPA 904.0	RADC/27673		
92282945002	**MDB-2**	EPA 904.0	RADC/27673		
92282945003	**MDB-3**	EPA 904.0	RADC/27673		
92282945004	**MDB-4**	EPA 904.0	RADC/27673		
92282945005	**MDB-4 DUP**	EPA 904.0	RADC/27673		
92282945006	**MDB rinse blank**	EPA 904.0	RADC/27673		
92282945007	**LS-1**	EPA 904.0	RADC/27839		
92282945001	**MDB-1**	ASTM D5174-97	RADC/27655		
92282945002	**MDB-2**	ASTM D5174-97	RADC/27655		
92282945003	**MDB-3**	ASTM D5174-97	RADC/27655		
92282945004	**MDB-4**	ASTM D5174-97	RADC/27655		
92282945005	**MDB-4 DUP**	ASTM D5174-97	RADC/27655		
92282945006	**MDB rinse blank**	ASTM D5174-97	RADC/27655		
92282945007	**LS-1**	ASTM D5174-97	RADC/27655		
92282945001	**MDB-1**	EPA 8315	TAMP/8430	EPA 8315	TAMP/8451
92282945002	**MDB-2**	EPA 8315	TAMP/8430	EPA 8315	TAMP/8451
92282945003	**MDB-3**	EPA 8315	TAMP/8430	EPA 8315	TAMP/8451
92282945004	**MDB-4**	EPA 8315	TAMP/8430	EPA 8315	TAMP/8451
92282945005	**MDB-4 DUP**	EPA 8315	TAMP/8430	EPA 8315	TAMP/8451
92282945006	**MDB rinse blank**	EPA 8315	TAMP/8430	EPA 8315	TAMP/8451
92282945007	**LS-1**	EPA 8315	TAMP/8430	EPA 8315	TAMP/8451
92282945001	**MDB-1**	EPA 9040	WET/42529		
92282945002	**MDB-2**	EPA 9040	WET/42529		
92282945003	**MDB-3**	EPA 9040	WET/42529		
92282945004	**MDB-4**	EPA 9040	WET/42529		
92282945005	**MDB-4 DUP**	EPA 9040	WET/42529		
92282945006	**MDB rinse blank**	EPA 9040	WET/42529		
92282945007	**LS-1**	EPA 9040	WET/42529		
92282945001	**MDB-1**	EPA 300.0	WETA/26112		
92282945002	**MDB-2**	EPA 300.0	WETA/26112		
92282945003	**MDB-3**	EPA 300.0	WETA/26112		
92282945004	**MDB-4**	EPA 300.0	WETA/26112		
92282945005	**MDB-4 DUP**	EPA 300.0	WETA/26112		
92282945006	**MDB rinse blank**	EPA 300.0	WETA/26112		
92282945007	**LS-1**	EPA 300.0	WETA/26112		
92282945001	**MDB-1**	EPA 350.1	WETA/26109		
92282945002	**MDB-2**	EPA 350.1	WETA/26109		
92282945003	**MDB-3**	EPA 350.1	WETA/26109		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Wright Chemical Site
Pace Project No.: 92282945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92282945004	**MDB-4**	EPA 350.1	WETA/26109		
92282945005	**MDB-4 DUP**	EPA 350.1	WETA/26109		
92282945006	**MDB rinse blank**	EPA 350.1	WETA/26109		
92282945007	**LS-1**	EPA 350.1	WETA/26109		
92282945001	**MDB-1**	EPA 353.2	WETA/26092		
92282945002	**MDB-2**	EPA 353.2	WETA/26092		
92282945003	**MDB-3**	EPA 353.2	WETA/26092		
92282945004	**MDB-4**	EPA 353.2	WETA/26092		
92282945005	**MDB-4 DUP**	EPA 353.2	WETA/26092		
92282945006	**MDB rinse blank**	EPA 353.2	WETA/26092		
92282945007	**LS-1**	EPA 353.2	WETA/26092		
92282945001	**MDB-1**	EPA 365.1	WETA/26144		
92282945002	**MDB-2**	EPA 365.1	WETA/26144		
92282945003	**MDB-3**	EPA 365.1	WETA/26144		
92282945004	**MDB-4**	EPA 365.1	WETA/26144		
92282945005	**MDB-4 DUP**	EPA 365.1	WETA/26144		
92282945006	**MDB rinse blank**	EPA 365.1	WETA/26144		
92282945007	**LS-1**	EPA 365.1	WETA/26144		
92282945001	**MDB-1**	SM 4500-Cl-E	WETA/26139		
92282945002	**MDB-2**	SM 4500-Cl-E	WETA/26139		
92282945003	**MDB-3**	SM 4500-Cl-E	WETA/26139		
92282945004	**MDB-4**	SM 4500-Cl-E	WETA/26139		
92282945005	**MDB-4 DUP**	SM 4500-Cl-E	WETA/26139		
92282945006	**MDB rinse blank**	SM 4500-Cl-E	WETA/26139		
92282945007	**LS-1**	SM 4500-Cl-E	WETA/26139		
92282945001	**MDB-1**	SM 4500-CN-E	WETA/26095		
92282945002	**MDB-2**	SM 4500-CN-E	WETA/26095		
92282945003	**MDB-3**	SM 4500-CN-E	WETA/26095		
92282945004	**MDB-4**	SM 4500-CN-E	WETA/26095		
92282945005	**MDB-4 DUP**	SM 4500-CN-E	WETA/26095		
92282945006	**MDB rinse blank**	SM 4500-CN-E	WETA/26095		
92282945007	**LS-1**	SM 4500-CN-E	WETA/26095		
92282945001	**MDB-1**	SM 4500-P E	WETA/26090		
92282945002	**MDB-2**	SM 4500-P E	WETA/26090		
92282945003	**MDB-3**	SM 4500-P E	WETA/26090		
92282945004	**MDB-4**	SM 4500-P E	WETA/26090		
92282945005	**MDB-4 DUP**	SM 4500-P E	WETA/26090		
92282945006	**MDB rinse blank**	SM 4500-P E	WETA/26090		
92282945007	**LS-1**	SM 4500-P E	WETA/26090		

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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:

Company: Shield Engineering
Address: 4301 Tarrant Creek Rd
Charlotte NC 28205
Email To: dave.stone@shieldengineering.com
Phone: 704-377-0403 Fax:
Requested Due Date: Standard

Section B — Required Project Information:

Report To: David Stone
Copy To:
Purchase Order #:
Project Name:
Project Number:

Section C — Invoice Information:

Attention: David Stone
Company Name: Shield
Address:
Pace Quote:
Pace Project Manager:
Pace Profile #: 7739-4

Regulatory Agency

State / Location: NC

Requested Analysis Filtered (Y/N)

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 (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 (2016)	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	TCL VOCs + TICs	TCL SVOCs + TICs	TCL Pesticides	TAL Metals	Cyanide	NH3/PO4	NO2/NO3/Ortho-P	pH/Cl/F/SO4	RAD	Formaldehyde		Residual Chlorine (Y/N)	92282945
1	MDB-1	WT	G	1/13	1335				17	8	1	4	3	1					X	X	X	X	X	X	X	X	X	X			001
2	MDB-2				1515														X	X	X	X	X	X	X	X	X	X			002
3	MDB-3				1530														X	X	X	X	X	X	X	X	X	X			003
4	MDB-4				1600														X	X	X	X	X	X	X	X	X	X			004
5	MDB-4 dup				1610														X	X	X	X	X	X	X	X	X	X			005
6	MDB rinse blank				1650														X	X	X	X	X	X	X	X	X	X			006
7	LS-1				1000														X	X	X	X	X	X	X	X	X	X			007
8	trip blank				—				2				2						X												008
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Ayla Homer	1/13/16	1800	J. Dixon / Pace	1/13/16	1800				
				Smart / Pace HVL	1-14-16	0930	31	4	N	4

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matthew Smith Ayla Homer

SIGNATURE of SAMPLER: [signature] DATE Signed: 1/13/16

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

WO# : 92282945

92282945

ATTACHMENT J

STORMWATER

LABORATORY RESULTS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 21, 2016

Mr. Mike Armour
Shield Engineering
4301 Taggart Creek Road
Charlotte, NC 28208

RE: Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Dear Mr. Armour:
Enclosed are the analytical results for sample(s) received by the laboratory on December 22, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Taylor Ezell for
Nicole Gasiorowski
nicole.gasiorowski@pacelabs.com
Project Manager

Enclosures

cc: Dave Stoner
Dave Wallace

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Pennsylvania Certification IDs

Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
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
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

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
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92281063001	**SA2 SS/SB-42 0.5-1.5**	Solid	12/22/15 09:15	12/22/15 17:47
92281063002	**SA2 SS/SB-22 0.5-1.0**	Solid	12/22/15 09:40	12/22/15 17:47
92281063003	**SA2 SS/SB-22 SPLIT**	Solid	12/22/15 09:45	12/22/15 17:47
92281063004	**MF STORMWATER N**	Water	12/22/15 13:30	12/22/15 17:47
92281063005	**MF STORMWATER W**	Water	12/22/15 13:50	12/22/15 17:47
92281063006	**SWOF-009**	Water	12/22/15 14:55	12/22/15 17:47
92281063007	**TRIP BLANK 1**	Water	12/22/15 00:00	12/22/15 17:47
92281063008	**SILAR RINSE BLANK 3**	Water	12/22/15 16:10	12/22/15 17:47
92281063009	**TRIP BLANK 2**	Water	12/22/15 00:00	12/22/15 17:47

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SAMPLE ANALYTE COUNT

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92281063001	**SA2 SS/SB-42 0.5-1.5**	EPA 8260	DLK	66	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92281063002	**SA2 SS/SB-22 0.5-1.0**	EPA 8260	DLK	56	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92281063003	**SA2 SS/SB-22 SPLIT**	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92281063004	**MF STORMWATER N**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8270	BPJ	74	PASI-C
		EPA 8260	NB	62	PASI-C
		EPA 900.0	FCC	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	JAL	1	PASI-PA
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	BRJ	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	WRC	1	PASI-A
92281063005	**MF STORMWATER W**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8270	BPJ	76	PASI-C
		EPA 8260	NB	60	PASI-C
		EPA 900.0	FCC	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	JAL	1	PASI-PA
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	BRJ	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	AES2	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 4500-Cl-E	SER	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	WRC	1	PASI-A
92281063006	**SWOF-009**	EPA 6010	CDF	19	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8270	RES	74	PASI-C
		EPA 8260	NB	68	PASI-C
		EPA 300.0	MDW	2	PASI-A
		EPA 353.2	DMN	2	PASI-A
		EPA 9012B	AES2	1	PASI-A
92281063007	**TRIP BLANK 1**	EPA 8260	NB	55	PASI-C
92281063008	**SILAR RINSE BLANK 3**	EPA 8081	SWB	22	PASI-C
		EPA 6010	CDF	22	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8270	BPJ	73	PASI-C
		EPA 8260	NB	58	PASI-C
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	JAL	1	PASI-PA
		EPA 9040	MLS	1	PASI-A
		EPA 300.0	MDW	2	PASI-A
		EPA 350.1	SER	1	PASI-A
		EPA 353.2	BRJ	3	PASI-A
		EPA 353.2	SER	1	PASI-A
		EPA 365.1	AES2	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 4500-P E	WRC	1	PASI-A
92281063009	**TRIP BLANK 2**	EPA 8260	NB	58	PASI-C

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 8081**
Description: 8081 Organochlorine Pesticides
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for EPA 8081. 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 3510 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: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Shield
Date: January 21, 2016

General Information:
4 samples were analyzed for EPA 6010. 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 3010A 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.

QC Batch: MPRP/20382

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92280986001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1637321)
  - Aluminum
  - Iron
- MSD (Lab ID: 1637322)
  - Aluminum
  - Calcium
  - Iron

QC Batch: MPRP/20389

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92281141001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1638248)
  - Calcium

Additional Comments:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 7470**
Description: 7470 Mercury
Client: Shield
Date: January 21, 2016

General Information:
4 samples were analyzed for EPA 7470. 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 7470 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.

QC Batch: MERP/8841

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92281062001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1640839)
  - Mercury
- MSD (Lab ID: 1640840)
  - Mercury

Additional Comments:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 8270**
Description: 8270 MSSV HVI Semivol Organic
Client: Shield
Date: January 21, 2016

General Information:
1 sample was analyzed for EPA 8270. 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 3510 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: OEXT/39962

S0: Surrogate recovery outside laboratory control limits.

- SWOF-009 (Lab ID: 92281063006)
  - 2,4,6-Tribromophenol (S)
  - 2-Fluorophenol (S)
  - Phenol-d6 (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.

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: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 8270**
Description: 8270 MSSV HVI Semivol Organic
Client: Shield
Date: January 21, 2016

Analyte Comments:

QC Batch: OEXT/39962

1g: Sample re-extracted outside method hold time. Results of re-analysis confirmed original analysis performed within hold time.

- SWOF-009 (Lab ID: 92281063006)
  - Nitrobenzene-d5 (S)

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for EPA 8270. 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 3510 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: OEXT/39986

S0: Surrogate recovery outside laboratory control limits.

- MF STORMWATER N (Lab ID: 92281063004)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Nitrobenzene-d5 (S)
  - Phenol-d6 (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.

QC Batch: OEXT/39986

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1637749)
  - 4,6-Dinitro-2-methylphenol
  - Butylbenzylphthalate
  - Di-n-octylphthalate

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Shield
Date: January 21, 2016

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

QC Batch: OEXT/39986

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92280918008

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1637750)
  - Butylbenzylphthalate
  - Di-n-octylphthalate

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1637750)
  - 2,4,5-Trichlorophenol
  - 2,4-Dinitrotoluene
  - 2,6-Dinitrotoluene
  - 2-Chloronaphthalene
  - Benzaldehyde
  - Caprolactam
  - Di-n-butylphthalate
  - bis(2-Ethylhexyl)phthalate

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

Additional Comments:

Analyte Comments:

QC Batch: OEXT/39986

1g: Sample re-extracted outside method hold time. Results of re-analysis confirmed original analysis performed within hold time.

- MF STORMWATER N (Lab ID: 92281063004)
  - Nitrobenzene-d5 (S)

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: Shield
Date: January 21, 2016

General Information:
6 samples were analyzed for EPA 8260. 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.

QC Batch: MSV/35002

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92281063006

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1639489)
  - 1,1,2-Trichlorotrifluoroethane
  - 1,4-Dioxane (p-Dioxane)
  - Bromochloromethane
  - Carbon disulfide

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: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for EPA 8260. 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.

QC Batch: MSV/34958

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1638153)
  - Methylene Chloride

Additional Comments:

Analyte Comments:

QC Batch: MSV/34958

C9: Common Laboratory Contaminant.

- DUP (Lab ID: 1638153)
  - Methylene Chloride

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 900.0**
Description: 900.0 Gross Alpha/Beta
Client: Shield
Date: January 21, 2016

General Information:
2 samples were analyzed for EPA 900.0. 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:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 900.0**
Description: 900.0 Gross Alpha/Beta
Client: Shield
Date: January 21, 2016

General Information:
1 sample was analyzed for EPA 900.0. 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:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for EPA 903.1. 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:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for EPA 904.0. 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:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **ASTM D5174-97**
Description: D517497 Total Uranium KPA
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for ASTM D5174-97. 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:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 9040**
Description: 9040 pH
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for EPA 9040. 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.

H6: Analysis initiated outside of the 15 minute EPA recommended holding time.
- MF STORMWATER N (Lab ID: 92281063004)
- MF STORMWATER W (Lab ID: 92281063005)
- SILAR RINSE BLANK 3 (Lab ID: 92281063008)

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.

QC Batch: WET/42196

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 1637736)
  - pH
- DUP (Lab ID: 1637737)
  - pH

Additional Comments:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Shield
Date: January 21, 2016

General Information:
4 samples were analyzed for EPA 300.0. 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.

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: WETA/25935

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92281063004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 1637651)
  - Fluoride

Additional Comments:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 350.1**
Description: 350.1 Ammonia
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for EPA 350.1. 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.

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: WETA/25963

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92280720003,92281123001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1638888)
  - Nitrogen, Ammonia
- MS (Lab ID: 1638890)
  - Nitrogen, Ammonia
- MSD (Lab ID: 1638889)
  - Nitrogen, Ammonia
- MSD (Lab ID: 1638891)
  - Nitrogen, Ammonia

Additional Comments:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Shield
Date: January 21, 2016

General Information:
4 samples were analyzed for EPA 353.2. 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.

H1: Analysis conducted outside the EPA method holding time.
- SILAR RINSE BLANK 3 (Lab ID: 92281063008)

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.

QC Batch: WETA/25966

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92281299001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 1638910)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrate
- MSD (Lab ID: 1638911)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite

Additional Comments:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Shield
Date: January 21, 2016

General Information:
1 sample was analyzed for EPA 353.2. 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.

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: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 365.1**
Description: 365.1 Phosphorus, Total
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for EPA 365.1. 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.

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: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **SM 4500-Cl-E**
Description: 4500 Chloride
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for SM 4500-Cl-E. 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.

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: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **SM 4500-CN-E**
Description: 4500CNE Cyanide, Total
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for SM 4500-CN-E. 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.

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: WETA/25951

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92280826001,92281020001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1638266)
  - Cyanide
- MSD (Lab ID: 1638267)
  - Cyanide

QC Batch: WETA/25952

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92280899006

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1638272)
  - Cyanide
- MSD (Lab ID: 1638273)
  - Cyanide

R1: RPD value was outside control limits.

- MSD (Lab ID: 1638273)
  - Cyanide

Additional Comments:

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PROJECT NARRATIVE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **SM 4500-P E**
Description: SM4500P-E, Phosphate, Ortho
Client: Shield
Date: January 21, 2016

General Information:
3 samples were analyzed for SM 4500-P E. 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.

H3: Sample was received or analysis requested beyond the recognized method holding time.
- SILAR RINSE BLANK 3 (Lab ID: 92281063008)

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: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Method: **EPA 9012B**
Description: 9012B Cyanide, Total
Client: Shield
Date: January 21, 2016

General Information:
1 sample was analyzed for EPA 9012B. 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.

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:

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

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SA2 SS/SB-42 0.5-1.5 **Lab ID: 92281063001** Collected: 12/22/15 09:15 Received: 12/22/15 17:47 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	98.2	9.8	1		12/28/15 19:20	67-64-1	
Benzene	ND	ug/kg	4.9	1.6	1		12/28/15 19:20	71-43-2	
Bromochloromethane	ND	ug/kg	4.9	1.7	1		12/28/15 19:20	74-97-5	
Bromodichloromethane	ND	ug/kg	4.9	1.9	1		12/28/15 19:20	75-27-4	
Bromoform	ND	ug/kg	4.9	2.3	1		12/28/15 19:20	75-25-2	
Bromomethane	ND	ug/kg	9.8	2.5	1		12/28/15 19:20	74-83-9	
2-Butanone (MEK)	ND	ug/kg	98.2	2.8	1		12/28/15 19:20	78-93-3	
Carbon disulfide	ND	ug/kg	9.8	2.9	1		12/28/15 19:20	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.9	2.6	1		12/28/15 19:20	56-23-5	
Chlorobenzene	ND	ug/kg	4.9	1.9	1		12/28/15 19:20	108-90-7	
Chloroethane	ND	ug/kg	9.8	2.4	1		12/28/15 19:20	75-00-3	
Chloroform	ND	ug/kg	4.9	1.6	1		12/28/15 19:20	67-66-3	
Chloromethane	ND	ug/kg	9.8	2.4	1		12/28/15 19:20	74-87-3	
Cyclohexane	ND	ug/kg	4.9	1.6	1		12/28/15 19:20	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.9	3.5	1		12/28/15 19:20	96-12-8	
Dibromochloromethane	ND	ug/kg	4.9	1.8	1		12/28/15 19:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.9	1.8	1		12/28/15 19:20	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	4.9	1.9	1		12/28/15 19:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.9	2.0	1		12/28/15 19:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.9	1.7	1		12/28/15 19:20	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	9.8	3.5	1		12/28/15 19:20	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.9	1.5	1		12/28/15 19:20	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.9	2.2	1		12/28/15 19:20	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.9	1.8	1		12/28/15 19:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.9	1.4	1		12/28/15 19:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.9	1.9	1		12/28/15 19:20	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.9	1.7	1		12/28/15 19:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	4.9	1.8	1		12/28/15 19:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.9	1.5	1		12/28/15 19:20	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	147	118	1		12/28/15 19:20	123-91-1	
Ethylbenzene	**3.2J**	ug/kg	4.9	1.8	1		12/28/15 19:20	100-41-4	
2-Hexanone	ND	ug/kg	49.1	3.8	1		12/28/15 19:20	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.9	1.9	1		12/28/15 19:20	98-82-8	
Methyl acetate	ND	ug/kg	9.8	1.4	1		12/28/15 19:20	79-20-9	
Methylcyclohexane	ND	ug/kg	9.8	1.5	1		12/28/15 19:20	108-87-2	
Methylene Chloride	**9.1J**	ug/kg	19.6	2.9	1		12/28/15 19:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	49.1	3.6	1		12/28/15 19:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.9	1.5	1		12/28/15 19:20	1634-04-4	
Styrene	ND	ug/kg	4.9	1.8	1		12/28/15 19:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.9	1.9	1		12/28/15 19:20	79-34-5	
Tetrachloroethene	ND	ug/kg	4.9	1.7	1		12/28/15 19:20	127-18-4	
Toluene	ND	ug/kg	4.9	1.8	1		12/28/15 19:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.9	2.2	1		12/28/15 19:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.9	1.6	1		12/28/15 19:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.9	1.8	1		12/28/15 19:20	71-55-6	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SA2 SS/SB-42 0.5-1.5 **Lab ID: 92281063001** Collected: 12/22/15 09:15 Received: 12/22/15 17:47 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
1,1,2-Trichloroethane	ND	ug/kg	4.9	2.1	1		12/28/15 19:20	79-00-5	
Trichloroethene	ND	ug/kg	4.9	2.1	1		12/28/15 19:20	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.9	2.2	1		12/28/15 19:20	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	4.9	1.9	1		12/28/15 19:20	76-13-1	
Vinyl chloride	ND	ug/kg	9.8	1.8	1		12/28/15 19:20	75-01-4	
m&p-Xylene	ND	ug/kg	9.8	3.5	1		12/28/15 19:20	179601-23-1	
o-Xylene	ND	ug/kg	4.9	1.9	1		12/28/15 19:20	95-47-6	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		12/28/15 19:20	2037-26-5	
4-Bromofluorobenzene (S)	98	%	70-130		1		12/28/15 19:20	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-132		1		12/28/15 19:20	17060-07-0	
Tentatively Identified Compounds									
Pentane, 2-methyl-	**9.6**	ug/kg			1		12/28/15 19:20	107-83-5	N
Cyclopentane, methyl-	**48.0**	ug/kg			1		12/28/15 19:20	96-37-7	N
Silanol, dimethyl(1,1,2-	**253**	ug/kg			1		12/28/15 19:20	55644-10-5	N
Disiloxane, hexamethyl-	**333**	ug/kg			1		12/28/15 19:20	107-46-0	N
Benzene, 1,3-diethyl-	**27.6**	ug/kg			1		12/28/15 19:20	141-93-5	N
C-10 or larger alkane	**40.1**	ug/kg			1		12/28/15 19:20		N
C-10 or larger alkane	**7.0**	ug/kg			1		12/28/15 19:20		N
Decane, 3,6-dimethyl-	**14.5**	ug/kg			1		12/28/15 19:20	17312-53-7	N
Unknown	**17.0**	ug/kg			1		12/28/15 19:20		N
Biphenyl	**6.3**	ug/kg			1		12/28/15 19:20	92-52-4	N
Diphenyl ether	**26.0**	ug/kg			1		12/28/15 19:20	101-84-8	N
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**6.4**	%	0.10	0.10	1		12/28/15 09:03		

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SA2 SS/SB-22 0.5-1.0 **Lab ID: 92281063002** Collected: 12/22/15 09:40 Received: 12/22/15 17:47 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	**26.4J**	ug/kg	126	12.6	1		12/28/15 19:40	67-64-1	
Benzene	ND	ug/kg	6.3	2.0	1		12/28/15 19:40	71-43-2	
Bromochloromethane	ND	ug/kg	6.3	2.1	1		12/28/15 19:40	74-97-5	
Bromodichloromethane	ND	ug/kg	6.3	2.4	1		12/28/15 19:40	75-27-4	
Bromoform	ND	ug/kg	6.3	2.9	1		12/28/15 19:40	75-25-2	
Bromomethane	ND	ug/kg	12.6	3.2	1		12/28/15 19:40	74-83-9	
2-Butanone (MEK)	ND	ug/kg	126	3.7	1		12/28/15 19:40	78-93-3	
Carbon disulfide	ND	ug/kg	12.6	3.8	1		12/28/15 19:40	75-15-0	
Carbon tetrachloride	ND	ug/kg	6.3	3.3	1		12/28/15 19:40	56-23-5	
Chlorobenzene	ND	ug/kg	6.3	2.4	1		12/28/15 19:40	108-90-7	
Chloroethane	ND	ug/kg	12.6	3.0	1		12/28/15 19:40	75-00-3	
Chloroform	ND	ug/kg	6.3	2.0	1		12/28/15 19:40	67-66-3	
Chloromethane	ND	ug/kg	12.6	3.0	1		12/28/15 19:40	74-87-3	
Cyclohexane	ND	ug/kg	6.3	2.0	1		12/28/15 19:40	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.3	4.6	1		12/28/15 19:40	96-12-8	
Dibromochloromethane	ND	ug/kg	6.3	2.3	1		12/28/15 19:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.3	2.3	1		12/28/15 19:40	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	6.3	2.4	1		12/28/15 19:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.3	2.5	1		12/28/15 19:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.3	2.1	1		12/28/15 19:40	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.6	4.6	1		12/28/15 19:40	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.3	1.9	1		12/28/15 19:40	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.3	2.8	1		12/28/15 19:40	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.3	2.3	1		12/28/15 19:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.3	1.8	1		12/28/15 19:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.3	2.4	1		12/28/15 19:40	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.3	2.1	1		12/28/15 19:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	6.3	2.3	1		12/28/15 19:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.3	1.9	1		12/28/15 19:40	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	190	152	1		12/28/15 19:40	123-91-1	
Ethylbenzene	ND	ug/kg	6.3	2.3	1		12/28/15 19:40	100-41-4	
2-Hexanone	ND	ug/kg	63.2	4.9	1		12/28/15 19:40	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.3	2.4	1		12/28/15 19:40	98-82-8	
Methyl acetate	ND	ug/kg	12.6	1.8	1		12/28/15 19:40	79-20-9	
Methylcyclohexane	ND	ug/kg	12.6	1.9	1		12/28/15 19:40	108-87-2	
Methylene Chloride	**4.2J**	ug/kg	25.3	3.8	1		12/28/15 19:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	63.2	4.7	1		12/28/15 19:40	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.3	1.9	1		12/28/15 19:40	1634-04-4	
Styrene	ND	ug/kg	6.3	2.3	1		12/28/15 19:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.3	2.4	1		12/28/15 19:40	79-34-5	
Tetrachloroethene	ND	ug/kg	6.3	2.1	1		12/28/15 19:40	127-18-4	
Toluene	ND	ug/kg	6.3	2.3	1		12/28/15 19:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.3	2.8	1		12/28/15 19:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.3	2.0	1		12/28/15 19:40	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.3	2.3	1		12/28/15 19:40	71-55-6	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SA2 SS/SB-22 0.5-1.0 **Lab ID: 92281063002** Collected: 12/22/15 09:40 Received: 12/22/15 17:47 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
1,1,2-Trichloroethane	ND	ug/kg	6.3	2.7	1		12/28/15 19:40	79-00-5	
Trichloroethene	ND	ug/kg	6.3	2.7	1		12/28/15 19:40	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.3	2.8	1		12/28/15 19:40	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	6.3	2.4	1		12/28/15 19:40	76-13-1	
Vinyl chloride	ND	ug/kg	12.6	2.3	1		12/28/15 19:40	75-01-4	
m&p-Xylene	ND	ug/kg	12.6	4.6	1		12/28/15 19:40	179601-23-1	
o-Xylene	ND	ug/kg	6.3	2.4	1		12/28/15 19:40	95-47-6	
Surrogates									
Toluene-d8 (S)	100	%	70-130		1		12/28/15 19:40	2037-26-5	
4-Bromofluorobenzene (S)	97	%	70-130		1		12/28/15 19:40	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-132		1		12/28/15 19:40	17060-07-0	
Tentatively Identified Compounds									
Diphenyl ether	**8.9**	ug/kg			1		12/28/15 19:40	101-84-8	N
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**6.1**	%	0.10	0.10	1		12/28/15 09:03		

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SA2 SS/SB-22 SPLIT **Lab ID: 92281063003** Collected: 12/22/15 09:45 Received: 12/22/15 17:47 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	**13.2J**	ug/kg	91.0	9.1	1		12/28/15 20:00	67-64-1	
Benzene	ND	ug/kg	4.5	1.5	1		12/28/15 20:00	71-43-2	
Bromochloromethane	ND	ug/kg	4.5	1.5	1		12/28/15 20:00	74-97-5	
Bromodichloromethane	ND	ug/kg	4.5	1.7	1		12/28/15 20:00	75-27-4	
Bromoform	ND	ug/kg	4.5	2.1	1		12/28/15 20:00	75-25-2	
Bromomethane	ND	ug/kg	9.1	2.3	1		12/28/15 20:00	74-83-9	
2-Butanone (MEK)	ND	ug/kg	91.0	2.6	1		12/28/15 20:00	78-93-3	
Carbon disulfide	ND	ug/kg	9.1	2.7	1		12/28/15 20:00	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.5	2.4	1		12/28/15 20:00	56-23-5	
Chlorobenzene	ND	ug/kg	4.5	1.7	1		12/28/15 20:00	108-90-7	
Chloroethane	ND	ug/kg	9.1	2.2	1		12/28/15 20:00	75-00-3	
Chloroform	ND	ug/kg	4.5	1.5	1		12/28/15 20:00	67-66-3	
Chloromethane	ND	ug/kg	9.1	2.2	1		12/28/15 20:00	74-87-3	
Cyclohexane	ND	ug/kg	4.5	1.5	1		12/28/15 20:00	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.5	3.3	1		12/28/15 20:00	96-12-8	
Dibromochloromethane	ND	ug/kg	4.5	1.6	1		12/28/15 20:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.5	1.6	1		12/28/15 20:00	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	4.5	1.7	1		12/28/15 20:00	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.5	1.8	1		12/28/15 20:00	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.5	1.5	1		12/28/15 20:00	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	9.1	3.3	1		12/28/15 20:00	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.5	1.4	1		12/28/15 20:00	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.5	2.0	1		12/28/15 20:00	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.5	1.6	1		12/28/15 20:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.5	1.3	1		12/28/15 20:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.5	1.7	1		12/28/15 20:00	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.5	1.5	1		12/28/15 20:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	4.5	1.6	1		12/28/15 20:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.5	1.4	1		12/28/15 20:00	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	136	109	1		12/28/15 20:00	123-91-1	
Ethylbenzene	ND	ug/kg	4.5	1.6	1		12/28/15 20:00	100-41-4	
2-Hexanone	ND	ug/kg	45.5	3.5	1		12/28/15 20:00	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.5	1.7	1		12/28/15 20:00	98-82-8	
Methyl acetate	ND	ug/kg	9.1	1.3	1		12/28/15 20:00	79-20-9	
Methylcyclohexane	ND	ug/kg	9.1	1.4	1		12/28/15 20:00	108-87-2	
Methylene Chloride	ND	ug/kg	18.2	2.7	1		12/28/15 20:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	45.5	3.4	1		12/28/15 20:00	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.5	1.4	1		12/28/15 20:00	1634-04-4	
Styrene	ND	ug/kg	4.5	1.6	1		12/28/15 20:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.5	1.7	1		12/28/15 20:00	79-34-5	
Tetrachloroethene	ND	ug/kg	4.5	1.5	1		12/28/15 20:00	127-18-4	
Toluene	ND	ug/kg	4.5	1.6	1		12/28/15 20:00	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.5	2.0	1		12/28/15 20:00	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.5	1.5	1		12/28/15 20:00	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.5	1.6	1		12/28/15 20:00	71-55-6	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SA2 SS/SB-22 SPLIT **Lab ID: 92281063003** Collected: 12/22/15 09:45 Received: 12/22/15 17:47 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	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
1,1,2-Trichloroethane	ND	ug/kg	4.5	1.9	1		12/28/15 20:00	79-00-5	
Trichloroethene	ND	ug/kg	4.5	1.9	1		12/28/15 20:00	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.5	2.0	1		12/28/15 20:00	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	4.5	1.7	1		12/28/15 20:00	76-13-1	
Vinyl chloride	ND	ug/kg	9.1	1.6	1		12/28/15 20:00	75-01-4	
m&p-Xylene	ND	ug/kg	9.1	3.3	1		12/28/15 20:00	179601-23-1	
o-Xylene	ND	ug/kg	4.5	1.7	1		12/28/15 20:00	95-47-6	
Surrogates									
Toluene-d8 (S)	100	%	70-130		1		12/28/15 20:00	2037-26-5	
4-Bromofluorobenzene (S)	95	%	70-130		1		12/28/15 20:00	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-132		1		12/28/15 20:00	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**5.1**	%	0.10	0.10	1		12/28/15 09:03		

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER N **Lab ID: 92281063004** Collected: 12/22/15 13:30 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	12/28/15 15:35	12/31/15 17:57	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 17:57	1024-57-3	
Methoxychlor	ND	ug/L	0.15	0.15	1	12/28/15 15:35	12/31/15 17:57	72-43-5	
Toxaphene	ND	ug/L	0.20	0.20	1	12/28/15 15:35	12/31/15 17:57	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	50	%	20-130		1	12/28/15 15:35	12/31/15 17:57	877-09-8	
Decachlorobiphenyl (S)	23	%	20-130		1	12/28/15 15:35	12/31/15 17:57	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**1260**	ug/L	100	50.0	1	12/24/15 18:30	12/28/15 20:56	7429-90-5	
Antimony	ND	ug/L	5.0	3.9	1	12/24/15 18:30	12/28/15 20:56	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	12/24/15 18:30	12/28/15 20:56	7440-38-2	
Barium	**4.9J**	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 20:56	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/24/15 18:30	12/28/15 20:56	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/24/15 18:30	12/28/15 20:56	7440-43-9	
Calcium	**3750**	ug/L	100	50.0	1	12/24/15 18:30	12/28/15 20:56	7440-70-2	
Chromium	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 20:56	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 20:56	7440-48-4	
Copper	**5.1**	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 20:56	7440-50-8	
Iron	**870**	ug/L	50.0	25.0	1	12/24/15 18:30	12/28/15 20:56	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 20:56	7439-92-1	
Magnesium	**335**	ug/L	100	50.0	1	12/24/15 18:30	12/28/15 20:56	7439-95-4	
Manganese	**9.5**	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 20:56	7439-96-5	
Nickel	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 20:56	7440-02-0	
Potassium	ND	ug/L	5000	2500	1	12/24/15 18:30	12/28/15 20:56	7440-09-7	
Selenium	ND	ug/L	10.0	5.0	1	12/24/15 18:30	12/28/15 20:56	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 20:56	7440-22-4	
Sodium	ND	ug/L	5000	2500	1	12/24/15 18:30	12/28/15 20:56	7440-23-5	
Thallium	ND	ug/L	10.0	5.0	1	12/24/15 18:30	12/28/15 20:56	7440-28-0	
Vanadium	**5.4**	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 20:56	7440-62-2	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER N **Lab ID: 92281063004** Collected: 12/22/15 13:30 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	**11.8**	ug/L	10.0	5.0	1	12/24/15 18:30	12/28/15 20:56	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	ND	ug/L	0.20	0.10	1	12/28/15 15:30	12/29/15 13:33	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	12/28/15 10:40	01/08/16 11:29	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 11:29	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	12/28/15 10:40	01/08/16 11:29	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	12/28/15 10:40	01/08/16 11:29	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	12/28/15 10:40	01/08/16 11:29	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	12/28/15 10:40	01/08/16 11:29	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	12/28/15 10:40	01/08/16 11:29	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	12/28/15 10:40	01/08/16 11:29	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	12/28/15 10:40	01/08/16 11:29	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	12/28/15 10:40	01/08/16 11:29	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	12/28/15 10:40	01/08/16 11:29	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	12/28/15 10:40	01/08/16 11:29	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	12/28/15 10:40	01/08/16 11:29	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	12/28/15 10:40	01/08/16 11:29	85-68-7	L3
Caprolactam	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 11:29	105-60-2	
Carbazole	ND	ug/L	10.0	0.73	1	12/28/15 10:40	01/08/16 11:29	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	12/28/15 10:40	01/08/16 11:29	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	12/28/15 10:40	01/08/16 11:29	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:29	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 11:29	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	12/28/15 10:40	01/08/16 11:29	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 11:29	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	12/28/15 10:40	01/08/16 11:29	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 11:29	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	12/28/15 10:40	01/08/16 11:29	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 11:29	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	12/28/15 10:40	01/08/16 11:29	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:29	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	12/28/15 10:40	01/08/16 11:29	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	12/28/15 10:40	01/08/16 11:29	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 11:29	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	12/28/15 10:40	01/08/16 11:29	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	12/28/15 10:40	01/08/16 11:29	534-52-1	L2
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	12/28/15 10:40	01/08/16 11:29	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	12/28/15 10:40	01/08/16 11:29	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:29	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	12/28/15 10:40	01/08/16 11:29	117-84-0	L3
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	12/28/15 10:40	01/08/16 11:29	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 11:29	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 11:29	86-73-7	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER N **Lab ID: 92281063004** Collected: 12/22/15 13:30 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 11:29	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	12/28/15 10:40	01/08/16 11:29	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 11:29	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 11:29	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	12/28/15 10:40	01/08/16 11:29	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 11:29	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	12/28/15 10:40	01/08/16 11:29	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:29	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:29		
Naphthalene	ND	ug/L	10.0	0.34	1	12/28/15 10:40	01/08/16 11:29	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	12/28/15 10:40	01/08/16 11:29	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	12/28/15 10:40	01/08/16 11:29	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	12/28/15 10:40	01/08/16 11:29	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:29	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:29	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	12/28/15 10:40	01/08/16 11:29	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	12/28/15 10:40	01/08/16 11:29	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	12/28/15 10:40	01/08/16 11:29	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	12/28/15 10:40	01/08/16 11:29	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	12/28/15 10:40	01/08/16 11:29	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	12/28/15 10:40	01/08/16 11:29	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:29	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	12/28/15 10:40	01/08/16 11:29	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:29	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	12/28/15 10:40	01/08/16 11:29	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	12/28/15 10:40	01/08/16 11:29	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	12/28/15 10:40	01/08/16 11:29	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	19	%	21-110		1	12/28/15 10:40	01/08/16 11:29	4165-60-0	1g,S0
2-Fluorobiphenyl (S)	17	%	27-110		1	12/28/15 10:40	01/08/16 11:29	321-60-8	S0
Terphenyl-d14 (S)	68	%	31-107		1	12/28/15 10:40	01/08/16 11:29	1718-51-0	
Phenol-d6 (S)	6	%	10-110		1	12/28/15 10:40	01/08/16 11:29	13127-88-3	S0
2-Fluorophenol (S)	8	%	12-110		1	12/28/15 10:40	01/08/16 11:29	367-12-4	S0
2,4,6-Tribromophenol (S)	50	%	27-110		1	12/28/15 10:40	01/08/16 11:29	118-79-6	
Tentatively Identified Compounds									
Unknown	**11.1**	ug/L			1	12/28/15 10:40	01/08/16 11:29		N
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		12/30/15 18:05	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		12/30/15 18:05	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		12/30/15 18:05	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/30/15 18:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		12/30/15 18:05	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		12/30/15 18:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		12/30/15 18:05	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		12/30/15 18:05	75-15-0	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER N **Lab ID: 92281063004** Collected: 12/22/15 13:30 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/30/15 18:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		12/30/15 18:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		12/30/15 18:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		12/30/15 18:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/30/15 18:05	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		12/30/15 18:05	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		12/30/15 18:05	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		12/30/15 18:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/30/15 18:05	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		12/30/15 18:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		12/30/15 18:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/30/15 18:05	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		12/30/15 18:05	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		12/30/15 18:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		12/30/15 18:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		12/30/15 18:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		12/30/15 18:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		12/30/15 18:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/30/15 18:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/30/15 18:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/30/15 18:05	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		12/30/15 18:05	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/30/15 18:05	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		12/30/15 18:05	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		12/30/15 18:05	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		12/30/15 18:05	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		12/30/15 18:05	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		12/30/15 18:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		12/30/15 18:05	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		12/30/15 18:05	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		12/30/15 18:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		12/30/15 18:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/30/15 18:05	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/30/15 18:05	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		12/30/15 18:05	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		12/30/15 18:05	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/30/15 18:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/30/15 18:05	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/30/15 18:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/30/15 18:05	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		12/30/15 18:05	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/30/15 18:05	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		12/30/15 18:05	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		12/30/15 18:05	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		12/30/15 18:05	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER N **Lab ID: 92281063004** Collected: 12/22/15 13:30 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		12/30/15 18:05	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		12/30/15 18:05	2037-26-5	
Tentatively Identified Compounds									
Unknown	**5.1**	ug/L			1		12/30/15 18:05		N
Methylene Chloride	**10.8**	ug/L			1		12/30/15 18:05	75-09-2	N
Silanol, trimethyl-	**5.4**	ug/L			1		12/30/15 18:05	1066-40-6	N
Cyclotrisiloxane, hexame	**19.9**	ug/L			1		12/30/15 18:05	541-05-9	N
Unknown	**141**	ug/L			1		12/30/15 18:05		N
Unknown	**142**	ug/L			1		12/30/15 18:05		N
Unknown	**6.4**	ug/L			1		12/30/15 18:05		N
9040 pH	Analytical Method: EPA 9040								
pH	**6.4**	Std. Units	0.10	0.10	1		12/28/15 14:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.50	0.25	1		12/28/15 11:29	16984-48-8	M1
Sulfate	**1.6J**	mg/L	2.0	1.0	1		12/28/15 11:29	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.20**	mg/L	0.10	0.050	1		12/31/15 00:49	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.010J**	mg/L	0.020	0.010	1		12/24/15 11:17		
Nitrogen, Nitrite	**0.026**	mg/L	0.020	0.010	1		12/24/15 11:17		
Nitrogen, NO2 plus NO3	**0.037**	mg/L	0.020	0.010	1		12/24/15 11:17		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**0.11**	mg/L	0.050	0.025	1		12/26/15 11:38	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**3.3**	mg/L	1.0	0.50	1		12/30/15 01:18	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0080	0.0040	1		12/30/15 15:55	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.059**	mg/L	0.050	0.025	1		12/23/15 22:20		

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER W **Lab ID: 92281063005** Collected: 12/22/15 13:50 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	12/28/15 15:35	12/31/15 18:32	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 18:32	1024-57-3	
Methoxychlor	ND	ug/L	0.15	0.15	1	12/28/15 15:35	12/31/15 18:32	72-43-5	
Toxaphene	ND	ug/L	0.20	0.20	1	12/28/15 15:35	12/31/15 18:32	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	65	%	20-130		1	12/28/15 15:35	12/31/15 18:32	877-09-8	
Decachlorobiphenyl (S)	38	%	20-130		1	12/28/15 15:35	12/31/15 18:32	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**913**	ug/L	100	50.0	1	12/24/15 18:30	12/28/15 21:08	7429-90-5	
Antimony	ND	ug/L	5.0	3.9	1	12/24/15 18:30	12/28/15 21:08	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	12/24/15 18:30	12/28/15 21:08	7440-38-2	
Barium	**5.4**	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:08	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/24/15 18:30	12/28/15 21:08	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/24/15 18:30	12/28/15 21:08	7440-43-9	
Calcium	**8850**	ug/L	100	50.0	1	12/24/15 18:30	12/28/15 21:08	7440-70-2	
Chromium	**3.1J**	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:08	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:08	7440-48-4	
Copper	**9.0**	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:08	7440-50-8	
Iron	**643**	ug/L	50.0	25.0	1	12/24/15 18:30	12/28/15 21:08	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:08	7439-92-1	
Magnesium	**475**	ug/L	100	50.0	1	12/24/15 18:30	12/28/15 21:08	7439-95-4	
Manganese	**18.4**	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:08	7439-96-5	
Nickel	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:08	7440-02-0	
Potassium	ND	ug/L	5000	2500	1	12/24/15 18:30	12/28/15 21:08	7440-09-7	
Selenium	ND	ug/L	10.0	5.0	1	12/24/15 18:30	12/28/15 21:08	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:08	7440-22-4	
Sodium	ND	ug/L	5000	2500	1	12/24/15 18:30	12/28/15 21:08	7440-23-5	
Thallium	ND	ug/L	10.0	5.0	1	12/24/15 18:30	12/28/15 21:08	7440-28-0	
Vanadium	**7.9**	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:08	7440-62-2	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER W **Lab ID: 92281063005** Collected: 12/22/15 13:50 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	**21.1**	ug/L	10.0	5.0	1	12/24/15 18:30	12/28/15 21:08	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	ND	ug/L	0.20	0.10	1	12/28/15 15:30	12/29/15 13:36	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	12/28/15 10:40	01/08/16 11:59	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 11:59	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	12/28/15 10:40	01/08/16 11:59	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	12/28/15 10:40	01/08/16 11:59	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	12/28/15 10:40	01/08/16 11:59	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	12/28/15 10:40	01/08/16 11:59	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	12/28/15 10:40	01/08/16 11:59	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	12/28/15 10:40	01/08/16 11:59	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	12/28/15 10:40	01/08/16 11:59	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	12/28/15 10:40	01/08/16 11:59	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	12/28/15 10:40	01/08/16 11:59	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	12/28/15 10:40	01/08/16 11:59	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	12/28/15 10:40	01/08/16 11:59	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	12/28/15 10:40	01/08/16 11:59	85-68-7	L3
Caprolactam	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 11:59	105-60-2	
Carbazole	ND	ug/L	10.0	0.73	1	12/28/15 10:40	01/08/16 11:59	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	12/28/15 10:40	01/08/16 11:59	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	12/28/15 10:40	01/08/16 11:59	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:59	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 11:59	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	12/28/15 10:40	01/08/16 11:59	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 11:59	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	12/28/15 10:40	01/08/16 11:59	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 11:59	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	12/28/15 10:40	01/08/16 11:59	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 11:59	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	12/28/15 10:40	01/08/16 11:59	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:59	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	12/28/15 10:40	01/08/16 11:59	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	12/28/15 10:40	01/08/16 11:59	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 11:59	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	12/28/15 10:40	01/08/16 11:59	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	12/28/15 10:40	01/08/16 11:59	534-52-1	L2
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	12/28/15 10:40	01/08/16 11:59	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	12/28/15 10:40	01/08/16 11:59	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:59	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	12/28/15 10:40	01/08/16 11:59	117-84-0	L3
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	12/28/15 10:40	01/08/16 11:59	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 11:59	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 11:59	86-73-7	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER W **Lab ID: 92281063005** Collected: 12/22/15 13:50 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 11:59	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	12/28/15 10:40	01/08/16 11:59	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 11:59	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 11:59	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	12/28/15 10:40	01/08/16 11:59	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 11:59	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	12/28/15 10:40	01/08/16 11:59	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:59	95-48-7	
3&4-Methylphenol(m&p Cresol)	**3.8J**	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:59		
Naphthalene	ND	ug/L	10.0	0.34	1	12/28/15 10:40	01/08/16 11:59	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	12/28/15 10:40	01/08/16 11:59	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	12/28/15 10:40	01/08/16 11:59	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	12/28/15 10:40	01/08/16 11:59	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:59	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:59	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	12/28/15 10:40	01/08/16 11:59	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	12/28/15 10:40	01/08/16 11:59	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	12/28/15 10:40	01/08/16 11:59	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	12/28/15 10:40	01/08/16 11:59	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	12/28/15 10:40	01/08/16 11:59	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	12/28/15 10:40	01/08/16 11:59	85-01-8	
Phenol	**2.8J**	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:59	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	12/28/15 10:40	01/08/16 11:59	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 11:59	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	12/28/15 10:40	01/08/16 11:59	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	12/28/15 10:40	01/08/16 11:59	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	12/28/15 10:40	01/08/16 11:59	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	86	%	21-110		1	12/28/15 10:40	01/08/16 11:59	4165-60-0	
2-Fluorobiphenyl (S)	84	%	27-110		1	12/28/15 10:40	01/08/16 11:59	321-60-8	
Terphenyl-d14 (S)	91	%	31-107		1	12/28/15 10:40	01/08/16 11:59	1718-51-0	
Phenol-d6 (S)	38	%	10-110		1	12/28/15 10:40	01/08/16 11:59	13127-88-3	
2-Fluorophenol (S)	47	%	12-110		1	12/28/15 10:40	01/08/16 11:59	367-12-4	
2,4,6-Tribromophenol (S)	94	%	27-110		1	12/28/15 10:40	01/08/16 11:59	118-79-6	
Tentatively Identified Compounds									
Unknown	**6.5**	ug/L			1	12/28/15 10:40	01/08/16 11:59		N
Unknown	**5.2**	ug/L			1	12/28/15 10:40	01/08/16 11:59		N
Unknown	**8.2**	ug/L			1	12/28/15 10:40	01/08/16 11:59		N
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		12/30/15 17:34	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		12/30/15 17:34	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		12/30/15 17:34	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/30/15 17:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		12/30/15 17:34	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		12/30/15 17:34	74-83-9	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER W **Lab ID: 92281063005** Collected: 12/22/15 13:50 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		12/30/15 17:34	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		12/30/15 17:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/30/15 17:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		12/30/15 17:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		12/30/15 17:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		12/30/15 17:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/30/15 17:34	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		12/30/15 17:34	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		12/30/15 17:34	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		12/30/15 17:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/30/15 17:34	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		12/30/15 17:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		12/30/15 17:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/30/15 17:34	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		12/30/15 17:34	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		12/30/15 17:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		12/30/15 17:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		12/30/15 17:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		12/30/15 17:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		12/30/15 17:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/30/15 17:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/30/15 17:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/30/15 17:34	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		12/30/15 17:34	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/30/15 17:34	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		12/30/15 17:34	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		12/30/15 17:34	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		12/30/15 17:34	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		12/30/15 17:34	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		12/30/15 17:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		12/30/15 17:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		12/30/15 17:34	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		12/30/15 17:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		12/30/15 17:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/30/15 17:34	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/30/15 17:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		12/30/15 17:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		12/30/15 17:34	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/30/15 17:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/30/15 17:34	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/30/15 17:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/30/15 17:34	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		12/30/15 17:34	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/30/15 17:34	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		12/30/15 17:34	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		12/30/15 17:34	95-47-6	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER W **Lab ID: 92281063005** Collected: 12/22/15 13:50 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		12/30/15 17:34	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		12/30/15 17:34	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		12/30/15 17:34	2037-26-5	
Tentatively Identified Compounds									
Methylene Chloride	**11.8**	ug/L			1		12/30/15 17:34	75-09-2	N
Cyclotrisiloxane, hexame	**25.6**	ug/L			1		12/30/15 17:34	541-05-9	N
Unknown	**145**	ug/L			1		12/30/15 17:34		N
Unknown	**144**	ug/L			1		12/30/15 17:34		N
Unknown	**7.4**	ug/L			1		12/30/15 17:34		N
9040 pH	Analytical Method: EPA 9040								
pH	**6.6**	Std. Units	0.10	0.10	1		12/28/15 14:40		D6,H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.50	0.25	1		12/28/15 12:27	16984-48-8	
Sulfate	**1.9J**	mg/L	2.0	1.0	1		12/28/15 12:27	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.51**	mg/L	0.10	0.050	1		12/31/15 00:51	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**1.5**	mg/L	0.020	0.010	1		12/24/15 11:19		
Nitrogen, Nitrite	**0.020**	mg/L	0.020	0.010	1		12/24/15 11:19		
Nitrogen, NO2 plus NO3	**1.5**	mg/L	0.020	0.010	1		12/24/15 11:19		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**0.15**	mg/L	0.050	0.025	1		12/26/15 11:39	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**1.9**	mg/L	1.0	0.50	1		12/30/15 01:19	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0080	0.0040	1		12/30/15 15:56	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.065**	mg/L	0.050	0.025	1		12/23/15 22:20		

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SWOF-009 **Lab ID: 92281063006** Collected: 12/22/15 14:55 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	**102**	ug/L	100	50.0	1	12/24/15 18:30	12/28/15 21:11	7429-90-5	
Antimony	ND	ug/L	5.0	3.9	1	12/24/15 18:30	12/28/15 21:11	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	12/24/15 18:30	12/28/15 21:11	7440-38-2	
Barium	**2.8J**	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:11	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/24/15 18:30	12/28/15 21:11	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/24/15 18:30	12/28/15 21:11	7440-43-9	
Calcium	**8790**	ug/L	100	50.0	1	12/24/15 18:30	12/28/15 21:11	7440-70-2	
Chromium	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:11	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:11	7440-48-4	
Iron	**92.8**	ug/L	50.0	25.0	1	12/24/15 18:30	12/28/15 21:11	7439-89-6	
Magnesium	**234**	ug/L	100	50.0	1	12/24/15 18:30	12/28/15 21:11	7439-95-4	
Manganese	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:11	7439-96-5	
Nickel	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:11	7440-02-0	
Potassium	ND	ug/L	5000	2500	1	12/24/15 18:30	12/28/15 21:11	7440-09-7	
Selenium	ND	ug/L	10.0	5.0	1	12/24/15 18:30	12/28/15 21:11	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:11	7440-22-4	
Sodium	ND	ug/L	5000	2500	1	12/24/15 18:30	12/28/15 21:11	7440-23-5	
Thallium	ND	ug/L	10.0	5.0	1	12/24/15 18:30	12/28/15 21:11	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	12/24/15 18:30	12/28/15 21:11	7440-62-2	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	12/28/15 15:30	12/29/15 13:43	7439-97-6	
8270 MSSV HVI Semivol Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Acenaphthene	ND	ug/L	10.0	1.7	1	12/24/15 13:30	12/30/15 13:19	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1.8	1	12/24/15 13:30	12/30/15 13:19	208-96-8	
Aniline	ND	ug/L	10.0	1.3	1	12/24/15 13:30	12/30/15 13:19	62-53-3	
Anthracene	ND	ug/L	10.0	1.1	1	12/24/15 13:30	12/30/15 13:19	120-12-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.72	1	12/24/15 13:30	12/30/15 13:19	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.71	1	12/24/15 13:30	12/30/15 13:19	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.81	1	12/24/15 13:30	12/30/15 13:19	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.97	1	12/24/15 13:30	12/30/15 13:19	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.87	1	12/24/15 13:30	12/30/15 13:19	207-08-9	
Benzoic Acid	ND	ug/L	50.0	11.1	1	12/24/15 13:30	12/30/15 13:19	65-85-0	
Benzyl alcohol	ND	ug/L	20.0	3.4	1	12/24/15 13:30	12/30/15 13:19	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	12/24/15 13:30	12/30/15 13:19	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	12/24/15 13:30	12/30/15 13:19	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	12/24/15 13:30	12/30/15 13:19	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	12/24/15 13:30	12/30/15 13:19	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	12/24/15 13:30	12/30/15 13:19	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	12/24/15 13:30	12/30/15 13:19	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1.6	1	12/24/15 13:30	12/30/15 13:19	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	12/24/15 13:30	12/30/15 13:19	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	12/24/15 13:30	12/30/15 13:19	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	12/24/15 13:30	12/30/15 13:19	7005-72-3	
Chrysene	ND	ug/L	10.0	0.65	1	12/24/15 13:30	12/30/15 13:19	218-01-9	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SWOF-009 **Lab ID: 92281063006** Collected: 12/22/15 14:55 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV HVI Semivol Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.70	1	12/24/15 13:30	12/30/15 13:19	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	12/24/15 13:30	12/30/15 13:19	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	10.0	1.2	1	12/24/15 13:30	12/30/15 13:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	1.1	1	12/24/15 13:30	12/30/15 13:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	1.2	1	12/24/15 13:30	12/30/15 13:19	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	12/24/15 13:30	12/30/15 13:19	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	12/24/15 13:30	12/30/15 13:19	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	12/24/15 13:30	12/30/15 13:19	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	12/24/15 13:30	12/30/15 13:19	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	12/24/15 13:30	12/30/15 13:19	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	12/24/15 13:30	12/30/15 13:19	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	12/24/15 13:30	12/30/15 13:19	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	12/24/15 13:30	12/30/15 13:19	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	12/24/15 13:30	12/30/15 13:19	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	12/24/15 13:30	12/30/15 13:19	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	12/24/15 13:30	12/30/15 13:19	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	12/24/15 13:30	12/30/15 13:19	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.87	1	12/24/15 13:30	12/30/15 13:19	206-44-0	
Fluorene	ND	ug/L	10.0	1.6	1	12/24/15 13:30	12/30/15 13:19	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	12/24/15 13:30	12/30/15 13:19	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	12/24/15 13:30	12/30/15 13:19	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	12/24/15 13:30	12/30/15 13:19	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	12/24/15 13:30	12/30/15 13:19	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1.8	1	12/24/15 13:30	12/30/15 13:19	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	12/24/15 13:30	12/30/15 13:19	78-59-1	
1-Methylnaphthalene	ND	ug/L	10.0	1.8	1	12/24/15 13:30	12/30/15 13:19	90-12-0	
2-Methylnaphthalene	**4.2J**	ug/L	10.0	1.7	1	12/24/15 13:30	12/30/15 13:19	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	12/24/15 13:30	12/30/15 13:19	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	12/24/15 13:30	12/30/15 13:19		
Naphthalene	**19.8**	ug/L	10.0	1.5	1	12/24/15 13:30	12/30/15 13:19	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	12/24/15 13:30	12/30/15 13:19	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	12/24/15 13:30	12/30/15 13:19	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	12/24/15 13:30	12/30/15 13:19	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	12/24/15 13:30	12/30/15 13:19	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	12/24/15 13:30	12/30/15 13:19	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	12/24/15 13:30	12/30/15 13:19	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	10.0	1.3	1	12/24/15 13:30	12/30/15 13:19	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	12/24/15 13:30	12/30/15 13:19	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	12/24/15 13:30	12/30/15 13:19	86-30-6	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	12/24/15 13:30	12/30/15 13:19	87-86-5	
Phenanthrene	ND	ug/L	10.0	1.0	1	12/24/15 13:30	12/30/15 13:19	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	12/24/15 13:30	12/30/15 13:19	108-95-2	
Pyrene	ND	ug/L	10.0	0.53	1	12/24/15 13:30	12/30/15 13:19	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	1.9	1	12/24/15 13:30	12/30/15 13:19	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	12/24/15 13:30	12/30/15 13:19	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	12/24/15 13:30	12/30/15 13:19	88-06-2	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SWOF-009 **Lab ID: 92281063006** Collected: 12/22/15 14:55 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV HVI Semivol Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Surrogates									
Nitrobenzene-d5 (S)	59	%	21-110		1	12/24/15 13:30	12/30/15 13:19	4165-60-0	1g
2-Fluorobiphenyl (S)	52	%	27-110		1	12/24/15 13:30	12/30/15 13:19	321-60-8	
Terphenyl-d14 (S)	83	%	31-107		1	12/24/15 13:30	12/30/15 13:19	1718-51-0	
Phenol-d6 (S)	8	%	10-110		1	12/24/15 13:30	12/30/15 13:19	13127-88-3	S0
2-Fluorophenol (S)	0	%	12-110		1	12/24/15 13:30	12/30/15 13:19	367-12-4	S0
2,4,6-Tribromophenol (S)	7	%	27-110		1	12/24/15 13:30	12/30/15 13:19	118-79-6	S0
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		12/30/15 17:50	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		12/30/15 17:50	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.30	1		12/30/15 17:50	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.17	1		12/30/15 17:50	74-97-5	M1
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/30/15 17:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		12/30/15 17:50	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		12/30/15 17:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		12/30/15 17:50	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/30/15 17:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		12/30/15 17:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		12/30/15 17:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		12/30/15 17:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/30/15 17:50	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.35	1		12/30/15 17:50	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.31	1		12/30/15 17:50	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		12/30/15 17:50	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		12/30/15 17:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/30/15 17:50	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		12/30/15 17:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		12/30/15 17:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		12/30/15 17:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/30/15 17:50	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		12/30/15 17:50	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		12/30/15 17:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		12/30/15 17:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		12/30/15 17:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		12/30/15 17:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		12/30/15 17:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/30/15 17:50	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/30/15 17:50	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		12/30/15 17:50	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		12/30/15 17:50	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/30/15 17:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/30/15 17:50	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		12/30/15 17:50	108-20-3	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/30/15 17:50	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.71	1		12/30/15 17:50	87-68-3	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SWOF-009 **Lab ID: 92281063006** Collected: 12/22/15 14:55 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
2-Hexanone	ND	ug/L	5.0	0.46	1		12/30/15 17:50	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	0.31	1		12/30/15 17:50	99-87-6	
Methylene Chloride	ND	ug/L	2.0	0.97	1		12/30/15 17:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		12/30/15 17:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		12/30/15 17:50	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		12/30/15 17:50	91-20-3	
Styrene	ND	ug/L	1.0	0.26	1		12/30/15 17:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		12/30/15 17:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		12/30/15 17:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/30/15 17:50	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/30/15 17:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		12/30/15 17:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		12/30/15 17:50	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/30/15 17:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/30/15 17:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/30/15 17:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/30/15 17:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/30/15 17:50	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		12/30/15 17:50	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/30/15 17:50	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		12/30/15 17:50	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		12/30/15 17:50	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		12/30/15 17:50	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		12/30/15 17:50	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		12/30/15 17:50	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		12/30/15 17:50	2037-26-5	
Tentatively Identified Compounds									
Methylene Chloride	**10.2**	ug/L			1		12/30/15 17:50	75-09-2	N
Cyclotrisiloxane, hexame	**17.4**	ug/L			1		12/30/15 17:50	541-05-9	N
Unknown	**142**	ug/L			1		12/30/15 17:50		N
Unknown	**142**	ug/L			1		12/30/15 17:50		N
Unknown	**7.6**	ug/L			1		12/30/15 17:50		N
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.50	0.25	1		12/28/15 12:47	16984-48-8	
Sulfate	**2.2**	mg/L	2.0	1.0	1		12/28/15 12:47	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.091**	mg/L	0.020	0.010	1		12/24/15 11:22		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		12/24/15 11:22		
9012B Cyanide, Total	Analytical Method: EPA 9012B Preparation Method: EPA 9012B								
Cyanide	**0.0J**	mg/L	0.0080		1	12/30/15 11:20	12/30/15 15:14	57-12-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: TRIP BLANK 1 **Lab ID: 92281063007** Collected: 12/22/15 00:00 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		12/30/15 17:11	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		12/30/15 17:11	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		12/30/15 17:11	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/30/15 17:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		12/30/15 17:11	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		12/30/15 17:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		12/30/15 17:11	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		12/30/15 17:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/30/15 17:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		12/30/15 17:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		12/30/15 17:11	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		12/30/15 17:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/30/15 17:11	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		12/30/15 17:11	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		12/30/15 17:11	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		12/30/15 17:11	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/30/15 17:11	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		12/30/15 17:11	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		12/30/15 17:11	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/30/15 17:11	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		12/30/15 17:11	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		12/30/15 17:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		12/30/15 17:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		12/30/15 17:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		12/30/15 17:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		12/30/15 17:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/30/15 17:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/30/15 17:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/30/15 17:11	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		12/30/15 17:11	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/30/15 17:11	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		12/30/15 17:11	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		12/30/15 17:11	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		12/30/15 17:11	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		12/30/15 17:11	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		12/30/15 17:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		12/30/15 17:11	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		12/30/15 17:11	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		12/30/15 17:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		12/30/15 17:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/30/15 17:11	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/30/15 17:11	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		12/30/15 17:11	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		12/30/15 17:11	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/30/15 17:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/30/15 17:11	79-00-5	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: TRIP BLANK 1 **Lab ID: 92281063007** Collected: 12/22/15 00:00 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	ND	ug/L	1.0	0.47	1		12/30/15 17:11	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/30/15 17:11	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		12/30/15 17:11	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/30/15 17:11	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		12/30/15 17:11	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		12/30/15 17:11	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		12/30/15 17:11	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		12/30/15 17:11	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		12/30/15 17:11	2037-26-5	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SILAR RINSE BLANK 3 **Lab ID: 92281063008** Collected: 12/22/15 16:10 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	12/28/15 15:35	12/31/15 19:07	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	12/28/15 15:35	12/31/15 19:07	1024-57-3	
Methoxychlor	ND	ug/L	0.15	0.15	1	12/28/15 15:35	12/31/15 19:07	72-43-5	
Toxaphene	ND	ug/L	0.20	0.20	1	12/28/15 15:35	12/31/15 19:07	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	73	%	20-130		1	12/28/15 15:35	12/31/15 19:07	877-09-8	
Decachlorobiphenyl (S)	47	%	20-130		1	12/28/15 15:35	12/31/15 19:07	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Aluminum	ND	ug/L	100	50.0	1	12/29/15 17:15	12/30/15 17:41	7429-90-5	
Antimony	ND	ug/L	5.0	3.9	1	12/29/15 17:15	12/30/15 17:41	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	12/29/15 17:15	12/30/15 17:41	7440-38-2	
Barium	ND	ug/L	5.0	2.5	1	12/29/15 17:15	12/30/15 17:41	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/29/15 17:15	12/30/15 17:41	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/29/15 17:15	12/30/15 17:41	7440-43-9	
Calcium	ND	ug/L	100	50.0	1	12/29/15 17:15	12/30/15 17:41	7440-70-2	
Chromium	ND	ug/L	5.0	2.5	1	12/29/15 17:15	12/30/15 17:41	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	12/29/15 17:15	12/30/15 17:41	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	12/29/15 17:15	12/30/15 17:41	7440-50-8	
Iron	ND	ug/L	50.0	25.0	1	12/29/15 17:15	12/30/15 17:41	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	12/29/15 17:15	12/30/15 17:41	7439-92-1	
Magnesium	ND	ug/L	100	50.0	1	12/29/15 17:15	12/30/15 17:41	7439-95-4	
Manganese	ND	ug/L	5.0	2.5	1	12/29/15 17:15	12/30/15 17:41	7439-96-5	
Nickel	ND	ug/L	5.0	2.5	1	12/29/15 17:15	12/30/15 17:41	7440-02-0	
Potassium	ND	ug/L	5000	2500	1	12/29/15 17:15	12/30/15 17:41	7440-09-7	
Selenium	ND	ug/L	10.0	5.0	1	12/29/15 17:15	12/30/15 17:41	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	12/29/15 17:15	12/30/15 17:41	7440-22-4	
Sodium	ND	ug/L	5000	2500	1	12/29/15 17:15	12/30/15 17:41	7440-23-5	
Thallium	ND	ug/L	10.0	5.0	1	12/29/15 17:15	12/30/15 17:41	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	12/29/15 17:15	12/30/15 17:41	7440-62-2	

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SILAR RINSE BLANK 3 **Lab ID: 92281063008** Collected: 12/22/15 16:10 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010		Preparation Method: EPA 3010A						
Zinc	ND	ug/L	10.0	5.0	1	12/29/15 17:15	12/30/15 17:41	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470		Preparation Method: EPA 7470						
Mercury	ND	ug/L	0.20	0.10	1	01/05/16 18:15	01/06/16 13:16	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270		Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	12/28/15 10:40	01/08/16 10:28	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 10:28	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	12/28/15 10:40	01/08/16 10:28	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	12/28/15 10:40	01/08/16 10:28	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	12/28/15 10:40	01/08/16 10:28	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	12/28/15 10:40	01/08/16 10:28	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	12/28/15 10:40	01/08/16 10:28	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	12/28/15 10:40	01/08/16 10:28	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	12/28/15 10:40	01/08/16 10:28	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	12/28/15 10:40	01/08/16 10:28	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	12/28/15 10:40	01/08/16 10:28	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	12/28/15 10:40	01/08/16 10:28	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	12/28/15 10:40	01/08/16 10:28	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	12/28/15 10:40	01/08/16 10:28	85-68-7	L3
Caprolactam	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 10:28	105-60-2	
Carbazole	ND	ug/L	10.0	0.73	1	12/28/15 10:40	01/08/16 10:28	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	12/28/15 10:40	01/08/16 10:28	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	12/28/15 10:40	01/08/16 10:28	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 10:28	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 10:28	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	12/28/15 10:40	01/08/16 10:28	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 10:28	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	12/28/15 10:40	01/08/16 10:28	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 10:28	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	12/28/15 10:40	01/08/16 10:28	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 10:28	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	12/28/15 10:40	01/08/16 10:28	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 10:28	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	12/28/15 10:40	01/08/16 10:28	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	12/28/15 10:40	01/08/16 10:28	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 10:28	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	12/28/15 10:40	01/08/16 10:28	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	12/28/15 10:40	01/08/16 10:28	534-52-1	L2
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	12/28/15 10:40	01/08/16 10:28	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	12/28/15 10:40	01/08/16 10:28	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 10:28	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	12/28/15 10:40	01/08/16 10:28	117-84-0	L3
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	12/28/15 10:40	01/08/16 10:28	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 10:28	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	12/28/15 10:40	01/08/16 10:28	86-73-7	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SILAR RINSE BLANK 3 **Lab ID: 92281063008** Collected: 12/22/15 16:10 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 10:28	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	12/28/15 10:40	01/08/16 10:28	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 10:28	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	12/28/15 10:40	01/08/16 10:28	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	12/28/15 10:40	01/08/16 10:28	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	12/28/15 10:40	01/08/16 10:28	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	12/28/15 10:40	01/08/16 10:28	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 10:28	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 10:28		
Naphthalene	ND	ug/L	10.0	0.34	1	12/28/15 10:40	01/08/16 10:28	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	12/28/15 10:40	01/08/16 10:28	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	12/28/15 10:40	01/08/16 10:28	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	12/28/15 10:40	01/08/16 10:28	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 10:28	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 10:28	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	12/28/15 10:40	01/08/16 10:28	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	12/28/15 10:40	01/08/16 10:28	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	12/28/15 10:40	01/08/16 10:28	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	12/28/15 10:40	01/08/16 10:28	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	12/28/15 10:40	01/08/16 10:28	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	12/28/15 10:40	01/08/16 10:28	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 10:28	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	12/28/15 10:40	01/08/16 10:28	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	12/28/15 10:40	01/08/16 10:28	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	12/28/15 10:40	01/08/16 10:28	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	12/28/15 10:40	01/08/16 10:28	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	12/28/15 10:40	01/08/16 10:28	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	79	%	21-110		1	12/28/15 10:40	01/08/16 10:28	4165-60-0	
2-Fluorobiphenyl (S)	72	%	27-110		1	12/28/15 10:40	01/08/16 10:28	321-60-8	
Terphenyl-d14 (S)	94	%	31-107		1	12/28/15 10:40	01/08/16 10:28	1718-51-0	
Phenol-d6 (S)	21	%	10-110		1	12/28/15 10:40	01/08/16 10:28	13127-88-3	
2-Fluorophenol (S)	31	%	12-110		1	12/28/15 10:40	01/08/16 10:28	367-12-4	
2,4,6-Tribromophenol (S)	88	%	27-110		1	12/28/15 10:40	01/08/16 10:28	118-79-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		01/03/16 20:25	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		01/03/16 20:25	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		01/03/16 20:25	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/03/16 20:25	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		01/03/16 20:25	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		01/03/16 20:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		01/03/16 20:25	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		01/03/16 20:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/03/16 20:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		01/03/16 20:25	108-90-7	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SILAR RINSE BLANK 3 **Lab ID: 92281063008** Collected: 12/22/15 16:10 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Chloroethane	ND	ug/L	1.0	0.54	1		01/03/16 20:25	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		01/03/16 20:25	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/03/16 20:25	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		01/03/16 20:25	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		01/03/16 20:25	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		01/03/16 20:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/03/16 20:25	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		01/03/16 20:25	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		01/03/16 20:25	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/03/16 20:25	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		01/03/16 20:25	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		01/03/16 20:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		01/03/16 20:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/03/16 20:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/03/16 20:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/03/16 20:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/03/16 20:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/03/16 20:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/03/16 20:25	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		01/03/16 20:25	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/03/16 20:25	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		01/03/16 20:25	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		01/03/16 20:25	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		01/03/16 20:25	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		01/03/16 20:25	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		01/03/16 20:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		01/03/16 20:25	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/03/16 20:25	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		01/03/16 20:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		01/03/16 20:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/03/16 20:25	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/03/16 20:25	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		01/03/16 20:25	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		01/03/16 20:25	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/03/16 20:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/03/16 20:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/03/16 20:25	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/03/16 20:25	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		01/03/16 20:25	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/03/16 20:25	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/03/16 20:25	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/03/16 20:25	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		01/03/16 20:25	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		01/03/16 20:25	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		01/03/16 20:25	2037-26-5	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SILAR RINSE BLANK 3 **Lab ID: 92281063008** Collected: 12/22/15 16:10 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Tentatively Identified Compounds									
Unknown	**8.6**	ug/L			1		01/03/16 20:25		N
Cyclotetrasiloxane, octa	**294**	ug/L			1		01/03/16 20:25	556-67-2	N
Unknown	**119**	ug/L			1		01/03/16 20:25		N
9040 pH	Analytical Method: EPA 9040								
pH	**6.1**	Std. Units	0.10	0.10	1		01/04/16 12:35		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.50	0.25	1		12/29/15 13:05	16984-48-8	
Sulfate	**1.2J**	mg/L	2.0	1.0	1		12/29/15 13:05	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.10	0.050	1		01/04/16 23:52	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.062**	mg/L	0.020	0.010	1		12/30/15 01:57		H1
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		12/30/15 01:57		H1
Nitrogen, NO2 plus NO3	**0.062**	mg/L	0.020	0.010	1		12/30/15 01:57		H1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.064**	mg/L	0.020	0.010	1		01/02/16 04:24		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	ND	mg/L	0.050	0.025	1		01/07/16 13:16	7723-14-0	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	ND	mg/L	1.0	0.50	1		12/30/15 01:23	16887-00-6	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0080	0.0040	1		12/30/15 16:18	57-12-5	
SM4500P-E, Phosphate, Ortho	Analytical Method: SM 4500-P E								
Orthophosphate as P	ND	mg/L	0.050	0.025	1		12/29/15 11:20		H3

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: TRIP BLANK 2 **Lab ID: 92281063009** Collected: 12/22/15 00:00 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		01/03/16 19:34	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		01/03/16 19:34	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		01/03/16 19:34	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/03/16 19:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		01/03/16 19:34	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		01/03/16 19:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		01/03/16 19:34	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		01/03/16 19:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/03/16 19:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		01/03/16 19:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		01/03/16 19:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		01/03/16 19:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/03/16 19:34	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		01/03/16 19:34	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		01/03/16 19:34	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		01/03/16 19:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/03/16 19:34	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		01/03/16 19:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		01/03/16 19:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/03/16 19:34	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		01/03/16 19:34	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		01/03/16 19:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		01/03/16 19:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/03/16 19:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/03/16 19:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/03/16 19:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/03/16 19:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/03/16 19:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/03/16 19:34	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		01/03/16 19:34	123-91-1	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/03/16 19:34	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		01/03/16 19:34	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		01/03/16 19:34	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		01/03/16 19:34	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		01/03/16 19:34	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		01/03/16 19:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		01/03/16 19:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/03/16 19:34	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		01/03/16 19:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		01/03/16 19:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/03/16 19:34	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/03/16 19:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		01/03/16 19:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		01/03/16 19:34	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/03/16 19:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/03/16 19:34	79-00-5	

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ANALYTICAL RESULTS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: TRIP BLANK 2 **Lab ID: 92281063009** Collected: 12/22/15 00:00 Received: 12/22/15 17:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	ND	ug/L	1.0	0.47	1		01/03/16 19:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/03/16 19:34	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		01/03/16 19:34	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/03/16 19:34	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/03/16 19:34	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/03/16 19:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		01/03/16 19:34	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		01/03/16 19:34	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		01/03/16 19:34	2037-26-5	
Tentatively Identified Compounds									
Unknown	**7.9**	ug/L			1		01/03/16 19:34		N
Cyclotetrasiloxane, octa	**313**	ug/L			1		01/03/16 19:34	556-67-2	N
Unknown	**128**	ug/L			1		01/03/16 19:34		N

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: MERP/8829 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 92281063004, 92281063005, 92281063006

METHOD BLANK: 1637699 Matrix: Water
Associated Lab Samples: 92281063004, 92281063005, 92281063006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.10	12/29/15 12:58	

LABORATORY CONTROL SAMPLE: 1637700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.3	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1637701 1637702

Parameter	Units	92280939001 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	92	93	75-125	1	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: MERP/8841
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92281063008

METHOD BLANK: 1640837
Matrix: Water
Associated Lab Samples: 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.10	01/06/16 13:04	

LABORATORY CONTROL SAMPLE: 1640838

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.4	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1640839 1640840

Parameter	Units	92281062001 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	1.3	1.5	49	57	75-125	15	25	M1

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: MPRP/20382 Analysis Method: EPA 6010
QC Batch Method: EPA 3010A Analysis Description: 6010 MET
Associated Lab Samples: 92281063004, 92281063005, 92281063006

METHOD BLANK: 1637319 Matrix: Water
Associated Lab Samples: 92281063004, 92281063005, 92281063006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	50.0	12/28/15 20:07	
Antimony	ug/L	ND	5.0	3.9	12/28/15 20:07	
Arsenic	ug/L	ND	10.0	5.0	12/28/15 20:07	
Barium	ug/L	ND	5.0	2.5	12/28/15 20:07	
Beryllium	ug/L	ND	1.0	0.50	12/28/15 20:07	
Cadmium	ug/L	ND	1.0	0.50	12/28/15 20:07	
Calcium	ug/L	ND	100	50.0	12/28/15 20:07	
Chromium	ug/L	ND	5.0	2.5	12/28/15 20:07	
Cobalt	ug/L	ND	5.0	2.5	12/28/15 20:07	
Copper	ug/L	ND	5.0	2.5	12/28/15 20:07	
Iron	ug/L	ND	50.0	25.0	12/28/15 20:07	
Lead	ug/L	ND	5.0	2.5	12/28/15 20:07	
Magnesium	ug/L	ND	100	50.0	12/28/15 20:07	
Manganese	ug/L	ND	5.0	2.5	12/28/15 20:07	
Nickel	ug/L	ND	5.0	2.5	12/28/15 20:07	
Potassium	ug/L	ND	5000	2500	12/28/15 20:07	
Selenium	ug/L	ND	10.0	5.0	12/28/15 20:07	
Silver	ug/L	ND	5.0	2.5	12/28/15 20:07	
Sodium	ug/L	ND	5000	2500	12/28/15 20:07	
Thallium	ug/L	ND	10.0	5.0	12/28/15 20:07	
Vanadium	ug/L	ND	5.0	2.5	12/28/15 20:07	
Zinc	ug/L	ND	10.0	5.0	12/28/15 20:07	

LABORATORY CONTROL SAMPLE: 1637320

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	4540	91	80-120	
Antimony	ug/L	500	442	88	80-120	
Arsenic	ug/L	500	448	90	80-120	
Barium	ug/L	500	490	98	80-120	
Beryllium	ug/L	500	492	98	80-120	
Cadmium	ug/L	500	472	94	80-120	
Calcium	ug/L	5000	4520	90	80-120	
Chromium	ug/L	500	485	97	80-120	
Cobalt	ug/L	500	465	93	80-120	
Copper	ug/L	500	475	95	80-120	
Iron	ug/L	5000	4580	92	80-120	
Lead	ug/L	500	461	92	80-120	
Magnesium	ug/L	5000	4460	89	80-120	
Manganese	ug/L	500	468	94	80-120	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE: 1637320

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel	ug/L	500	473	95	80-120	
Potassium	ug/L	5000	4610J	92	80-120	
Selenium	ug/L	500	456	91	80-120	
Silver	ug/L	250	220	88	80-120	
Sodium	ug/L	5000	4610J	92	80-120	
Thallium	ug/L	500	468	94	80-120	
Vanadium	ug/L	500	474	95	80-120	
Zinc	ug/L	500	456	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1637321 1637322

Parameter	Units	92280986001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	10900	5000	5000	21000	22900	202	241	75-125	9	20	M1
Antimony	ug/L	ND	500	500	455	535	90	106	75-125	16	20	
Arsenic	ug/L	10.3	500	500	488	571	95	112	75-125	16	20	
Barium	ug/L	151	500	500	665	736	103	117	75-125	10	20	
Beryllium	ug/L	ND	500	500	514	585	103	117	75-125	13	20	
Cadmium	ug/L	ND	500	500	494	575	99	115	75-125	15	20	
Calcium	ug/L	205000	5000	5000	209000	207000	84	40	75-125	1	20	M1
Chromium	ug/L	16.9	500	500	520	590	101	115	75-125	13	20	
Cobalt	ug/L	ND	500	500	470	549	94	110	75-125	15	20	
Copper	ug/L	10.7	500	500	518	602	101	118	75-125	15	20	
Iron	ug/L	23800	5000	5000	30500	32500	134	174	75-125	6	20	M1
Lead	ug/L	27.8	500	500	489	565	92	107	75-125	14	20	
Magnesium	ug/L	10100	5000	5000	14700	15300	92	104	75-125	4	20	
Manganese	ug/L	201	500	500	680	749	96	110	75-125	10	20	
Nickel	ug/L	5.0J	500	500	481	556	95	110	75-125	14	20	
Potassium	ug/L	4150J	5000	5000	9260	9910	102	115	75-125	7	20	
Selenium	ug/L	ND	500	500	447	526	89	105	75-125	16	20	
Silver	ug/L	ND	250	250	231	270	92	108	75-125	15	20	
Sodium	ug/L	13100	5000	5000	17900	18400	96	105	75-125	2	20	
Thallium	ug/L	ND	500	500	474	552	95	110	75-125	15	20	
Vanadium	ug/L	38.7	500	500	540	613	100	115	75-125	13	20	
Zinc	ug/L	174	500	500	629	715	91	108	75-125	13	20	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: MPRP/20389
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 92281063008

METHOD BLANK: 1638246
Matrix: Water
Associated Lab Samples: 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	50.0	12/31/15 11:58	
Antimony	ug/L	ND	5.0	3.9	12/31/15 11:58	
Arsenic	ug/L	ND	10.0	5.0	12/31/15 11:58	
Barium	ug/L	ND	5.0	2.5	12/31/15 11:58	
Beryllium	ug/L	ND	1.0	0.50	12/31/15 11:58	
Cadmium	ug/L	ND	1.0	0.50	12/31/15 11:58	
Calcium	ug/L	ND	100	50.0	12/31/15 11:58	
Chromium	ug/L	ND	5.0	2.5	12/31/15 11:58	
Cobalt	ug/L	ND	5.0	2.5	12/31/15 11:58	
Copper	ug/L	ND	5.0	2.5	12/31/15 11:58	
Iron	ug/L	ND	50.0	25.0	12/31/15 11:58	
Lead	ug/L	ND	5.0	2.5	12/31/15 11:58	
Magnesium	ug/L	ND	100	50.0	12/31/15 11:58	
Manganese	ug/L	ND	5.0	2.5	12/31/15 11:58	
Nickel	ug/L	ND	5.0	2.5	12/31/15 11:58	
Potassium	ug/L	ND	5000	2500	12/31/15 11:58	
Selenium	ug/L	ND	10.0	5.0	12/31/15 11:58	
Silver	ug/L	ND	5.0	2.5	12/31/15 11:58	
Sodium	ug/L	ND	5000	2500	12/31/15 11:58	
Thallium	ug/L	ND	10.0	5.0	12/31/15 11:58	
Vanadium	ug/L	ND	5.0	2.5	12/31/15 11:58	
Zinc	ug/L	ND	10.0	5.0	12/31/15 11:58	

LABORATORY CONTROL SAMPLE: 1638247

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	4350	87	80-120	
Antimony	ug/L	500	467	93	80-120	
Arsenic	ug/L	500	432	86	80-120	
Barium	ug/L	500	441	88	80-120	
Beryllium	ug/L	500	428	86	80-120	
Cadmium	ug/L	500	444	89	80-120	
Calcium	ug/L	5000	4180	84	80-120	
Chromium	ug/L	500	419	84	80-120	
Cobalt	ug/L	500	434	87	80-120	
Copper	ug/L	500	454	91	80-120	
Iron	ug/L	5000	4240	85	80-120	
Lead	ug/L	500	429	86	80-120	
Magnesium	ug/L	5000	4260	85	80-120	
Manganese	ug/L	500	412	82	80-120	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE: 1638247

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel	ug/L	500	434	87	80-120	
Potassium	ug/L	5000	4350J	87	80-120	
Selenium	ug/L	500	447	89	80-120	
Silver	ug/L	250	220	88	80-120	
Sodium	ug/L	5000	4440J	89	80-120	
Thallium	ug/L	500	437	87	80-120	
Vanadium	ug/L	500	423	85	80-120	
Zinc	ug/L	500	410	82	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638248 1638249

Parameter	Units	92281141001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	4230	5000	5000	10100	10300	117	122	75-125	2	20	
Antimony	ug/L	ND	500	500	472	473	94	94	75-125	0	20	
Arsenic	ug/L	ND	500	500	440	446	88	89	75-125	1	20	
Barium	ug/L	14.1	500	500	454	463	88	90	75-125	2	20	
Beryllium	ug/L	ND	500	500	434	441	87	88	75-125	2	20	
Cadmium	ug/L	ND	500	500	448	450	90	90	75-125	1	20	
Calcium	ug/L	46200	5000	5000	49900	50100	73	77	75-125	0	20	M1
Chromium	ug/L	11.5	500	500	427	440	83	86	75-125	3	20	
Cobalt	ug/L	ND	500	500	423	430	84	85	75-125	2	20	
Copper	ug/L	19.0	500	500	485	485	93	93	75-125	0	20	
Iron	ug/L	5490	5000	5000	10300	10500	97	99	75-125	1	20	
Lead	ug/L	ND	500	500	414	421	83	84	75-125	2	20	
Magnesium	ug/L	33600	5000	5000	37500	37700	78	82	75-125	1	20	
Manganese	ug/L	98.0	500	500	506	514	82	83	75-125	1	20	
Nickel	ug/L	15.3	500	500	434	442	84	85	75-125	2	20	
Potassium	ug/L	ND	5000	5000	4750J	4780J	90	91	75-125		20	
Selenium	ug/L	ND	500	500	452	453	90	90	75-125	0	20	
Silver	ug/L	ND	250	250	223	225	89	90	75-125	1	20	
Sodium	ug/L	51100	5000	5000	55500	55700	88	92	75-125	0	20	
Thallium	ug/L	ND	500	500	420	424	84	84	75-125	1	20	
Vanadium	ug/L	15.7	500	500	448	454	86	88	75-125	1	20	
Zinc	ug/L	ND	500	500	407	414	80	82	75-125	2	20	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: MSV/35000
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92281063007

METHOD BLANK: 1639383
Matrix: Water
Associated Lab Samples: 92281063007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	12/30/15 12:55	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	12/30/15 12:55	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	12/30/15 12:55	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	12/30/15 12:55	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	12/30/15 12:55	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	12/30/15 12:55	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	12/30/15 12:55	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	12/30/15 12:55	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	12/30/15 12:55	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	12/30/15 12:55	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	12/30/15 12:55	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	12/30/15 12:55	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	12/30/15 12:55	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	12/30/15 12:55	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	12/30/15 12:55	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	12/30/15 12:55	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	12/30/15 12:55	
2-Hexanone	ug/L	ND	5.0	0.46	12/30/15 12:55	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	12/30/15 12:55	
Acetone	ug/L	ND	25.0	10.0	12/30/15 12:55	
Benzene	ug/L	ND	1.0	0.25	12/30/15 12:55	
Bromochloromethane	ug/L	ND	1.0	0.17	12/30/15 12:55	
Bromodichloromethane	ug/L	ND	1.0	0.18	12/30/15 12:55	
Bromoform	ug/L	ND	1.0	0.26	12/30/15 12:55	
Bromomethane	ug/L	ND	2.0	0.29	12/30/15 12:55	
Carbon disulfide	ug/L	ND	2.0	1.2	12/30/15 12:55	
Carbon tetrachloride	ug/L	ND	1.0	0.25	12/30/15 12:55	
Chlorobenzene	ug/L	ND	1.0	0.23	12/30/15 12:55	
Chloroethane	ug/L	ND	1.0	0.54	12/30/15 12:55	
Chloroform	ug/L	ND	1.0	0.14	12/30/15 12:55	
Chloromethane	ug/L	ND	1.0	0.11	12/30/15 12:55	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	12/30/15 12:55	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	12/30/15 12:55	
Cyclohexane	ug/L	ND	1.0	0.36	12/30/15 12:55	
Dibromochloromethane	ug/L	ND	1.0	0.21	12/30/15 12:55	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	12/30/15 12:55	
Ethylbenzene	ug/L	ND	1.0	0.30	12/30/15 12:55	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	12/30/15 12:55	
m&p-Xylene	ug/L	ND	2.0	0.66	12/30/15 12:55	
Methyl acetate	ug/L	ND	10.0	0.82	12/30/15 12:55	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	12/30/15 12:55	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

METHOD BLANK: 1639383 Matrix: Water
Associated Lab Samples: 92281063007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	12/30/15 12:55	
Methylene Chloride	ug/L	ND	2.0	0.97	12/30/15 12:55	
o-Xylene	ug/L	ND	1.0	0.23	12/30/15 12:55	
Styrene	ug/L	ND	1.0	0.26	12/30/15 12:55	
Tetrachloroethene	ug/L	ND	1.0	0.46	12/30/15 12:55	
Toluene	ug/L	ND	1.0	0.26	12/30/15 12:55	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	12/30/15 12:55	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	12/30/15 12:55	
Trichloroethene	ug/L	ND	1.0	0.47	12/30/15 12:55	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	12/30/15 12:55	
Vinyl chloride	ug/L	ND	1.0	0.62	12/30/15 12:55	
1,2-Dichloroethane-d4 (S)	%	92	70-130		12/30/15 12:55	
4-Bromofluorobenzene (S)	%	101	70-130		12/30/15 12:55	
Toluene-d8 (S)	%	100	70-130		12/30/15 12:55	

LABORATORY CONTROL SAMPLE: 1639384

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	41.9	84	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.4	91	70-130	
1,1,2-Trichloroethane	ug/L	50	41.5	83	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	48.9	98	70-130	
1,1-Dichloroethane	ug/L	50	43.1	86	70-130	
1,1-Dichloroethene	ug/L	50	43.5	87	70-132	
1,2,3-Trichlorobenzene	ug/L	50	42.4	85	70-135	
1,2,4-Trichlorobenzene	ug/L	50	42.4	85	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	42.1	84	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	44.2	88	70-130	
1,2-Dichlorobenzene	ug/L	50	42.1	84	70-130	
1,2-Dichloroethane	ug/L	50	37.7	75	70-130	
1,2-Dichloropropane	ug/L	50	41.8	84	70-130	
1,3-Dichlorobenzene	ug/L	50	44.4	89	70-130	
1,4-Dichlorobenzene	ug/L	50	44.5	89	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	902	90	71-125	
2-Butanone (MEK)	ug/L	100	80.6	81	70-145	
2-Hexanone	ug/L	100	78.7	79	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	79.7	80	70-140	
Acetone	ug/L	100	87.8	88	50-175	
Benzene	ug/L	50	44.3	89	70-130	
Bromochloromethane	ug/L	50	45.9	92	70-130	
Bromodichloromethane	ug/L	50	42.1	84	70-130	
Bromoform	ug/L	50	41.7	83	70-130	
Bromomethane	ug/L	50	57.1	114	54-130	
Carbon disulfide	ug/L	50	54.9	110	70-131	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE: 1639384

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	39.7	79	70-132	
Chlorobenzene	ug/L	50	43.2	86	70-130	
Chloroethane	ug/L	50	49.9	100	64-134	
Chloroform	ug/L	50	42.3	85	70-130	
Chloromethane	ug/L	50	38.0	76	64-130	
cis-1,2-Dichloroethene	ug/L	50	42.7	85	70-131	
cis-1,3-Dichloropropene	ug/L	50	44.2	88	70-130	
Cyclohexane	ug/L	50	44.4	89	70-130	
Dibromochloromethane	ug/L	50	43.2	86	70-130	
Dichlorodifluoromethane	ug/L	50	42.2	84	56-130	
Ethylbenzene	ug/L	50	42.8	86	70-130	
Isopropylbenzene (Cumene)	ug/L	50	45.5	91	70-130	
m&p-Xylene	ug/L	100	85.9	86	70-130	
Methyl acetate	ug/L	50	45.4	91	70-130	
Methyl-tert-butyl ether	ug/L	50	45.8	92	70-130	
Methylcyclohexane	ug/L	50	47.2	94	70-130	
Methylene Chloride	ug/L	50	41.7	83	63-130	
o-Xylene	ug/L	50	42.2	84	70-130	
Styrene	ug/L	50	43.5	87	70-130	
Tetrachloroethene	ug/L	50	40.9	82	70-130	
Toluene	ug/L	50	43.8	88	70-130	
trans-1,2-Dichloroethene	ug/L	50	45.0	90	70-130	
trans-1,3-Dichloropropene	ug/L	50	41.3	83	70-132	
Trichloroethene	ug/L	50	43.3	87	70-130	
Trichlorofluoromethane	ug/L	50	43.3	87	62-133	
Vinyl chloride	ug/L	50	48.2	96	50-150	
1,2-Dichloroethane-d4 (S)	%			91	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 1639385

Parameter	Units	92281126007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	20	20.7	104	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	19.3	97	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	18.8	94	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	23.2	116	70-130	
1,1-Dichloroethane	ug/L	ND	20	20.7	104	70-130	
1,1-Dichloroethene	ug/L	ND	20	21.4	107	70-166	
1,2,3-Trichlorobenzene	ug/L	ND	20	17.8	89	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	18.2	91	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	19.0	95	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.8	99	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	18.6	93	70-130	
1,2-Dichloroethane	ug/L	ND	20	18.7	94	70-130	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

MATRIX SPIKE SAMPLE: 1639385

Parameter	Units	92281126007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	ug/L	ND	20	19.8	99	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	19.9	99	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	20.3	102	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	403	101	70-130	
2-Butanone (MEK)	ug/L	ND	40	38.4	96	70-130	
2-Hexanone	ug/L	ND	40	39.8	99	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	39.2	98	70-130	
Acetone	ug/L	ND	40	44.9	112	70-130	
Benzene	ug/L	ND	20	20.4	102	70-148	
Bromochloromethane	ug/L	ND	20	20.5	102	70-130	
Bromodichloromethane	ug/L	ND	20	19.7	99	70-130	
Bromoform	ug/L	ND	20	18.1	90	70-130	
Bromomethane	ug/L	ND	20	21.7	108	70-130	
Carbon disulfide	ug/L	ND	20	24.0	120	70-130	
Carbon tetrachloride	ug/L	ND	20	20.6	103	70-130	
Chlorobenzene	ug/L	ND	20	20.4	102	70-146	
Chloroethane	ug/L	ND	20	22.9	115	70-130	
Chloroform	ug/L	ND	20	20.8	104	70-130	
Chloromethane	ug/L	ND	20	18.4	92	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	20.1	101	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	19.3	96	70-130	
Cyclohexane	ug/L	ND	20	21.2	106	70-130	
Dibromochloromethane	ug/L	ND	20	19.5	98	70-130	
Dichlorodifluoromethane	ug/L	ND	20	21.7	109	70-130	
Ethylbenzene	ug/L	ND	20	20.0	100	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	20	21.1	106	70-130	
m&p-Xylene	ug/L	ND	40	40.0	100	70-130	
Methyl acetate	ug/L	ND	20	20.8	104	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	21.7	105	70-130	
Methylcyclohexane	ug/L	ND	20	21.4	107	70-130	
Methylene Chloride	ug/L	ND	20	20.2	101	70-130	
o-Xylene	ug/L	ND	20	19.9	100	70-130	
Styrene	ug/L	ND	20	19.8	99	70-130	
Tetrachloroethene	ug/L	ND	20	20.2	101	70-130	
Toluene	ug/L	ND	20	20.1	100	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	21.9	110	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	18.5	92	70-130	
Trichloroethene	ug/L	ND	20	20.5	103	69-151	
Trichlorofluoromethane	ug/L	ND	20	22.7	114	70-130	
Vinyl chloride	ug/L	ND	20	23.1	116	70-130	
1,2-Dichloroethane-d4 (S)	%				97	70-130	
4-Bromofluorobenzene (S)	%				106	70-130	
Toluene-d8 (S)	%				100	70-130	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

SAMPLE DUPLICATE: 1639386

Parameter	Units	92281126006 Result	Dup Result	RPD	Max RPD	Qualifiers
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	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	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	
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	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	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	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Cyclohexane	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl acetate	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	10.6	10.6	0	30	
Methylcyclohexane	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	0.47J		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

SAMPLE DUPLICATE: 1639386

Parameter	Units	92281126006 Result	Dup Result	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	99	100	1		
4-Bromofluorobenzene (S)	%	108	106	1		
Toluene-d8 (S)	%	99	100	1		

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: MSV/35002 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92281063004, 92281063005, 92281063006

METHOD BLANK: 1639487 Matrix: Water
Associated Lab Samples: 92281063004, 92281063005, 92281063006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.33	12/30/15 16:46	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	12/30/15 16:46	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	12/30/15 16:46	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	12/30/15 16:46	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	12/30/15 16:46	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	12/30/15 16:46	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	12/30/15 16:46	
1,1-Dichloropropene	ug/L	ND	1.0	0.49	12/30/15 16:46	
1,2,3-Trichlorobenzene	ug/L	0.36J	1.0	0.33	12/30/15 16:46	
1,2,3-Trichloropropane	ug/L	ND	1.0	0.41	12/30/15 16:46	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	12/30/15 16:46	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	12/30/15 16:46	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	12/30/15 16:46	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	12/30/15 16:46	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	12/30/15 16:46	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	12/30/15 16:46	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	12/30/15 16:46	
1,3-Dichloropropane	ug/L	ND	1.0	0.28	12/30/15 16:46	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	12/30/15 16:46	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	12/30/15 16:46	
2,2-Dichloropropane	ug/L	ND	1.0	0.13	12/30/15 16:46	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	12/30/15 16:46	
2-Chlorotoluene	ug/L	ND	1.0	0.35	12/30/15 16:46	
2-Hexanone	ug/L	ND	5.0	0.46	12/30/15 16:46	
4-Chlorotoluene	ug/L	ND	1.0	0.31	12/30/15 16:46	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	12/30/15 16:46	
Acetone	ug/L	ND	25.0	10.0	12/30/15 16:46	
Benzene	ug/L	ND	1.0	0.25	12/30/15 16:46	
Bromobenzene	ug/L	ND	1.0	0.30	12/30/15 16:46	
Bromochloromethane	ug/L	ND	1.0	0.17	12/30/15 16:46	
Bromodichloromethane	ug/L	ND	1.0	0.18	12/30/15 16:46	
Bromoform	ug/L	ND	1.0	0.26	12/30/15 16:46	
Bromomethane	ug/L	ND	2.0	0.29	12/30/15 16:46	
Carbon disulfide	ug/L	ND	2.0	1.2	12/30/15 16:46	
Carbon tetrachloride	ug/L	ND	1.0	0.25	12/30/15 16:46	
Chlorobenzene	ug/L	ND	1.0	0.23	12/30/15 16:46	
Chloroethane	ug/L	ND	1.0	0.54	12/30/15 16:46	
Chloroform	ug/L	ND	1.0	0.14	12/30/15 16:46	
Chloromethane	ug/L	ND	1.0	0.11	12/30/15 16:46	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	12/30/15 16:46	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	12/30/15 16:46	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

METHOD BLANK: 1639487 Matrix: Water
Associated Lab Samples: 92281063004, 92281063005, 92281063006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyclohexane	ug/L	ND	1.0	0.36	12/30/15 16:46	
Dibromochloromethane	ug/L	ND	1.0	0.21	12/30/15 16:46	
Dibromomethane	ug/L	ND	1.0	0.21	12/30/15 16:46	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	12/30/15 16:46	
Diisopropyl ether	ug/L	ND	1.0	0.12	12/30/15 16:46	
Ethylbenzene	ug/L	ND	1.0	0.30	12/30/15 16:46	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	0.71	12/30/15 16:46	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	12/30/15 16:46	
m&p-Xylene	ug/L	ND	2.0	0.66	12/30/15 16:46	
Methyl acetate	ug/L	ND	10.0	0.82	12/30/15 16:46	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	12/30/15 16:46	
Methylcyclohexane	ug/L	ND	10.0	1.9	12/30/15 16:46	
Methylene Chloride	ug/L	ND	2.0	0.97	12/30/15 16:46	
Naphthalene	ug/L	0.39J	1.0	0.24	12/30/15 16:46	
o-Xylene	ug/L	ND	1.0	0.23	12/30/15 16:46	
p-Isopropyltoluene	ug/L	ND	1.0	0.31	12/30/15 16:46	
Styrene	ug/L	ND	1.0	0.26	12/30/15 16:46	
Tetrachloroethene	ug/L	ND	1.0	0.46	12/30/15 16:46	
Toluene	ug/L	ND	1.0	0.26	12/30/15 16:46	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	12/30/15 16:46	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	12/30/15 16:46	
Trichloroethene	ug/L	ND	1.0	0.47	12/30/15 16:46	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	12/30/15 16:46	
Vinyl acetate	ug/L	ND	2.0	0.35	12/30/15 16:46	
Vinyl chloride	ug/L	ND	1.0	0.62	12/30/15 16:46	
Xylene (Total)	ug/L	ND	2.0	0.66	12/30/15 16:46	
1,2-Dichloroethane-d4 (S)	%	98	70-130		12/30/15 16:46	
4-Bromofluorobenzene (S)	%	99	70-130		12/30/15 16:46	
Toluene-d8 (S)	%	98	70-130		12/30/15 16:46	

LABORATORY CONTROL SAMPLE: 1639488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	43.6	87	70-130	
1,1,1-Trichloroethane	ug/L	50	47.9	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	41.1	82	70-130	
1,1,2-Trichloroethane	ug/L	50	43.6	87	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	54.1	108	70-130	
1,1-Dichloroethane	ug/L	50	43.3	87	70-130	
1,1-Dichloroethene	ug/L	50	46.7	93	70-132	
1,1-Dichloropropene	ug/L	50	48.1	96	70-130	
1,2,3-Trichlorobenzene	ug/L	50	48.1	96	70-135	
1,2,3-Trichloropropane	ug/L	50	40.1	80	70-130	
1,2,4-Trichlorobenzene	ug/L	50	50.1	100	70-134	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE: 1639488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	50	48.0	96	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	42.7	85	70-130	
1,2-Dichlorobenzene	ug/L	50	44.2	88	70-130	
1,2-Dichloroethane	ug/L	50	42.4	85	70-130	
1,2-Dichloropropane	ug/L	50	42.0	84	70-130	
1,3-Dichlorobenzene	ug/L	50	44.8	90	70-130	
1,3-Dichloropropane	ug/L	50	40.6	81	70-130	
1,4-Dichlorobenzene	ug/L	50	44.5	89	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	1110	111	71-125	
2,2-Dichloropropane	ug/L	50	49.3	99	58-145	
2-Butanone (MEK)	ug/L	100	86.5	87	70-145	
2-Chlorotoluene	ug/L	50	41.8	84	70-130	
2-Hexanone	ug/L	100	98.7	99	70-144	
4-Chlorotoluene	ug/L	50	42.5	85	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	89.1	89	70-140	
Acetone	ug/L	100	97.4	97	50-175	
Benzene	ug/L	50	43.9	88	70-130	
Bromobenzene	ug/L	50	43.2	86	70-130	
Bromochloromethane	ug/L	50	51.9	104	70-130	
Bromodichloromethane	ug/L	50	45.8	92	70-130	
Bromoform	ug/L	50	45.5	91	70-130	
Bromomethane	ug/L	50	41.0	82	54-130	
Carbon disulfide	ug/L	50	54.7	109	70-131	
Carbon tetrachloride	ug/L	50	49.5	99	70-132	
Chlorobenzene	ug/L	50	42.7	85	70-130	
Chloroethane	ug/L	50	38.4	77	64-134	
Chloroform	ug/L	50	44.2	88	70-130	
Chloromethane	ug/L	50	47.2	94	64-130	
cis-1,2-Dichloroethene	ug/L	50	43.3	87	70-131	
cis-1,3-Dichloropropene	ug/L	50	44.7	89	70-130	
Cyclohexane	ug/L	50	50.1	100	70-130	
Dibromochloromethane	ug/L	50	45.7	91	70-130	
Dibromomethane	ug/L	50	45.3	91	70-131	
Dichlorodifluoromethane	ug/L	50	43.4	87	56-130	
Diisopropyl ether	ug/L	50	46.5	93	70-130	
Ethylbenzene	ug/L	50	42.7	85	70-130	
Hexachloro-1,3-butadiene	ug/L	50	64.8	130	70-130	
Isopropylbenzene (Cumene)	ug/L	50	45.7	91	70-130	
m&p-Xylene	ug/L	100	85.1	85	70-130	
Methyl acetate	ug/L	50	47.6	95	70-130	
Methyl-tert-butyl ether	ug/L	50	47.9	96	70-130	
Methylcyclohexane	ug/L	50	49.8	100	70-130	
Methylene Chloride	ug/L	50	45.4	91	63-130	
Naphthalene	ug/L	50	49.2	98	70-138	
o-Xylene	ug/L	50	42.1	84	70-130	
p-Isopropyltoluene	ug/L	50	46.0	92	70-130	
Styrene	ug/L	50	43.8	88	70-130	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE: 1639488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	50	42.4	85	70-130	
Toluene	ug/L	50	43.8	88	70-130	
trans-1,2-Dichloroethene	ug/L	50	46.5	93	70-130	
trans-1,3-Dichloropropene	ug/L	50	44.0	88	70-132	
Trichloroethene	ug/L	50	46.1	92	70-130	
Trichlorofluoromethane	ug/L	50	44.1	88	62-133	
Vinyl acetate	ug/L	100	92.5	93	66-157	
Vinyl chloride	ug/L	50	45.6	91	50-150	
Xylene (Total)	ug/L	150	127	85	70-130	
1,2-Dichloroethane-d4 (S)	%			94	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 1639489

Parameter	Units	92281063006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	19.8	99	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	23.7	118	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.5	92	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	19.7	99	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	27.4	137	70-130	M1
1,1-Dichloroethane	ug/L	ND	20	21.3	107	70-130	
1,1-Dichloroethene	ug/L	ND	20	23.3	116	70-166	
1,1-Dichloropropene	ug/L	ND	20	23.3	117	70-130	
1,2,3-Trichlorobenzene	ug/L	ND	20	19.5	98	70-130	
1,2,3-Trichloropropane	ug/L	ND	20	18.0	90	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	20.4	102	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	18.5	92	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.2	96	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	19.8	99	70-130	
1,2-Dichloroethane	ug/L	ND	20	19.7	98	70-130	
1,2-Dichloropropane	ug/L	ND	20	19.6	98	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	19.5	98	70-130	
1,3-Dichloropropane	ug/L	ND	20	18.5	93	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	20.7	103	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	228	57	70-130	M1
2,2-Dichloropropane	ug/L	ND	20	23.0	115	70-130	
2-Butanone (MEK)	ug/L	ND	40	40.1	100	70-130	
2-Chlorotoluene	ug/L	ND	20	19.6	98	70-130	
2-Hexanone	ug/L	ND	40	38.4	96	70-130	
4-Chlorotoluene	ug/L	ND	20	19.3	96	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	39.2	98	70-130	
Acetone	ug/L	ND	40	40.6	102	70-130	
Benzene	ug/L	ND	20	21.0	105	70-148	
Bromobenzene	ug/L	ND	20	18.8	94	70-130	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

MATRIX SPIKE SAMPLE: 1639489

Parameter	Units	92281063006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromochloromethane	ug/L	ND	20	26.4	132	70-130	M1
Bromodichloromethane	ug/L	ND	20	20.3	101	70-130	
Bromoform	ug/L	ND	20	17.9	90	70-130	
Bromomethane	ug/L	ND	20	14.7	73	70-130	
Carbon disulfide	ug/L	ND	20	26.3	131	70-130	M1
Carbon tetrachloride	ug/L	ND	20	24.0	120	70-130	
Chlorobenzene	ug/L	ND	20	19.6	98	70-146	
Chloroethane	ug/L	ND	20	24.1	121	70-130	
Chloroform	ug/L	ND	20	21.3	106	70-130	
Chloromethane	ug/L	ND	20	18.4	92	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	21.3	107	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	19.9	99	70-130	
Cyclohexane	ug/L	ND	20	24.2	121	70-130	
Dibromochloromethane	ug/L	ND	20	19.6	98	70-130	
Dibromomethane	ug/L	ND	20	21.0	105	70-130	
Dichlorodifluoromethane	ug/L	ND	20	21.9	110	70-130	
Diisopropyl ether	ug/L	ND	20	21.9	109	70-130	
Ethylbenzene	ug/L	ND	20	19.8	99	70-130	
Hexachloro-1,3-butadiene	ug/L	ND	20	26.1	130	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	20	22.3	111	70-130	
m&p-Xylene	ug/L	ND	40	39.5	99	70-130	
Methyl acetate	ug/L	ND	20	20.1	100	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	22.2	111	70-130	
Methylcyclohexane	ug/L	ND	20	22.6	113	70-130	
Methylene Chloride	ug/L	ND	20	20.3	101	70-130	
Naphthalene	ug/L	ND	20	20.9	104	70-130	
o-Xylene	ug/L	ND	20	19.2	96	70-130	
p-Isopropyltoluene	ug/L	ND	20	19.9	100	70-130	
Styrene	ug/L	ND	20	19.4	97	70-130	
Tetrachloroethene	ug/L	ND	20	20.6	103	70-130	
Toluene	ug/L	ND	20	20.6	103	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	23.1	115	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	19.1	96	70-130	
Trichloroethene	ug/L	ND	20	21.4	107	69-151	
Trichlorofluoromethane	ug/L	ND	20	23.3	117	70-130	
Vinyl acetate	ug/L	ND	40	39.5	99	70-130	
Vinyl chloride	ug/L	ND	20	21.3	106	70-130	
1,2-Dichloroethane-d4 (S)	%				98	70-130	
4-Bromofluorobenzene (S)	%				101	70-130	
Toluene-d8 (S)	%				99	70-130	

SAMPLE DUPLICATE: 1639490

Parameter	Units	92281141001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

SAMPLE DUPLICATE: 1639490

Parameter	Units	92281141001 Result	Dup Result	RPD	Max RPD	Qualifiers
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	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	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	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	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	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Cyclohexane	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

SAMPLE DUPLICATE: 1639490

Parameter	Units	92281141001 Result	Dup Result	RPD	Max RPD	Qualifiers
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl acetate	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylcyclohexane	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	
p-Isopropyltoluene	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	
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)	%	106	107	1		
4-Bromofluorobenzene (S)	%	100	101	1		
Toluene-d8 (S)	%	100	97	3		

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: MSV/35033 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92281063008, 92281063009

METHOD BLANK: 1640381 | Matrix: Water
Associated Lab Samples: 92281063008, 92281063009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	01/03/16 18:43	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	01/03/16 18:43	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	01/03/16 18:43	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	01/03/16 18:43	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	01/03/16 18:43	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	01/03/16 18:43	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	01/03/16 18:43	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	01/03/16 18:43	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	01/03/16 18:43	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	01/03/16 18:43	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	01/03/16 18:43	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	01/03/16 18:43	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	01/03/16 18:43	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	01/03/16 18:43	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	01/03/16 18:43	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	01/03/16 18:43	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	01/03/16 18:43	
2-Hexanone	ug/L	ND	5.0	0.46	01/03/16 18:43	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	01/03/16 18:43	
Acetone	ug/L	ND	25.0	10.0	01/03/16 18:43	
Benzene	ug/L	ND	1.0	0.25	01/03/16 18:43	
Bromochloromethane	ug/L	ND	1.0	0.17	01/03/16 18:43	
Bromodichloromethane	ug/L	ND	1.0	0.18	01/03/16 18:43	
Bromoform	ug/L	ND	1.0	0.26	01/03/16 18:43	
Bromomethane	ug/L	ND	2.0	0.29	01/03/16 18:43	
Carbon disulfide	ug/L	ND	2.0	1.2	01/03/16 18:43	
Carbon tetrachloride	ug/L	ND	1.0	0.25	01/03/16 18:43	
Chlorobenzene	ug/L	ND	1.0	0.23	01/03/16 18:43	
Chloroethane	ug/L	ND	1.0	0.54	01/03/16 18:43	
Chloroform	ug/L	ND	1.0	0.14	01/03/16 18:43	
Chloromethane	ug/L	ND	1.0	0.11	01/03/16 18:43	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	01/03/16 18:43	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	01/03/16 18:43	
Cyclohexane	ug/L	ND	1.0	0.36	01/03/16 18:43	
Dibromochloromethane	ug/L	ND	1.0	0.21	01/03/16 18:43	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	01/03/16 18:43	
Ethylbenzene	ug/L	ND	1.0	0.30	01/03/16 18:43	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	01/03/16 18:43	
m&p-Xylene	ug/L	ND	2.0	0.66	01/03/16 18:43	
Methyl acetate	ug/L	ND	10.0	0.82	01/03/16 18:43	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	01/03/16 18:43	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

METHOD BLANK: 1640381 Matrix: Water
Associated Lab Samples: 92281063008, 92281063009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	01/03/16 18:43	
Methylene Chloride	ug/L	ND	2.0	0.97	01/03/16 18:43	
o-Xylene	ug/L	ND	1.0	0.23	01/03/16 18:43	
Styrene	ug/L	ND	1.0	0.26	01/03/16 18:43	
Tetrachloroethene	ug/L	ND	1.0	0.46	01/03/16 18:43	
Toluene	ug/L	ND	1.0	0.26	01/03/16 18:43	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	01/03/16 18:43	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	01/03/16 18:43	
Trichloroethene	ug/L	ND	1.0	0.47	01/03/16 18:43	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	01/03/16 18:43	
Vinyl chloride	ug/L	ND	1.0	0.62	01/03/16 18:43	
1,2-Dichloroethane-d4 (S)	%	99	70-130		01/03/16 18:43	
4-Bromofluorobenzene (S)	%	108	70-130		01/03/16 18:43	
Toluene-d8 (S)	%	102	70-130		01/03/16 18:43	

LABORATORY CONTROL SAMPLE: 1640382

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	46.4	93	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.7	95	70-130	
1,1,2-Trichloroethane	ug/L	50	44.7	89	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	49.1	98	70-130	
1,1-Dichloroethane	ug/L	50	43.0	86	70-130	
1,1-Dichloroethene	ug/L	50	44.6	89	70-132	
1,2,3-Trichlorobenzene	ug/L	50	47.0	94	70-135	
1,2,4-Trichlorobenzene	ug/L	50	47.5	95	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	51.2	102	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	46.9	94	70-130	
1,2-Dichlorobenzene	ug/L	50	45.9	92	70-130	
1,2-Dichloroethane	ug/L	50	42.5	85	70-130	
1,2-Dichloropropane	ug/L	50	44.3	89	70-130	
1,3-Dichlorobenzene	ug/L	50	47.4	95	70-130	
1,4-Dichlorobenzene	ug/L	50	47.3	95	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	978	98	71-125	
2-Butanone (MEK)	ug/L	100	83.1	83	70-145	
2-Hexanone	ug/L	100	86.8	87	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	90.3	90	70-140	
Acetone	ug/L	100	89.9	90	50-175	
Benzene	ug/L	50	45.0	90	70-130	
Bromochloromethane	ug/L	50	46.6	93	70-130	
Bromodichloromethane	ug/L	50	49.9	100	70-130	
Bromoform	ug/L	50	53.3	107	70-130	
Bromomethane	ug/L	50	63.8	128	54-130	
Carbon disulfide	ug/L	50	51.5	103	70-131	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE: 1640382

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	49.9	100	70-132	
Chlorobenzene	ug/L	50	46.6	93	70-130	
Chloroethane	ug/L	50	47.4	95	64-134	
Chloroform	ug/L	50	44.7	89	70-130	
Chloromethane	ug/L	50	44.2	88	64-130	
cis-1,2-Dichloroethene	ug/L	50	43.9	88	70-131	
cis-1,3-Dichloropropene	ug/L	50	48.1	96	70-130	
Cyclohexane	ug/L	50	43.7	87	70-130	
Dibromochloromethane	ug/L	50	51.7	103	70-130	
Dichlorodifluoromethane	ug/L	50	41.5	83	56-130	
Ethylbenzene	ug/L	50	46.3	93	70-130	
Isopropylbenzene (Cumene)	ug/L	50	50.8	102	70-130	
m&p-Xylene	ug/L	100	93.7	94	70-130	
Methyl acetate	ug/L	50	48.2	96	70-130	
Methyl-tert-butyl ether	ug/L	50	46.3	93	70-130	
Methylcyclohexane	ug/L	50	49.3	99	70-130	
Methylene Chloride	ug/L	50	42.8	86	63-130	
o-Xylene	ug/L	50	45.9	92	70-130	
Styrene	ug/L	50	47.1	94	70-130	
Tetrachloroethene	ug/L	50	47.9	96	70-130	
Toluene	ug/L	50	46.2	92	70-130	
trans-1,2-Dichloroethene	ug/L	50	45.0	90	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.0	96	70-132	
Trichloroethene	ug/L	50	47.0	94	70-130	
Trichlorofluoromethane	ug/L	50	46.9	94	62-133	
Vinyl chloride	ug/L	50	47.4	95	50-150	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			111	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 1640383

Parameter	Units	92281585001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	20	21.4	107	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	19.2	96	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	19.1	96	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	22.3	112	70-130	
1,1-Dichloroethane	ug/L	ND	20	19.3	96	70-130	
1,1-Dichloroethene	ug/L	ND	20	20.9	105	70-166	
1,2,3-Trichlorobenzene	ug/L	ND	20	17.8	89	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	17.8	89	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20.7	104	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.2	96	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	18.7	94	70-130	
1,2-Dichloroethane	ug/L	ND	20	19.5	97	70-130	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

MATRIX SPIKE SAMPLE: 1640383

Parameter	Units	92281585001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	ug/L	ND	20	18.8	94	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	19.6	98	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	19.4	97	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	458	114	70-130	
2-Butanone (MEK)	ug/L	ND	40	41.0	103	70-130	
2-Hexanone	ug/L	ND	40	39.9	100	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	39.4	99	70-130	
Acetone	ug/L	ND	40	47.9	120	70-130	
Benzene	ug/L	ND	20	19.6	98	70-148	
Bromochloromethane	ug/L	ND	20	20.7	103	70-130	
Bromodichloromethane	ug/L	ND	20	20.9	104	70-130	
Bromoform	ug/L	ND	20	19.2	96	70-130	
Bromomethane	ug/L	ND	20	18.1	91	70-130	
Carbon disulfide	ug/L	ND	20	21.6	108	70-130	
Carbon tetrachloride	ug/L	ND	20	22.2	111	70-130	
Chlorobenzene	ug/L	ND	20	20.0	100	70-146	
Chloroethane	ug/L	ND	20	20.5	103	70-130	
Chloroform	ug/L	ND	20	20.3	101	70-130	
Chloromethane	ug/L	ND	20	19.8	99	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	19.9	99	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	18.7	93	70-130	
Cyclohexane	ug/L	ND	20	20.1	101	70-130	
Dibromochloromethane	ug/L	ND	20	19.6	98	70-130	
Dichlorodifluoromethane	ug/L	ND	20	19.8	99	70-130	
Ethylbenzene	ug/L	ND	20	19.7	99	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	20	21.4	107	70-130	
m&p-Xylene	ug/L	ND	40	39.4	98	70-130	
Methyl acetate	ug/L	ND	20	19.5	97	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	20.2	101	70-130	
Methylcyclohexane	ug/L	ND	20	21.2	106	70-130	
Methylene Chloride	ug/L	ND	20	18.3	91	70-130	
o-Xylene	ug/L	ND	20	19.6	98	70-130	
Styrene	ug/L	ND	20	18.9	94	70-130	
Tetrachloroethene	ug/L	ND	20	20.3	102	70-130	
Toluene	ug/L	ND	20	20.0	100	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	20.5	102	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	18.4	92	70-130	
Trichloroethene	ug/L	ND	20	21.0	105	69-151	
Trichlorofluoromethane	ug/L	ND	20	22.5	112	70-130	
Vinyl chloride	ug/L	ND	20	20.2	101	70-130	
1,2-Dichloroethane-d4 (S)	%				102	70-130	
4-Bromofluorobenzene (S)	%				112	70-130	
Toluene-d8 (S)	%				101	70-130	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

SAMPLE DUPLICATE: 1640384

Parameter	Units	92281585005 Result	Dup Result	RPD	Max RPD	Qualifiers
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	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	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	
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	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	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	
cis-1,2-Dichloroethene	ug/L	10.7	10.9	2	30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Cyclohexane	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl acetate	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylcyclohexane	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

SAMPLE DUPLICATE: 1640384

Parameter	Units	92281585005 Result	Dup Result	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	5.5	5.3	4	30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	0.64J		30	
1,2-Dichloroethane-d4 (S)	%	103	104	1		
4-Bromofluorobenzene (S)	%	107	108	1		
Toluene-d8 (S)	%	102	102	0		

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: MSV/34958 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92281063001, 92281063002, 92281063003

METHOD BLANK: 1637888 Matrix: Solid
Associated Lab Samples: 92281063001, 92281063002, 92281063003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.2	1.9	12/28/15 12:44	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.2	2.0	12/28/15 12:44	
1,1,2-Trichloroethane	ug/kg	ND	5.2	2.2	12/28/15 12:44	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	5.2	2.0	12/28/15 12:44	
1,1-Dichloroethane	ug/kg	ND	5.2	1.6	12/28/15 12:44	
1,1-Dichloroethene	ug/kg	ND	5.2	1.9	12/28/15 12:44	
1,2,3-Trichlorobenzene	ug/kg	ND	5.2	2.3	12/28/15 12:44	
1,2,4-Trichlorobenzene	ug/kg	ND	5.2	1.7	12/28/15 12:44	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.2	3.7	12/28/15 12:44	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.2	1.9	12/28/15 12:44	
1,2-Dichlorobenzene	ug/kg	ND	5.2	2.0	12/28/15 12:44	
1,2-Dichloroethane	ug/kg	ND	5.2	2.3	12/28/15 12:44	
1,2-Dichloropropane	ug/kg	ND	5.2	1.8	12/28/15 12:44	
1,3-Dichlorobenzene	ug/kg	ND	5.2	2.1	12/28/15 12:44	
1,4-Dichlorobenzene	ug/kg	ND	5.2	1.8	12/28/15 12:44	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	155	124	12/28/15 12:44	
2-Butanone (MEK)	ug/kg	ND	104	3.0	12/28/15 12:44	
2-Hexanone	ug/kg	ND	51.8	4.0	12/28/15 12:44	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	51.8	3.8	12/28/15 12:44	
Acetone	ug/kg	ND	104	10.4	12/28/15 12:44	
Benzene	ug/kg	ND	5.2	1.7	12/28/15 12:44	
Bromochloromethane	ug/kg	ND	5.2	1.8	12/28/15 12:44	
Bromodichloromethane	ug/kg	ND	5.2	2.0	12/28/15 12:44	
Bromoform	ug/kg	ND	5.2	2.4	12/28/15 12:44	
Bromomethane	ug/kg	ND	10.4	2.6	12/28/15 12:44	
Carbon disulfide	ug/kg	ND	10.4	3.1	12/28/15 12:44	
Carbon tetrachloride	ug/kg	ND	5.2	2.7	12/28/15 12:44	
Chlorobenzene	ug/kg	ND	5.2	2.0	12/28/15 12:44	
Chloroethane	ug/kg	ND	10.4	2.5	12/28/15 12:44	
Chloroform	ug/kg	ND	5.2	1.7	12/28/15 12:44	
Chloromethane	ug/kg	ND	10.4	2.5	12/28/15 12:44	
cis-1,2-Dichloroethene	ug/kg	ND	5.2	1.4	12/28/15 12:44	
cis-1,3-Dichloropropene	ug/kg	ND	5.2	1.9	12/28/15 12:44	
Cyclohexane	ug/kg	ND	5.2	1.7	12/28/15 12:44	
Dibromochloromethane	ug/kg	ND	5.2	1.9	12/28/15 12:44	
Dichlorodifluoromethane	ug/kg	ND	10.4	3.7	12/28/15 12:44	
Ethylbenzene	ug/kg	ND	5.2	1.9	12/28/15 12:44	
Isopropylbenzene (Cumene)	ug/kg	ND	5.2	2.0	12/28/15 12:44	
m&p-Xylene	ug/kg	ND	10.4	3.7	12/28/15 12:44	
Methyl acetate	ug/kg	ND	10.4	1.4	12/28/15 12:44	
Methyl-tert-butyl ether	ug/kg	ND	5.2	1.6	12/28/15 12:44	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

METHOD BLANK: 1637888 Matrix: Solid
Associated Lab Samples: 92281063001, 92281063002, 92281063003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/kg	ND	10.4	1.6	12/28/15 12:44	
Methylene Chloride	ug/kg	ND	20.7	3.1	12/28/15 12:44	
o-Xylene	ug/kg	ND	5.2	2.0	12/28/15 12:44	
Styrene	ug/kg	ND	5.2	1.9	12/28/15 12:44	
Tetrachloroethene	ug/kg	ND	5.2	1.8	12/28/15 12:44	
Toluene	ug/kg	ND	5.2	1.9	12/28/15 12:44	
trans-1,2-Dichloroethene	ug/kg	ND	5.2	2.0	12/28/15 12:44	
trans-1,3-Dichloropropene	ug/kg	ND	5.2	1.6	12/28/15 12:44	
Trichloroethene	ug/kg	ND	5.2	2.2	12/28/15 12:44	
Trichlorofluoromethane	ug/kg	ND	5.2	2.3	12/28/15 12:44	
Vinyl chloride	ug/kg	ND	10.4	1.9	12/28/15 12:44	
1,2-Dichloroethane-d4 (S)	%	107	70-132		12/28/15 12:44	
4-Bromofluorobenzene (S)	%	96	70-130		12/28/15 12:44	
Toluene-d8 (S)	%	102	70-130		12/28/15 12:44	

LABORATORY CONTROL SAMPLE: 1637889

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	52.4	53.1	101	67-140	
1,1,2,2-Tetrachloroethane	ug/kg	52.4	49.4	94	72-141	
1,1,2-Trichloroethane	ug/kg	52.4	51.6	98	78-138	
1,1,2-Trichlorotrifluoroethane	ug/kg	52.4	55.4	106	82-143	
1,1-Dichloroethane	ug/kg	52.4	50.6	97	69-134	
1,1-Dichloroethene	ug/kg	52.4	54.5	104	67-138	
1,2,3-Trichlorobenzene	ug/kg	52.4	53.1	101	70-146	
1,2,4-Trichlorobenzene	ug/kg	52.4	52.4	100	68-148	
1,2-Dibromo-3-chloropropane	ug/kg	52.4	51.0	97	65-140	
1,2-Dibromoethane (EDB)	ug/kg	52.4	50.8	97	77-135	
1,2-Dichlorobenzene	ug/kg	52.4	51.3	98	77-141	
1,2-Dichloroethane	ug/kg	52.4	52.4	100	65-137	
1,2-Dichloropropane	ug/kg	52.4	49.6	95	72-136	
1,3-Dichlorobenzene	ug/kg	52.4	51.4	98	74-138	
1,4-Dichlorobenzene	ug/kg	52.4	51.1	97	76-138	
1,4-Dioxane (p-Dioxane)	ug/kg	1050	1170	112	54-154	
2-Butanone (MEK)	ug/kg	105	112	107	58-147	
2-Hexanone	ug/kg	105	113	108	62-145	
4-Methyl-2-pentanone (MIBK)	ug/kg	105	112	106	64-149	
Acetone	ug/kg	105	119	114	53-153	
Benzene	ug/kg	52.4	51.2	98	73-135	
Bromochloromethane	ug/kg	52.4	50.9	97	73-134	
Bromodichloromethane	ug/kg	52.4	50.4	96	71-135	
Bromoform	ug/kg	52.4	51.8	99	66-141	
Bromomethane	ug/kg	52.4	60.6	116	53-160	
Carbon disulfide	ug/kg	52.4	57.2	109	63-140	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE: 1637889

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	52.4	51.7	99	60-145	
Chlorobenzene	ug/kg	52.4	48.6	93	78-130	
Chloroethane	ug/kg	52.4	56.2	107	64-149	
Chloroform	ug/kg	52.4	52.6	100	70-134	
Chloromethane	ug/kg	52.4	53.8	103	52-150	
cis-1,2-Dichloroethene	ug/kg	52.4	52.5	100	70-133	
cis-1,3-Dichloropropene	ug/kg	52.4	50.9	97	68-134	
Cyclohexane	ug/kg	52.4	52.2	100	79-146	
Dibromochloromethane	ug/kg	52.4	50.0	95	71-138	
Dichlorodifluoromethane	ug/kg	52.4	56.3	107	40-160	
Ethylbenzene	ug/kg	52.4	48.6	93	75-133	
Isopropylbenzene (Cumene)	ug/kg	52.4	53.4	102	76-143	
m&p-Xylene	ug/kg	105	97.8	93	75-136	
Methyl acetate	ug/kg	52.4	53.6	102	31-160	
Methyl-tert-butyl ether	ug/kg	52.4	55.5	106	68-144	
Methylcyclohexane	ug/kg	52.4	50.6	96	84-149	
Methylene Chloride	ug/kg	52.4	53.5	102	45-154	
o-Xylene	ug/kg	52.4	48.0	92	76-141	
Styrene	ug/kg	52.4	49.3	94	79-137	
Tetrachloroethene	ug/kg	52.4	42.8	82	71-138	
Toluene	ug/kg	52.4	49.4	94	74-131	
trans-1,2-Dichloroethene	ug/kg	52.4	55.6	106	67-135	
trans-1,3-Dichloropropene	ug/kg	52.4	51.1	98	65-146	
Trichloroethene	ug/kg	52.4	51.2	98	67-135	
Trichlorofluoromethane	ug/kg	52.4	53.3	102	59-144	
Vinyl chloride	ug/kg	52.4	58.9	112	56-141	
1,2-Dichloroethane-d4 (S)	%			110	70-132	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 1638154

Parameter	Units	92281063002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	19.7	18.4	93	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	ND	19.7	20.6	105	70-130	
1,1,2-Trichloroethane	ug/kg	ND	19.7	19.7	100	70-130	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	19.7	22.2	113	70-130	
1,1-Dichloroethane	ug/kg	ND	19.7	19.7	100	70-130	
1,1-Dichloroethene	ug/kg	ND	19.7	20.5	104	49-180	
1,2,3-Trichlorobenzene	ug/kg	ND	19.7	14.8	75	70-130	
1,2,4-Trichlorobenzene	ug/kg	ND	19.7	15.8	81	70-130	
1,2-Dibromo-3-chloropropane	ug/kg	ND	19.7	18.8	96	70-130	
1,2-Dibromoethane (EDB)	ug/kg	ND	19.7	21.5	109	70-130	
1,2-Dichlorobenzene	ug/kg	ND	19.7	19.2	98	70-130	
1,2-Dichloroethane	ug/kg	ND	19.7	18.6	95	70-130	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

MATRIX SPIKE SAMPLE: 1638154

Parameter	Units	92281063002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	ug/kg	ND	19.7	19.7	100	70-130	
1,3-Dichlorobenzene	ug/kg	ND	19.7	19.8	101	70-130	
1,4-Dichlorobenzene	ug/kg	ND	19.7	20.3	103	70-130	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	393	407	104	70-130	
2-Butanone (MEK)	ug/kg	ND	39.3	37.1J	94	70-130	
2-Hexanone	ug/kg	ND	39.3	39.0J	99	70-130	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	39.3	41.8J	106	70-130	
Acetone	ug/kg	26.4J	39.3	56.7J	77	70-130	
Benzene	ug/kg	ND	19.7	20.9	103	50-166	
Bromochloromethane	ug/kg	ND	19.7	20.4	104	70-130	
Bromodichloromethane	ug/kg	ND	19.7	18.6	95	70-130	
Bromoform	ug/kg	ND	19.7	16.9	86	70-130	
Bromomethane	ug/kg	ND	19.7	24.1	122	70-130	
Carbon disulfide	ug/kg	ND	19.7	21.0	107	70-130	
Carbon tetrachloride	ug/kg	ND	19.7	18.9	96	70-130	
Chlorobenzene	ug/kg	ND	19.7	19.6	100	43-169	
Chloroethane	ug/kg	ND	19.7	23.4	119	70-130	
Chloroform	ug/kg	ND	19.7	19.2	98	70-130	
Chloromethane	ug/kg	ND	19.7	19.7	100	70-130	
cis-1,2-Dichloroethene	ug/kg	ND	19.7	18.8	96	70-130	
cis-1,3-Dichloropropene	ug/kg	ND	19.7	18.9	96	70-130	
Cyclohexane	ug/kg	ND	19.7	20.2	103	70-130	
Dibromochloromethane	ug/kg	ND	19.7	18.6	95	70-130	
Dichlorodifluoromethane	ug/kg	ND	19.7	18.9	96	70-130	
Ethylbenzene	ug/kg	ND	19.7	19.3	94	70-130	
Isopropylbenzene (Cumene)	ug/kg	ND	19.7	20.8	106	70-130	
m&p-Xylene	ug/kg	ND	39.3	39.2	99	70-130	
Methyl acetate	ug/kg	ND	19.7	20.7	105	70-130	
Methyl-tert-butyl ether	ug/kg	ND	19.7	20.5	104	70-130	
Methylcyclohexane	ug/kg	ND	19.7	20.8	105	70-130	
Methylene Chloride	ug/kg	4.2J	19.7	27.4	118	70-130	
o-Xylene	ug/kg	ND	19.7	19.0	97	70-130	
Styrene	ug/kg	ND	19.7	18.7	95	70-130	
Tetrachloroethene	ug/kg	ND	19.7	17.3	88	70-130	
Toluene	ug/kg	ND	19.7	19.3	95	52-163	
trans-1,2-Dichloroethene	ug/kg	ND	19.7	21.2	108	70-130	
trans-1,3-Dichloropropene	ug/kg	ND	19.7	17.9	91	70-130	
Trichloroethene	ug/kg	ND	19.7	19.3	98	49-167	
Trichlorofluoromethane	ug/kg	ND	19.7	16.6	85	70-130	
Vinyl chloride	ug/kg	ND	19.7	22.1	112	70-130	
1,2-Dichloroethane-d4 (S)	%				104	70-132	
4-Bromofluorobenzene (S)	%				97	70-130	
Toluene-d8 (S)	%				98	70-130	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

SAMPLE DUPLICATE: 1638153

Parameter	Units	92281086011 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg		ND		30	
1,1,2,2-Tetrachloroethane	ug/kg		ND		30	
1,1,2-Trichloroethane	ug/kg		ND		30	
1,1,2-Trichlorotrifluoroethane	ug/kg		ND		30	
1,1-Dichloroethane	ug/kg		ND		30	
1,1-Dichloroethene	ug/kg		ND		30	
1,2,3-Trichlorobenzene	ug/kg		ND		30	
1,2,4-Trichlorobenzene	ug/kg		ND		30	
1,2-Dibromo-3-chloropropane	ug/kg		ND		30	
1,2-Dibromoethane (EDB)	ug/kg		ND		30	
1,2-Dichlorobenzene	ug/kg		ND		30	
1,2-Dichloroethane	ug/kg		ND		30	
1,2-Dichloropropane	ug/kg		ND		30	
1,3-Dichlorobenzene	ug/kg		ND		30	
1,4-Dichlorobenzene	ug/kg		ND		30	
1,4-Dioxane (p-Dioxane)	ug/kg		ND		30	
2-Butanone (MEK)	ug/kg		ND		30	
2-Hexanone	ug/kg		ND		30	
4-Methyl-2-pentanone (MIBK)	ug/kg		ND		30	
Acetone	ug/kg		ND		30	
Benzene	ug/kg	ND	ND		30	
Bromochloromethane	ug/kg		ND		30	
Bromodichloromethane	ug/kg		ND		30	
Bromoform	ug/kg		ND		30	
Bromomethane	ug/kg		ND		30	
Carbon disulfide	ug/kg		ND		30	
Carbon tetrachloride	ug/kg		ND		30	
Chlorobenzene	ug/kg		ND		30	
Chloroethane	ug/kg		ND		30	
Chloroform	ug/kg		ND		30	
Chloromethane	ug/kg		ND		30	
cis-1,2-Dichloroethene	ug/kg		ND		30	
cis-1,3-Dichloropropene	ug/kg		ND		30	
Cyclohexane	ug/kg		ND		30	
Dibromochloromethane	ug/kg		ND		30	
Dichlorodifluoromethane	ug/kg		ND		30	
Ethylbenzene	ug/kg	ND	ND		30	
Isopropylbenzene (Cumene)	ug/kg		ND		30	
m&p-Xylene	ug/kg	ND	ND		30	
Methyl acetate	ug/kg		ND		30	
Methyl-tert-butyl ether	ug/kg	ND	ND		30	
Methylcyclohexane	ug/kg		ND		30	
Methylene Chloride	ug/kg		50.6	33	30	C9,D6
o-Xylene	ug/kg	ND	ND		30	
Styrene	ug/kg		ND		30	
Tetrachloroethene	ug/kg		ND		30	
Toluene	ug/kg	ND	ND		30	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

SAMPLE DUPLICATE: 1638153

Parameter	Units	92281086011 Result	Dup Result	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/kg		ND		30	
trans-1,3-Dichloropropene	ug/kg		ND		30	
Trichloroethene	ug/kg		ND		30	
Trichlorofluoromethane	ug/kg		ND		30	
Vinyl chloride	ug/kg		ND		30	
1,2-Dichloroethane-d4 (S)	%	108	106	19		
4-Bromofluorobenzene (S)	%	103	96	24		
Toluene-d8 (S)	%	101	97	20		

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: OEXT/40000 Analysis Method: EPA 8081
QC Batch Method: EPA 3510 Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 92281063004, 92281063005, 92281063008

METHOD BLANK: 1638001 Matrix: Water
Associated Lab Samples: 92281063004, 92281063005, 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	0.050	12/31/15 20:53	
4,4'-DDE	ug/L	ND	0.050	0.050	12/31/15 20:53	
4,4'-DDT	ug/L	ND	0.050	0.050	12/31/15 20:53	
Aldrin	ug/L	ND	0.050	0.050	12/31/15 20:53	
alpha-BHC	ug/L	ND	0.050	0.050	12/31/15 20:53	
beta-BHC	ug/L	ND	0.050	0.050	12/31/15 20:53	
Chlordane (Technical)	ug/L	ND	0.20	0.20	12/31/15 20:53	
delta-BHC	ug/L	ND	0.050	0.050	12/31/15 20:53	
Dieldrin	ug/L	ND	0.050	0.050	12/31/15 20:53	
Endosulfan I	ug/L	ND	0.050	0.050	12/31/15 20:53	
Endosulfan II	ug/L	ND	0.050	0.050	12/31/15 20:53	
Endosulfan sulfate	ug/L	ND	0.050	0.050	12/31/15 20:53	
Endrin	ug/L	ND	0.050	0.050	12/31/15 20:53	
Endrin aldehyde	ug/L	ND	0.050	0.050	12/31/15 20:53	
Endrin ketone	ug/L	ND	0.050	0.050	12/31/15 20:53	
gamma-BHC (Lindane)	ug/L	ND	0.050	0.050	12/31/15 20:53	
Heptachlor	ug/L	ND	0.050	0.050	12/31/15 20:53	
Heptachlor epoxide	ug/L	ND	0.050	0.050	12/31/15 20:53	
Methoxychlor	ug/L	ND	0.15	0.15	12/31/15 20:53	
Toxaphene	ug/L	ND	0.20	0.20	12/31/15 20:53	
Decachlorobiphenyl (S)	%	69	20-130		12/31/15 20:53	
Tetrachloro-m-xylene (S)	%	76	20-130		12/31/15 20:53	

LABORATORY CONTROL SAMPLE: 1638002

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	.25	0.24	99	20-150	
4,4'-DDE	ug/L	.25	0.22	90	20-150	
4,4'-DDT	ug/L	.25	0.19	79	20-150	
Aldrin	ug/L	.25	0.19	77	20-150	
alpha-BHC	ug/L	.25	0.22	89	20-150	
beta-BHC	ug/L	.25	0.22	90	20-150	
delta-BHC	ug/L	.25	0.24	97	20-150	
Dieldrin	ug/L	.25	0.23	91	20-150	
Endosulfan I	ug/L	.25	0.22	90	20-150	
Endosulfan II	ug/L	.25	0.23	94	20-150	
Endosulfan sulfate	ug/L	.25	0.23	94	20-150	
Endrin	ug/L	.25	0.24	97	20-150	
Endrin aldehyde	ug/L	.25	0.20	82	20-150	
Endrin ketone	ug/L	.25	0.21	83	20-150	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE: 1638002

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
gamma-BHC (Lindane)	ug/L	.25	0.22	90	20-150	
Heptachlor	ug/L	.25	0.19	79	20-150	
Heptachlor epoxide	ug/L	.25	0.22	89	20-150	
Methoxychlor	ug/L	.74	0.59	80	20-150	
Decachlorobiphenyl (S)	%			73	20-130	
Tetrachloro-m-xylene (S)	%			87	20-130	

MATRIX SPIKE SAMPLE: 1638003

Parameter	Units	92281063004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	ND	.25	0.22	91	20-150	
4,4'-DDE	ug/L	ND	.25	0.21	83	20-150	
4,4'-DDT	ug/L	ND	.25	0.21	86	20-150	
Aldrin	ug/L	ND	.25	0.17	71	20-150	
alpha-BHC	ug/L	ND	.25	0.18	71	20-150	
beta-BHC	ug/L	ND	.25	0.19	76	20-150	
delta-BHC	ug/L	ND	.25	0.18	74	20-150	
Dieldrin	ug/L	ND	.25	0.20	82	20-150	
Endosulfan I	ug/L	ND	.25	0.20	82	20-150	
Endosulfan II	ug/L	ND	.25	0.22	88	20-150	
Endosulfan sulfate	ug/L	ND	.25	0.23	92	20-150	
Endrin	ug/L	ND	.25	0.23	94	20-150	
Endrin aldehyde	ug/L	ND	.25	0.21	86	20-150	
Endrin ketone	ug/L	ND	.25	0.20	80	20-150	
gamma-BHC (Lindane)	ug/L	ND	.25	0.19	78	20-150	
Heptachlor	ug/L	ND	.25	0.17	69	20-150	
Heptachlor epoxide	ug/L	ND	.25	0.22	88	20-150	
Methoxychlor	ug/L	ND	.74	0.65	88	20-150	
Decachlorobiphenyl (S)	%				39	20-130	
Tetrachloro-m-xylene (S)	%				70	20-130	

SAMPLE DUPLICATE: 1638004

Parameter	Units	92281063005 Result	Dup Result	RPD	Max RPD	Qualifiers
4,4'-DDD	ug/L	ND	ND		30	
4,4'-DDE	ug/L	ND	ND		30	
4,4'-DDT	ug/L	ND	ND		30	
Aldrin	ug/L	ND	ND		30	
alpha-BHC	ug/L	ND	ND		30	
beta-BHC	ug/L	ND	ND		30	
Chlordane (Technical)	ug/L	ND	ND		30	
delta-BHC	ug/L	ND	ND		30	
Dieldrin	ug/L	ND	ND		30	
Endosulfan I	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

SAMPLE DUPLICATE: 1638004

Parameter	Units	92281063005 Result	Dup Result	RPD	Max RPD	Qualifiers
Endosulfan II	ug/L	ND	ND		30	
Endosulfan sulfate	ug/L	ND	ND		30	
Endrin	ug/L	ND	ND		30	
Endrin aldehyde	ug/L	ND	ND		30	
Endrin ketone	ug/L	ND	ND		30	
gamma-BHC (Lindane)	ug/L	ND	ND		30	
Heptachlor	ug/L	ND	ND		30	
Heptachlor epoxide	ug/L	ND	ND		30	
Methoxychlor	ug/L	ND	ND		30	
Toxaphene	ug/L	ND	ND		30	
Decachlorobiphenyl (S)	%	38	38	0		
Tetrachloro-m-xylene (S)	%	65	54	20		

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: OEXT/39962 | Analysis Method: EPA 8270
QC Batch Method: EPA 3510 | Analysis Description: 8270 Water MSSV HVI
Associated Lab Samples: 92281063006

METHOD BLANK: 1636635 | Matrix: Water
Associated Lab Samples: 92281063006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	10.0	1.9	12/28/15 10:55	
1,2-Dichlorobenzene	ug/L	ND	10.0	1.2	12/28/15 10:55	
1,3-Dichlorobenzene	ug/L	ND	10.0	1.1	12/28/15 10:55	
1,4-Dichlorobenzene	ug/L	ND	10.0	1.2	12/28/15 10:55	
1-Methylnaphthalene	ug/L	ND	10.0	1.8	12/28/15 10:55	
2,4,5-Trichlorophenol	ug/L	ND	10.0	2.2	12/28/15 10:55	
2,4,6-Trichlorophenol	ug/L	ND	10.0	1.9	12/28/15 10:55	
2,4-Dichlorophenol	ug/L	ND	10.0	1.7	12/28/15 10:55	
2,4-Dimethylphenol	ug/L	ND	10.0	2.2	12/28/15 10:55	
2,4-Dinitrophenol	ug/L	ND	50.0	6.5	12/28/15 10:55	
2,4-Dinitrotoluene	ug/L	ND	10.0	1.2	12/28/15 10:55	
2,6-Dinitrotoluene	ug/L	ND	10.0	1.7	12/28/15 10:55	
2-Chloronaphthalene	ug/L	ND	10.0	2.2	12/28/15 10:55	
2-Chlorophenol	ug/L	ND	10.0	1.5	12/28/15 10:55	
2-Methylnaphthalene	ug/L	ND	10.0	1.7	12/28/15 10:55	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	1.7	12/28/15 10:55	
2-Nitroaniline	ug/L	ND	50.0	2.8	12/28/15 10:55	
2-Nitrophenol	ug/L	ND	10.0	1.7	12/28/15 10:55	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	1.7	12/28/15 10:55	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	1.4	12/28/15 10:55	
3-Nitroaniline	ug/L	ND	50.0	2.4	12/28/15 10:55	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	1.7	12/28/15 10:55	
4-Bromophenylphenyl ether	ug/L	ND	10.0	1.3	12/28/15 10:55	
4-Chloro-3-methylphenol	ug/L	ND	20.0	4.2	12/28/15 10:55	
4-Chloroaniline	ug/L	ND	20.0	3.4	12/28/15 10:55	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	2.1	12/28/15 10:55	
4-Nitroaniline	ug/L	ND	20.0	2.5	12/28/15 10:55	
4-Nitrophenol	ug/L	ND	50.0	5.8	12/28/15 10:55	
Acenaphthene	ug/L	ND	10.0	1.7	12/28/15 10:55	
Acenaphthylene	ug/L	ND	10.0	1.8	12/28/15 10:55	
Aniline	ug/L	ND	10.0	1.3	12/28/15 10:55	
Anthracene	ug/L	ND	10.0	1.1	12/28/15 10:55	
Benzo(a)anthracene	ug/L	ND	10.0	0.72	12/28/15 10:55	
Benzo(a)pyrene	ug/L	ND	10.0	0.71	12/28/15 10:55	
Benzo(b)fluoranthene	ug/L	ND	10.0	0.81	12/28/15 10:55	
Benzo(g,h,i)perylene	ug/L	ND	10.0	0.97	12/28/15 10:55	
Benzo(k)fluoranthene	ug/L	ND	10.0	0.87	12/28/15 10:55	
Benzoic Acid	ug/L	ND	50.0	11.1	12/28/15 10:55	
Benzyl alcohol	ug/L	ND	20.0	3.4	12/28/15 10:55	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	1.7	12/28/15 10:55	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	1.5	12/28/15 10:55	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

METHOD BLANK: 1636635 Matrix: Water
Associated Lab Samples: 92281063006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
bis(2-Chloroisopropyl) ether	ug/L	ND	10.0	1.6	12/28/15 10:55	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	0.85	12/28/15 10:55	
Butylbenzylphthalate	ug/L	ND	10.0	0.75	12/28/15 10:55	
Chrysene	ug/L	ND	10.0	0.65	12/28/15 10:55	
Di-n-butylphthalate	ug/L	ND	10.0	1.1	12/28/15 10:55	
Di-n-octylphthalate	ug/L	ND	10.0	0.86	12/28/15 10:55	
Dibenz(a,h)anthracene	ug/L	ND	10.0	0.70	12/28/15 10:55	
Dibenzofuran	ug/L	ND	10.0	1.8	12/28/15 10:55	
Diethylphthalate	ug/L	ND	10.0	1.3	12/28/15 10:55	
Dimethylphthalate	ug/L	ND	10.0	1.5	12/28/15 10:55	
Fluoranthene	ug/L	ND	10.0	0.87	12/28/15 10:55	
Fluorene	ug/L	ND	10.0	1.6	12/28/15 10:55	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	1.8	12/28/15 10:55	
Hexachlorobenzene	ug/L	ND	10.0	1.1	12/28/15 10:55	
Hexachlorocyclopentadiene	ug/L	ND	10.0	1.8	12/28/15 10:55	
Hexachloroethane	ug/L	ND	10.0	1.5	12/28/15 10:55	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	1.8	12/28/15 10:55	
Isophorone	ug/L	ND	10.0	1.8	12/28/15 10:55	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	2.1	12/28/15 10:55	
N-Nitrosodimethylamine	ug/L	ND	10.0	1.3	12/28/15 10:55	
N-Nitrosodiphenylamine	ug/L	ND	10.0	1.3	12/28/15 10:55	
Naphthalene	ug/L	ND	10.0	1.5	12/28/15 10:55	
Nitrobenzene	ug/L	ND	10.0	1.7	12/28/15 10:55	
Pentachlorophenol	ug/L	ND	25.0	2.3	12/28/15 10:55	
Phenanthrene	ug/L	ND	10.0	1.0	12/28/15 10:55	
Phenol	ug/L	ND	10.0	1.7	12/28/15 10:55	
Pyrene	ug/L	ND	10.0	0.53	12/28/15 10:55	
2,4,6-Tribromophenol (S)	%	59	27-110		12/28/15 10:55	
2-Fluorobiphenyl (S)	%	64	27-110		12/28/15 10:55	
2-Fluorophenol (S)	%	32	12-110		12/28/15 10:55	
Nitrobenzene-d5 (S)	%	66	21-110		12/28/15 10:55	
Phenol-d6 (S)	%	22	10-110		12/28/15 10:55	
Terphenyl-d14 (S)	%	52	31-107		12/28/15 10:55	

LABORATORY CONTROL SAMPLE & LCSD: 1636636 1636637

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	34.5	37.4	69	75	31-120	8	30	
1,2-Dichlorobenzene	ug/L	50	28.6	31.7	57	63	38-120	10	30	
1,3-Dichlorobenzene	ug/L	50	27.8	29.4	56	59	30-122	6	30	
1,4-Dichlorobenzene	ug/L	50	28.2	31.4	56	63	37-120	11	30	
1-Methylnaphthalene	ug/L	50	38.0	39.6	76	79	34-113	4	30	
2,4,5-Trichlorophenol	ug/L	50	32.0	33.2	64	66	43-113	4	30	
2,4,6-Trichlorophenol	ug/L	50	38.6	39.4	77	79	42-120	2	30	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE & LCSD: 1636636 1636637

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4-Dichlorophenol	ug/L	50	32.3	30.6	65	61	30-120	6	30	
2,4-Dimethylphenol	ug/L	50	34.6	35.4	69	71	29-111	2	30	
2,4-Dinitrophenol	ug/L	250	140	158	56	63	19-132	12	30	
2,4-Dinitrotoluene	ug/L	50	35.3	37.7	71	75	58-128	7	30	
2,6-Dinitrotoluene	ug/L	50	34.8	36.4	70	73	54-129	5	30	
2-Chloronaphthalene	ug/L	50	28.7	30.3	57	61	43-117	5	30	
2-Chlorophenol	ug/L	50	31.0	31.0	62	62	37-120	0	30	
2-Methylnaphthalene	ug/L	50	36.8	39.1	74	78	33-120	6	30	
2-Methylphenol(o-Cresol)	ug/L	50	26.2	26.8	52	54	31-120	2	30	
2-Nitroaniline	ug/L	100	59.6	60.4	60	60	48-121	1	30	
2-Nitrophenol	ug/L	50	30.8	30.9	62	62	25-116	0	30	
3&4-Methylphenol(m&p Cresol)	ug/L	50	21.7	21.2	43	42	23-120	2	30	
3,3'-Dichlorobenzidine	ug/L	100	73.1	81.3	73	81	10-154	11	30	
3-Nitroaniline	ug/L	100	56.5	61.9	56	62	43-115	9	30	
4,6-Dinitro-2-methylphenol	ug/L	100	69.5	74.0	69	74	44-124	6	30	
4-Bromophenylphenyl ether	ug/L	50	33.0	35.8	66	72	34-113	8	30	
4-Chloro-3-methylphenol	ug/L	100	85.3	88.0	85	88	31-110	3	30	
4-Chloroaniline	ug/L	100	69.0	69.1	69	69	20-120	0	30	
4-Chlorophenylphenyl ether	ug/L	50	34.5	35.5	69	71	34-116	3	30	
4-Nitroaniline	ug/L	100	55.4	61.0	55	61	46-128	10	30	
4-Nitrophenol	ug/L	250	74.2	88.8	30	36	11-120	18	30	
Acenaphthene	ug/L	50	33.1	34.1	66	68	48-114	3	30	
Acenaphthylene	ug/L	50	33.1	34.6	66	69	48-112	4	30	
Aniline	ug/L	50	23.2	21.7	46	43	26-120	7	30	
Anthracene	ug/L	50	32.3	34.1	65	68	57-118	5	30	
Benzo(a)anthracene	ug/L	50	36.2	39.5	72	79	56-121	9	30	
Benzo(a)pyrene	ug/L	50	33.7	36.4	67	73	55-127	8	30	
Benzo(b)fluoranthene	ug/L	50	28.4	31.8	57	64	53-128	11	30	
Benzo(g,h,i)perylene	ug/L	50	43.6	46.0	87	92	54-125	5	30	
Benzo(k)fluoranthene	ug/L	50	38.3	38.6	77	77	51-123	1	30	
Benzoic Acid	ug/L	250	107	120	43	48	10-120	12	30	
Benzyl alcohol	ug/L	100	55.8	55.8	56	56	27-120	0	30	
bis(2-Chloroethoxy)methane	ug/L	50	34.1	35.2	68	70	32-120	3	30	
bis(2-Chloroethyl) ether	ug/L	50	30.8	31.4	62	63	33-111	2	30	
bis(2-Chloroisopropyl) ether	ug/L	50	17.4	17.9	35	36	15-120	3	30	
bis(2-Ethylhexyl)phthalate	ug/L	50	33.6	37.8	67	76	50-145	12	30	
Butylbenzylphthalate	ug/L	50	34.4	37.2	69	74	54-138	8	30	
Chrysene	ug/L	50	35.4	38.2	71	76	58-127	8	30	
Di-n-butylphthalate	ug/L	50	33.9	36.8	68	74	56-125	8	30	
Di-n-octylphthalate	ug/L	50	40.0	49.1	80	98	50-134	20	30	
Dibenz(a,h)anthracene	ug/L	50	41.3	43.0	83	86	53-129	4	30	
Dibenzofuran	ug/L	50	35.2	35.9	70	72	45-120	2	30	
Diethylphthalate	ug/L	50	35.8	39.1	72	78	53-120	9	30	
Dimethylphthalate	ug/L	50	36.4	39.4	73	79	55-116	8	30	
Fluoranthene	ug/L	50	34.9	38.3	70	77	57-125	9	30	
Fluorene	ug/L	50	34.7	36.3	69	73	53-118	4	30	
Hexachloro-1,3-butadiene	ug/L	50	33.6	36.4	67	73	23-120	8	30	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE & LCSD: 1636636 1636637

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Hexachlorobenzene	ug/L	50	40.2	43.3	80	87	49-116	7	30	
Hexachlorocyclopentadiene	ug/L	50	24.8	25.9	50	52	26-158	4	30	
Hexachloroethane	ug/L	50	27.9	31.1	56	62	30-114	11	30	
Indeno(1,2,3-cd)pyrene	ug/L	50	43.2	46.1	86	92	55-128	6	30	
Isophorone	ug/L	50	41.9	40.9	84	82	31-118	2	30	
N-Nitroso-di-n-propylamine	ug/L	50	36.9	34.8	74	70	32-119	6	30	
N-Nitrosodimethylamine	ug/L	50	22.6	24.4	45	49	13-120	8	30	
N-Nitrosodiphenylamine	ug/L	50	32.8	34.4	66	69	43-120	5	30	
Naphthalene	ug/L	50	30.4	32.7	61	65	32-120	7	30	
Nitrobenzene	ug/L	50	33.9	35.5	68	71	33-110	5	30	
Pentachlorophenol	ug/L	100	67.4	71.2	67	71	10-137	5	30	
Phenanthrene	ug/L	50	32.3	34.3	65	69	57-117	6	30	
Phenol	ug/L	50	17.0	17.7	34	35	10-120	5	30	
Pyrene	ug/L	50	34.4	35.3	69	71	55-122	3	30	
2,4,6-Tribromophenol (S)	%				71	77	27-110			
2-Fluorobiphenyl (S)	%				61	64	27-110			
2-Fluorophenol (S)	%				40	42	12-110			
Nitrobenzene-d5 (S)	%				68	69	21-110			
Phenol-d6 (S)	%				27	29	10-110			
Terphenyl-d14 (S)	%				61	65	31-107			

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: OEXT/39986 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 Water MSSV
Associated Lab Samples: 92281063004, 92281063005, 92281063008

METHOD BLANK: 1637748 Matrix: Water
Associated Lab Samples: 92281063004, 92281063005, 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	1.7	12/29/15 14:31	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	1.6	12/29/15 18:33	
2,3,4,6-Tetrachlorophenol	ug/L	ND	10.0	2.3	12/29/15 18:33	
2,4,5-Trichlorophenol	ug/L	ND	10.0	2.2	12/29/15 18:33	
2,4,6-Trichlorophenol	ug/L	ND	10.0	1.9	12/29/15 18:33	
2,4-Dichlorophenol	ug/L	ND	10.0	1.7	12/29/15 18:33	
2,4-Dimethylphenol	ug/L	ND	10.0	2.2	12/29/15 18:33	
2,4-Dinitrophenol	ug/L	ND	50.0	6.5	12/29/15 18:33	
2,4-Dinitrotoluene	ug/L	ND	10.0	1.2	12/29/15 18:33	
2,6-Dinitrotoluene	ug/L	ND	10.0	1.7	12/29/15 18:33	
2-Chloronaphthalene	ug/L	ND	10.0	2.2	12/29/15 18:33	
2-Chlorophenol	ug/L	ND	10.0	1.5	12/29/15 18:33	
2-Methylnaphthalene	ug/L	ND	10.0	0.28	12/29/15 18:33	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	1.7	12/29/15 18:33	
2-Nitroaniline	ug/L	ND	50.0	2.8	12/29/15 18:33	
2-Nitrophenol	ug/L	ND	10.0	1.7	12/29/15 18:33	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	1.7	12/29/15 18:33	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	1.4	12/29/15 18:33	
3-Nitroaniline	ug/L	ND	50.0	2.4	12/29/15 18:33	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	1.7	12/29/15 18:33	
4-Bromophenylphenyl ether	ug/L	ND	10.0	1.3	12/29/15 18:33	
4-Chloro-3-methylphenol	ug/L	ND	20.0	4.2	12/29/15 18:33	
4-Chloroaniline	ug/L	ND	20.0	3.4	12/29/15 18:33	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	2.1	12/29/15 18:33	
4-Nitroaniline	ug/L	ND	20.0	2.5	12/29/15 18:33	
4-Nitrophenol	ug/L	ND	50.0	5.8	12/29/15 18:33	
Acenaphthene	ug/L	ND	10.0	0.25	12/29/15 18:33	
Acenaphthylene	ug/L	ND	10.0	0.21	12/29/15 18:33	
Acetophenone	ug/L	ND	10.0	2.0	12/29/15 18:33	
Anthracene	ug/L	ND	10.0	0.14	12/29/15 18:33	
Atrazine	ug/L	ND	20.0	1.7	12/29/15 14:31	
Benzaldehyde	ug/L	ND	20.0	4.7	12/29/15 14:31	
Benzo(a)anthracene	ug/L	ND	10.0	0.33	12/29/15 18:33	
Benzo(a)pyrene	ug/L	ND	10.0	0.30	12/29/15 18:33	
Benzo(b)fluoranthene	ug/L	ND	10.0	0.28	12/29/15 18:33	
Benzo(g,h,i)perylene	ug/L	ND	10.0	0.38	12/29/15 18:33	
Benzo(k)fluoranthene	ug/L	ND	10.0	0.43	12/29/15 18:33	
Biphenyl (Diphenyl)	ug/L	ND	10.0	1.9	12/29/15 18:33	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	1.7	12/29/15 18:33	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	1.5	12/29/15 18:33	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	0.85	12/29/15 18:33	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

METHOD BLANK: 1637748 Matrix: Water
Associated Lab Samples: 92281063004, 92281063005, 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Butylbenzylphthalate	ug/L	ND	10.0	0.75	12/29/15 18:33	
Caprolactam	ug/L	ND	10.0	1.8	12/29/15 14:31	
Carbazole	ug/L	ND	10.0	0.73	12/29/15 18:33	
Chrysene	ug/L	ND	10.0	0.21	12/29/15 18:33	
Di-n-butylphthalate	ug/L	ND	10.0	1.1	12/29/15 18:33	
Di-n-octylphthalate	ug/L	ND	10.0	0.86	12/29/15 18:33	
Dibenz(a,h)anthracene	ug/L	ND	10.0	0.55	12/29/15 18:33	
Dibenzofuran	ug/L	ND	10.0	1.8	12/29/15 18:33	
Diethylphthalate	ug/L	ND	10.0	1.3	12/29/15 18:33	
Dimethylphthalate	ug/L	ND	10.0	1.5	12/29/15 18:33	
Fluoranthene	ug/L	ND	10.0	0.21	12/29/15 18:33	
Fluorene	ug/L	ND	10.0	0.21	12/29/15 18:33	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	1.8	12/29/15 18:33	
Hexachlorobenzene	ug/L	ND	10.0	1.1	12/29/15 18:33	
Hexachlorocyclopentadiene	ug/L	ND	10.0	1.8	12/29/15 18:33	
Hexachloroethane	ug/L	ND	10.0	1.5	12/29/15 18:33	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	0.29	12/29/15 18:33	
Isophorone	ug/L	ND	10.0	1.8	12/29/15 18:33	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	2.1	12/29/15 18:33	
N-Nitrosodiphenylamine	ug/L	ND	10.0	1.3	12/29/15 18:33	
Naphthalene	ug/L	ND	10.0	0.34	12/29/15 18:33	
Nitrobenzene	ug/L	ND	10.0	1.7	12/29/15 18:33	
Pentachlorophenol	ug/L	ND	25.0	2.3	12/29/15 18:33	
Phenanthrene	ug/L	ND	10.0	0.22	12/29/15 18:33	
Phenol	ug/L	ND	10.0	1.7	12/29/15 18:33	
Pyrene	ug/L	ND	10.0	0.19	12/29/15 18:33	
2,4,6-Tribromophenol (S)	%	78	27-110		12/29/15 18:33	
2-Fluorobiphenyl (S)	%	68	27-110		12/29/15 18:33	
2-Fluorophenol (S)	%	35	12-110		12/29/15 18:33	
Nitrobenzene-d5 (S)	%	50	21-110		12/29/15 18:33	
Phenol-d6 (S)	%	20	10-110		12/29/15 18:33	
Terphenyl-d14 (S)	%	105	31-107		12/29/15 18:33	

LABORATORY CONTROL SAMPLE: 1637749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	37.9	76	16-129	
2,2'-Oxybis(1-chloropropane)	ug/L	50	32.2	64	18-120	
2,3,4,6-Tetrachlorophenol	ug/L	50	62.8	126	54-276	
2,4,5-Trichlorophenol	ug/L	50	39.7	79	43-113	
2,4,6-Trichlorophenol	ug/L	50	31.4	63	42-120	
2,4-Dichlorophenol	ug/L	50	40.0	80	30-120	
2,4-Dimethylphenol	ug/L	50	42.4	85	29-111	
2,4-Dinitrophenol	ug/L	250	70.7	28	19-132	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE: 1637749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/L	50	51.8	104	58-128	
2,6-Dinitrotoluene	ug/L	50	51.6	103	54-129	
2-Chloronaphthalene	ug/L	50	56.5	113	43-117	
2-Chlorophenol	ug/L	50	38.3	77	37-120	
2-Methylnaphthalene	ug/L	50	42.7	85	33-120	
2-Methylphenol(o-Cresol)	ug/L	50	38.3	77	31-120	
2-Nitroaniline	ug/L	100	96.0	96	48-121	
2-Nitrophenol	ug/L	50	42.2	84	25-116	
3&4-Methylphenol(m&p Cresol)	ug/L	50	35.8	72	23-120	
3,3'-Dichlorobenzidine	ug/L	250	104	41	10-154	
3-Nitroaniline	ug/L	100	95.9	96	43-115	
4,6-Dinitro-2-methylphenol	ug/L	100	40.4	40	44-124	L0
4-Bromophenylphenyl ether	ug/L	50	43.8	88	34-113	
4-Chloro-3-methylphenol	ug/L	100	96.2	96	31-110	
4-Chloroaniline	ug/L	100	79.6	80	20-120	
4-Chlorophenylphenyl ether	ug/L	50	43.1	86	34-116	
4-Nitroaniline	ug/L	100	106	106	46-128	
4-Nitrophenol	ug/L	250	43.9J	18	11-120	
Acenaphthene	ug/L	50	45.1	90	48-114	
Acenaphthylene	ug/L	50	47.8	96	48-112	
Acetophenone	ug/L	50	45.9	92	24-120	
Anthracene	ug/L	50	50.6	101	57-118	
Atrazine	ug/L	50	63.3	127	33-160	
Benzaldehyde	ug/L	50	20.2	40	10-120	
Benzo(a)anthracene	ug/L	50	53.6	107	56-121	
Benzo(a)pyrene	ug/L	50	46.4	93	55-127	
Benzo(b)fluoranthene	ug/L	50	45.2	90	53-128	
Benzo(g,h,i)perylene	ug/L	50	43.4	87	54-125	
Benzo(k)fluoranthene	ug/L	50	55.0	110	51-123	
Biphenyl (Diphenyl)	ug/L	50	42.1	84	38-120	
bis(2-Chloroethoxy)methane	ug/L	50	41.6	83	32-120	
bis(2-Chloroethyl) ether	ug/L	50	40.3	81	33-111	
bis(2-Ethylhexyl)phthalate	ug/L	50	53.3	107	50-145	
Butylbenzylphthalate	ug/L	50	76.7	153	54-138	L0
Caprolactam	ug/L	50	13.2	26	10-115	
Carbazole	ug/L	50	46.3	93	59-119	
Chrysene	ug/L	50	50.5	101	58-127	
Di-n-butylphthalate	ug/L	50	55.4	111	56-125	
Di-n-octylphthalate	ug/L	50	68.7	137	50-134	L0
Dibenz(a,h)anthracene	ug/L	50	43.4	87	53-129	
Dibenzofuran	ug/L	50	44.3	89	45-120	
Diethylphthalate	ug/L	50	50.4	101	53-120	
Dimethylphthalate	ug/L	50	48.1	96	55-116	
Fluoranthene	ug/L	50	51.7	103	57-125	
Fluorene	ug/L	50	49.8	100	53-118	
Hexachloro-1,3-butadiene	ug/L	50	39.4	79	23-120	
Hexachlorobenzene	ug/L	50	49.1	98	49-116	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

LABORATORY CONTROL SAMPLE: 1637749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachlorocyclopentadiene	ug/L	50	44.4	89	26-158	
Hexachloroethane	ug/L	50	38.8	78	30-114	
Indeno(1,2,3-cd)pyrene	ug/L	50	46.1	92	55-128	
Isophorone	ug/L	50	46.0	92	31-118	
N-Nitroso-di-n-propylamine	ug/L	50	47.6	95	32-119	
N-Nitrosodiphenylamine	ug/L	50	43.8	88	43-120	
Naphthalene	ug/L	50	42.5	85	32-120	
Nitrobenzene	ug/L	50	43.1	86	33-110	
Pentachlorophenol	ug/L	250	44.4	18	10-137	
Phenanthrene	ug/L	50	45.3	91	57-117	
Phenol	ug/L	50	18.8	38	10-120	
Pyrene	ug/L	50	51.6	103	55-122	
2,4,6-Tribromophenol (S)	%			77	27-110	
2-Fluorobiphenyl (S)	%			83	27-110	
2-Fluorophenol (S)	%			45	12-110	
Nitrobenzene-d5 (S)	%			92	21-110	
Phenol-d6 (S)	%			37	10-110	
Terphenyl-d14 (S)	%			98	31-107	

MATRIX SPIKE SAMPLE: 1637750

Parameter	Units	92280918008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	50	39.3	79	50-150	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	50	29.5	59	50-150	
2,3,4,6-Tetrachlorophenol	ug/L	ND	50	111	222	50-150	
2,4,5-Trichlorophenol	ug/L	ND	50	53.2	106	19-105	M1
2,4,6-Trichlorophenol	ug/L	ND	50	52.2	104	13-108	
2,4-Dichlorophenol	ug/L	ND	50	43.8	88	29-111	
2,4-Dimethylphenol	ug/L	ND	50	44.5	89	21-103	
2,4-Dinitrophenol	ug/L	ND	250	266	106	10-109	
2,4-Dinitrotoluene	ug/L	ND	50	52.3	105	27-104	M1
2,6-Dinitrotoluene	ug/L	ND	50	53.0	106	28-101	M1
2-Chloronaphthalene	ug/L	ND	50	56.7	113	14-102	M1
2-Chlorophenol	ug/L	ND	50	37.0	74	16-110	
2-Methylnaphthalene	ug/L	ND	50	41.7	83	13-110	
2-Methylphenol(o-Cresol)	ug/L	ND	50	33.7	67	19-110	
2-Nitroaniline	ug/L	ND	100	98.3	98	26-103	
2-Nitrophenol	ug/L	ND	50	49.2	98	20-110	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	31.5	63	20-110	
3,3'-Dichlorobenzidine	ug/L	1.5J	250	110	44	25-112	
3-Nitroaniline	ug/L	ND	100	96.3	96	29-110	
4,6-Dinitro-2-methylphenol	ug/L	ND	100	101	101	10-117	
4-Bromophenylphenyl ether	ug/L	ND	50	45.4	91	20-105	
4-Chloro-3-methylphenol	ug/L	ND	100	98.3	98	22-110	
4-Chloroaniline	ug/L	ND	100	78.5	79	20-100	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

MATRIX SPIKE SAMPLE: 1637750

Parameter	Units	92280918008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
4-Chlorophenylphenyl ether	ug/L	ND	50	43.4	87	19-102	
4-Nitroaniline	ug/L	ND	100	106	106	29-110	
4-Nitrophenol	ug/L	ND	250	112	45	10-110	
Acenaphthene	ug/L	ND	50	46.4	93	17-100	
Acenaphthylene	ug/L	ND	50	49.5	99	21-100	
Acetophenone	ug/L	ND	50	40.7	81	50-150	
Anthracene	ug/L	ND	50	52.1	104	24-109	
Atrazine	ug/L	ND	50	64.3	129	50-150	
Benzaldehyde	ug/L	ND	50	ND	0	50-150	M1
Benzo(a)anthracene	ug/L	ND	50	55.8	112	22-117	
Benzo(a)pyrene	ug/L	ND	50	48.8	98	23-104	
Benzo(b)fluoranthene	ug/L	ND	50	50.5	101	23-103	
Benzo(g,h,i)perylene	ug/L	ND	50	45.3	91	18-111	
Benzo(k)fluoranthene	ug/L	1.1J	50	55.4	109	22-113	
Biphenyl (Diphenyl)	ug/L	ND	50	42.2	84	50-150	
bis(2-Chloroethoxy)methane	ug/L	ND	50	40.4	81	22-110	
bis(2-Chloroethyl) ether	ug/L	ND	50	37.0	74	16-110	
bis(2-Ethylhexyl)phthalate	ug/L	ND	50	54.1	108	23-102	M1
Butylbenzylphthalate	ug/L	ND	50	76.7	153	25-110	M0
Caprolactam	ug/L	ND	50	13.2	26	50-150	M1
Carbazole	ug/L	ND	50	47.9	96	50-150	
Chrysene	ug/L	ND	50	52.3	105	23-115	
Di-n-butylphthalate	ug/L	ND	50	57.4	115	26-110	M1
Di-n-octylphthalate	ug/L	ND	50	74.7	149	22-110	M0
Dibenz(a,h)anthracene	ug/L	ND	50	45.5	91	21-112	
Dibenzofuran	ug/L	ND	50	45.0	90	19-102	
Diethylphthalate	ug/L	ND	50	50.9	102	29-110	
Dimethylphthalate	ug/L	ND	50	49.5	99	27-110	
Fluoranthene	ug/L	ND	50	53.8	108	23-112	
Fluorene	ug/L	ND	50	50.2	100	22-104	
Hexachloro-1,3-butadiene	ug/L	ND	50	41.7	83	10-110	
Hexachlorobenzene	ug/L	ND	50	50.5	101	21-116	
Hexachlorocyclopentadiene	ug/L	ND	50	47.6	95	10-110	
Hexachloroethane	ug/L	ND	50	44.0	88	10-110	
Indeno(1,2,3-cd)pyrene	ug/L	ND	50	48.1	96	20-113	
Isophorone	ug/L	ND	50	44.8	90	50-150	
N-Nitroso-di-n-propylamine	ug/L	ND	50	43.6	87	21-105	
N-Nitrosodiphenylamine	ug/L	ND	50	45.6	91	23-107	
Naphthalene	ug/L	ND	50	42.5	85	10-110	
Nitrobenzene	ug/L	ND	50	41.6	83	20-110	
Pentachlorophenol	ug/L	ND	250	116	46	10-118	
Phenanthrene	ug/L	ND	50	46.6	93	24-106	
Phenol	ug/L	ND	50	16.5	33	12-110	
Pyrene	ug/L	ND	50	51.0	102	24-114	
2,4,6-Tribromophenol (S)	%				106	27-110	
2-Fluorobiphenyl (S)	%				82	27-110	
2-Fluorophenol (S)	%				47	12-110	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

MATRIX SPIKE SAMPLE: 1637750

Parameter	Units	92280918008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrobenzene-d5 (S)	%				88	21-110	
Phenol-d6 (S)	%				32	10-110	
Terphenyl-d14 (S)	%				93	31-107	

SAMPLE DUPLICATE: 1637751

Parameter	Units	92281063008 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	ND		30	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	ND		30	
2,3,4,6-Tetrachlorophenol	ug/L	ND	ND		30	
2,4,5-Trichlorophenol	ug/L	ND	ND		30	
2,4,6-Trichlorophenol	ug/L	ND	ND		30	
2,4-Dichlorophenol	ug/L	ND	ND		30	
2,4-Dimethylphenol	ug/L	ND	ND		30	
2,4-Dinitrophenol	ug/L	ND	ND		30	
2,4-Dinitrotoluene	ug/L	ND	ND		30	
2,6-Dinitrotoluene	ug/L	ND	ND		30	
2-Chloronaphthalene	ug/L	ND	ND		30	
2-Chlorophenol	ug/L	ND	ND		30	
2-Methylnaphthalene	ug/L	ND	ND		30	
2-Methylphenol(o-Cresol)	ug/L	ND	ND		30	
2-Nitroaniline	ug/L	ND	ND		30	
2-Nitrophenol	ug/L	ND	ND		30	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	ND		30	
3,3'-Dichlorobenzidine	ug/L	ND	ND		30	
3-Nitroaniline	ug/L	ND	ND		30	
4,6-Dinitro-2-methylphenol	ug/L	ND	ND		30	
4-Bromophenylphenyl ether	ug/L	ND	ND		30	
4-Chloro-3-methylphenol	ug/L	ND	ND		30	
4-Chloroaniline	ug/L	ND	ND		30	
4-Chlorophenylphenyl ether	ug/L	ND	ND		30	
4-Nitroaniline	ug/L	ND	ND		30	
4-Nitrophenol	ug/L	ND	ND		30	
Acenaphthene	ug/L	ND	ND		30	
Acenaphthylene	ug/L	ND	ND		30	
Acetophenone	ug/L	ND	ND		30	
Anthracene	ug/L	ND	ND		30	
Atrazine	ug/L	ND	ND		30	
Benzaldehyde	ug/L	ND	ND		30	
Benzo(a)anthracene	ug/L	ND	ND		30	
Benzo(a)pyrene	ug/L	ND	ND		30	
Benzo(b)fluoranthene	ug/L	ND	ND		30	
Benzo(g,h,i)perylene	ug/L	ND	ND		30	
Benzo(k)fluoranthene	ug/L	ND	ND		30	
Biphenyl (Diphenyl)	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

SAMPLE DUPLICATE: 1637751

Parameter	Units	92281063008 Result	Dup Result	RPD	Max RPD	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	ND	ND		30	
bis(2-Chloroethyl) ether	ug/L	ND	ND		30	
bis(2-Ethylhexyl)phthalate	ug/L	ND	ND		30	
Butylbenzylphthalate	ug/L	ND	ND		30	
Caprolactam	ug/L	ND	ND		30	
Carbazole	ug/L	ND	ND		30	
Chrysene	ug/L	ND	ND		30	
Di-n-butylphthalate	ug/L	ND	ND		30	
Di-n-octylphthalate	ug/L	ND	ND		30	
Dibenz(a,h)anthracene	ug/L	ND	ND		30	
Dibenzofuran	ug/L	ND	ND		30	
Diethylphthalate	ug/L	ND	ND		30	
Dimethylphthalate	ug/L	ND	ND		30	
Fluoranthene	ug/L	ND	ND		30	
Fluorene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Hexachlorobenzene	ug/L	ND	ND		30	
Hexachlorocyclopentadiene	ug/L	ND	ND		30	
Hexachloroethane	ug/L	ND	ND		30	
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND		30	
Isophorone	ug/L	ND	ND		30	
N-Nitroso-di-n-propylamine	ug/L	ND	ND		30	
N-Nitrosodiphenylamine	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
Nitrobenzene	ug/L	ND	ND		30	
Pentachlorophenol	ug/L	ND	ND		30	
Phenanthrene	ug/L	ND	ND		30	
Phenol	ug/L	ND	ND		30	
Pyrene	ug/L	ND	ND		30	
2,4,6-Tribromophenol (S)	%	88	96	8		
2-Fluorobiphenyl (S)	%	72	86	18		
2-Fluorophenol (S)	%	31	37	16		
Nitrobenzene-d5 (S)	%	79	91	13		
Phenol-d6 (S)	%	21	25	19		
Terphenyl-d14 (S)	%	94	93	1		

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: PMST/8692 | Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 | Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92281063001, 92281063002, 92281063003

SAMPLE DUPLICATE: 1637014

Parameter	Units	92281086003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.9	12.0	1	25	

SAMPLE DUPLICATE: 1637026

Parameter	Units	92280996001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.6	21.6	10	25	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WET/42196 | Analysis Method: EPA 9040
QC Batch Method: EPA 9040 | Analysis Description: 9040 pH
Associated Lab Samples: 92281063004, 92281063005

SAMPLE DUPLICATE: 1637736

Parameter	Units	92281034001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	6.3	6.4	1	9	D6,H6

SAMPLE DUPLICATE: 1637737

Parameter	Units	92281063005 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	6.6	6.4	2	9	D6,H6

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WET/42282
QC Batch Method: EPA 9040
Analysis Method: EPA 9040
Analysis Description: 9040 pH
Associated Lab Samples: 92281063008

SAMPLE DUPLICATE: 1640368

Parameter	Units	92281063008 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	6.1	6.1	0	9	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25935 — Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 — Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92281063004, 92281063005, 92281063006

METHOD BLANK: 1637648 — Matrix: Water
Associated Lab Samples: 92281063004, 92281063005, 92281063006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.50	0.25	12/28/15 10:50	
Sulfate	mg/L	ND	2.0	1.0	12/28/15 10:50	

LABORATORY CONTROL SAMPLE: 1637649

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.3	93	90-110	
Sulfate	mg/L	20	18.4	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1637650 1637651

Parameter	Units	92281063004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	2.4	2.3	90	89	90-110	1	10	M1
Sulfate	mg/L	1.6J	20	20	19.9	19.9	91	91	90-110	0	10	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25944
Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92281063008

METHOD BLANK: 1638171
Matrix: Water
Associated Lab Samples: 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.50	0.25	12/29/15 12:26	
Sulfate	mg/L	ND	2.0	1.0	12/29/15 12:26	

LABORATORY CONTROL SAMPLE: 1638172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	94	90-110	
Sulfate	mg/L	20	18.5	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638173 1638174

Parameter	Units	92281063008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	98	98	90-110	0	10	
Sulfate	mg/L	1.2J	20	20	19.4	19.3	91	91	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25963 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 92281063004, 92281063005

METHOD BLANK: 1638886 | Matrix: Water
Associated Lab Samples: 92281063004, 92281063005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.050	12/31/15 00:41	

LABORATORY CONTROL SAMPLE: 1638887

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.1	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638888 1638889

Parameter	Units	92280720003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	0.38	5	5	0.97	0.96	12	12	90-110	1	7	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638890 1638891

Parameter	Units	92281123001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	0.20	5	5	0.82	0.83	12	13	90-110	2	7	M1

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25985
QC Batch Method: EPA 350.1
Analysis Method: EPA 350.1
Analysis Description: 350.1 Ammonia
Associated Lab Samples: 92281063008

METHOD BLANK: 1640314
Matrix: Water
Associated Lab Samples: 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.050	01/04/16 23:50	

LABORATORY CONTROL SAMPLE: 1640315

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1640316 1640317

Parameter	Units	92281063008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	ND	5	5	5.1	5.0	101	101	90-110	0	7	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1640318 1640319

Parameter	Units	92281335002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	55.0	5	5	60.2	59.9	103	98	90-110	0	7	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25922 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92281063004, 92281063005, 92281063006

METHOD BLANK: 1637265 | Matrix: Water
Associated Lab Samples: 92281063004, 92281063005, 92281063006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	0.010	12/24/15 11:02	
Nitrogen, Nitrite	mg/L	ND	0.020	0.010	12/24/15 11:02	
Nitrogen, NO2 plus NO3	mg/L	ND	0.020	0.010	12/24/15 11:02	

LABORATORY CONTROL SAMPLE: 1637266

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.4	98	90-110	
Nitrogen, Nitrite	mg/L	1	0.99	99	90-110	
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1637267 1637268

Parameter	Units	92281048005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	0.28	2.5	2.5	2.8	2.8	100	99	90-110	0	10	
Nitrogen, Nitrite	mg/L	ND	1	1	1.1	1.1	105	105	90-110	0	10	
Nitrogen, NO2 plus NO3	mg/L	0.28	2.5	2.5	2.8	2.8	100	99	90-110	0	10	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25966
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92281063008

METHOD BLANK: 1638908
Matrix: Water
Associated Lab Samples: 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	0.010	12/30/15 01:48	
Nitrogen, Nitrite	mg/L	ND	0.020	0.010	12/30/15 01:48	
Nitrogen, NO2 plus NO3	mg/L	ND	0.020	0.010	12/30/15 01:48	

LABORATORY CONTROL SAMPLE: 1638909

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.6	104	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	102	90-110	
Nitrogen, NO2 plus NO3	mg/L	2.5	2.6	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638910 1638911

Parameter	Units	92281299001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	4.2	2.5	2.5	8.0	8.6	154	178	90-110	7	10	M1
Nitrogen, Nitrite	mg/L	2.5	1	1	3.5	3.4	97	89	90-110	2	10	M1
Nitrogen, NO2 plus NO3	mg/L	6.7	2.5	2.5	8.0	8.6	52	77	90-110	7	10	M1

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25984
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 92281063008

METHOD BLANK: 1640308
Matrix: Water
Associated Lab Samples: 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.020	0.010	01/02/16 04:08	

LABORATORY CONTROL SAMPLE: 1640309

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1640310 1640311

Parameter	Units	92281083001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	4.4	12.5	12.5	16.6	16.6	98	98	75-125	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1640312 1640313

Parameter	Units	92281163002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.5	2.5	2.4	99	94	75-125	5	10	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25918 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Phosphorus, Total
Associated Lab Samples: 92281063004, 92281063005

METHOD BLANK: 1637198 | Matrix: Water
Associated Lab Samples: 92281063004, 92281063005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	0.025	12/26/15 11:18	

LABORATORY CONTROL SAMPLE: 1637199

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.6	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1637200 1637201

Parameter	Units	92280618003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	0.11	2.5	2.5	2.6	2.5	97	97	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1637202 1637203

Parameter	Units	92280913003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	ND	2.5	2.5	2.4	2.4	95	95	90-110	0	10	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/26003
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Phosphorus, Total
Associated Lab Samples: 92281063008

METHOD BLANK: 1642148
Matrix: Water
Associated Lab Samples: 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	0.025	01/07/16 12:56	

LABORATORY CONTROL SAMPLE: 1642149

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1642150 1642151

Parameter	Units	92281294001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	0.051	2.5	2.5	2.8	2.5	108	99	90-110	9	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1642152 1642153

Parameter	Units	92281821002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	4.6	2.5	2.5	6.9	7.0	92	94	90-110	1	10	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25955 — Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E — Analysis Description: 4500 Chloride
Associated Lab Samples: 92281063004, 92281063005, 92281063008

METHOD BLANK: 1638401 — Matrix: Water
Associated Lab Samples: 92281063004, 92281063005, 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	12/30/15 01:12	

LABORATORY CONTROL SAMPLE: 1638402

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.6	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638403 1638404

Parameter	Units	92280808001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	61.5	20	20	80.1	79.6	93	91	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638405 1638406

Parameter	Units	92280941004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	26.1	20	20	46.8	45.6	103	97	90-110	3	10	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25951 | Analysis Method: SM 4500-CN-E
QC Batch Method: SM 4500-CN-E | Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92281063004, 92281063005

METHOD BLANK: 1638264 | Matrix: Water
Associated Lab Samples: 92281063004, 92281063005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0080	0.0040	12/30/15 15:43	

LABORATORY CONTROL SAMPLE: 1638265

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.090	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638266 1638267

Parameter	Units	92280826001 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	.1	.1	0.040	0.042	33	36	75-125	6	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638355 1638356

Parameter	Units	92281020001 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	.1	.1	0.099	0.099	94	94	75-125	1	10	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25952
QC Batch Method: SM 4500-CN-E
Analysis Method: SM 4500-CN-E
Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92281063008

METHOD BLANK: 1638270
Matrix: Water
Associated Lab Samples: 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0080	0.0040	12/30/15 16:10	

LABORATORY CONTROL SAMPLE: 1638271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638272 1638273

Parameter	Units	92280899006 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	.1	.1	0.058	0.048	56	47	75-125	18	10	M1,R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25910 | Analysis Method: SM 4500-P E
QC Batch Method: SM 4500-P E | Analysis Description: SM4500P-E Phosphorus, Ortho
Associated Lab Samples: 92281063004, 92281063005

METHOD BLANK: 1637090 | Matrix: Water
Associated Lab Samples: 92281063004, 92281063005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.050	0.025	12/23/15 22:20	

LABORATORY CONTROL SAMPLE: 1637091

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.25	0.25	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1637092 1637093

Parameter	Units	92281020001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.36	1.2	1.2	1.6	1.6	102	102	90-110	0	10	

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25953
QC Batch Method: SM 4500-P E
Analysis Method: SM 4500-P E
Analysis Description: SM4500P-E Phosphorus, Ortho
Associated Lab Samples: 92281063008

METHOD BLANK: 1638377
Matrix: Water
Associated Lab Samples: 92281063008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.050	0.025	12/29/15 11:20	

LABORATORY CONTROL SAMPLE: 1638378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.25	0.26	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1638379 1638380

Parameter	Units	92281063008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	ND	.25	.25	0.26	0.26	102	102	90-110	0	10	H1

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QUALITY CONTROL DATA

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: WETA/25967
QC Batch Method: EPA 9012B
Analysis Method: EPA 9012B
Analysis Description: EPA 9012B Cyanide
Associated Lab Samples: 92281063006

METHOD BLANK: 1639077
Matrix: Water
Associated Lab Samples: 92281063006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	mg/L	0.0J	0.0080		12/30/15 15:12	

LABORATORY CONTROL SAMPLE: 1639078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1639079 1639080

Parameter	Units	92281063006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	0.0J	.1	.1	0.090	0.093	90	93	75-125	3	20	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER N **Lab ID: 92281063004** Collected: 12/22/15 13:30 Received: 12/22/15 17:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**3.95 ± 1.40 (1.36)** **C:NA T:NA**	pCi/L	01/08/16 08:41	12587-46-1	
Gross Beta	EPA 900.0	**6.04 ± 1.40 (1.76)** **C:NA T:NA**	pCi/L	01/08/16 08:41	12587-47-2	
Radium-226	EPA 903.1	**0.0673 ± 0.528 (0.949)** **C:NA T:81%**	pCi/L	01/15/16 11:34	13982-63-3	
Radium-228	EPA 904.0	**0.920 ± 0.507 (0.957)** **C:79% T:50%**	pCi/L	01/13/16 12:34	15262-20-1	
Total Uranium	ASTM D5174-97	**0.200 ± 0.005 (0.193)** **C:NA T:NA**	ug/L	01/18/16 10:33	7440-61-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: MF STORMWATER W **Lab ID: 92281063005** Collected: 12/22/15 13:50 Received: 12/22/15 17:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**0.323 ± 0.525 (1.14)** **C:NA T:NA**	pCi/L	01/08/16 08:41	12587-46-1	
Gross Beta	EPA 900.0	**2.59 ± 1.05 (1.81)** **C:NA T:NA**	pCi/L	01/08/16 08:41	12587-47-2	
Radium-226	EPA 903.1	**0.378 ± 0.591 (0.990)** **C:NA T:75%**	pCi/L	01/15/16 11:49	13982-63-3	
Radium-228	EPA 904.0	**0.313 ± 0.352 (0.747)** **C:86% T:70%**	pCi/L	01/13/16 12:33	15262-20-1	
Total Uranium	ASTM D5174-97	**0.364 ± 0.010 (0.193)** **C:NA T:NA**	ug/L	01/18/16 10:36	7440-61-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Sample: SILAR RINSE BLANK 3 **Lab ID: 92281063008** Collected: 12/22/15 16:10 Received: 12/22/15 17:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**-0.025 ± 0.553 (1.36)** **C:NA T:NA**	pCi/L	01/09/16 15:24	12587-46-1	
Gross Beta	EPA 900.0	**-0.021 ± 0.543 (1.27)** **C:NA T:NA**	pCi/L	01/09/16 15:24	12587-47-2	
Radium-226	EPA 903.1	**0.0593 ± 0.270 (0.436)** **C:NA T:93%**	pCi/L	01/19/16 10:15	13982-63-3	
Radium-228	EPA 904.0	**0.486 ± 0.376 (0.743)** **C:84% T:79%**	pCi/L	01/14/16 12:34	15262-20-1	
Total Uranium	ASTM D5174-97	**0.002 ± 0.000 (0.193)** **C:NA T:NA**	ug/L	01/18/16 10:38	7440-61-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: RADC/27510 | Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0 | Analysis Description: 900.0 Gross Alpha/Beta
Associated Lab Samples: 92281063008

METHOD BLANK: 1007413 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.123 ± 0.300 (0.696) C:NA T:NA	pCi/L	01/09/16 13:59	
Gross Beta	0.288 ± 0.602 (1.32) C:NA T:NA	pCi/L	01/09/16 13:59	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: RADC/27482 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 92281063004, 92281063005

METHOD BLANK: 1007373 Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.0280 ± 0.319 (0.746) C:86% T:85%	pCi/L	01/13/16 12:32	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: RADC/27443 Analysis Method: ASTM D5174-97
QC Batch Method: ASTM D5174-97 Analysis Description: D5174.97 Total Uranium KPA
Associated Lab Samples: 92281063004, 92281063005, 92281063008

METHOD BLANK: 1006058 Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Total Uranium	-0.003 ± -0.001 (0.193) C:NA T:NA	ug/L	01/18/16 10:14	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: RADC/27426 | Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0 | Analysis Description: 900.0 Gross Alpha/Beta
Associated Lab Samples: 92281063004, 92281063005

METHOD BLANK: 1005876 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.664 ± 0.530 (0.937) C:NA T:NA	pCi/L	01/07/16 18:58	
Gross Beta	0.849 ± 0.637 (1.23) C:NA T:NA	pCi/L	01/07/16 18:58	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: RADC/27416 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 92281063004, 92281063005

METHOD BLANK: 1004611 Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0923 ± 0.421 (0.680) C:NA T:83%	pCi/L	01/15/16 11:05	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: RADC/27488 | Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 | Analysis Description: 903.1 Radium-226
Associated Lab Samples: 92281063008

METHOD BLANK: 1007379 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.059 ± 0.267 (0.630) C:NA T:95%	pCi/L	01/19/16 09:46	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

QC Batch: RADC/27484 | Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 | Analysis Description: 904.0 Radium 228
Associated Lab Samples: 92281063008

METHOD BLANK: 1007375 | Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0321 ± 0.341 (0.786) C:81% T:85%	pCi/L	01/14/16 12:31	

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QUALIFIERS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

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.

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, Styrene, and Vinyl chloride.

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1g	Sample re-extracted outside method hold time. Results of re-analysis confirmed original analysis performed within hold time.
C9	Common Laboratory Contaminant.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
H1	Analysis conducted outside the EPA method holding time.
H3	Sample was received or analysis requested beyond the recognized method holding time.
H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

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QUALIFIERS

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

ANALYTE QUALIFIERS

L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
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.
N	Tentatively identified compound (TIC) based on mass spectral library search. Result is estimated.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92281063004	**MF STORMWATER N**	EPA 3510	OEXT/40000	EPA 8081	GCSV/23705
92281063005	**MF STORMWATER W**	EPA 3510	OEXT/40000	EPA 8081	GCSV/23705
92281063008	**SILAR RINSE BLANK 3**	EPA 3510	OEXT/40000	EPA 8081	GCSV/23705
92281063004	**MF STORMWATER N**	EPA 3010A	MPRP/20382	EPA 6010	ICP/18387
92281063005	**MF STORMWATER W**	EPA 3010A	MPRP/20382	EPA 6010	ICP/18387
92281063006	**SWOF-009**	EPA 3010A	MPRP/20382	EPA 6010	ICP/18387
92281063008	**SILAR RINSE BLANK 3**	EPA 3010A	MPRP/20389	EPA 6010	ICP/18397
92281063004	**MF STORMWATER N**	EPA 7470	MERP/8829	EPA 7470	MERC/8483
92281063005	**MF STORMWATER W**	EPA 7470	MERP/8829	EPA 7470	MERC/8483
92281063006	**SWOF-009**	EPA 7470	MERP/8829	EPA 7470	MERC/8483
92281063008	**SILAR RINSE BLANK 3**	EPA 7470	MERP/8841	EPA 7470	MERC/8492
92281063006	**SWOF-009**	EPA 3510	OEXT/39962	EPA 8270	MSSV/11706
92281063004	**MF STORMWATER N**	EPA 3510	OEXT/39986	EPA 8270	MSSV/11716
92281063005	**MF STORMWATER W**	EPA 3510	OEXT/39986	EPA 8270	MSSV/11716
92281063008	**SILAR RINSE BLANK 3**	EPA 3510	OEXT/39986	EPA 8270	MSSV/11716
92281063004	**MF STORMWATER N**	EPA 8260	MSV/35002		
92281063005	**MF STORMWATER W**	EPA 8260	MSV/35002		
92281063006	**SWOF-009**	EPA 8260	MSV/35002		
92281063007	**TRIP BLANK 1**	EPA 8260	MSV/35000		
92281063008	**SILAR RINSE BLANK 3**	EPA 8260	MSV/35033		
92281063009	**TRIP BLANK 2**	EPA 8260	MSV/35033		
92281063001	**SA2 SS/SB-42 0.5-1.5**	EPA 8260	MSV/34958		
92281063002	**SA2 SS/SB-22 0.5-1.0**	EPA 8260	MSV/34958		
92281063003	**SA2 SS/SB-22 SPLIT**	EPA 8260	MSV/34958		
92281063001	**SA2 SS/SB-42 0.5-1.5**	ASTM D2974-87	PMST/8692		
92281063002	**SA2 SS/SB-22 0.5-1.0**	ASTM D2974-87	PMST/8692		
92281063003	**SA2 SS/SB-22 SPLIT**	ASTM D2974-87	PMST/8692		
92281063004	**MF STORMWATER N**	EPA 900.0	RADC/27426		
92281063005	**MF STORMWATER W**	EPA 900.0	RADC/27426		
92281063008	**SILAR RINSE BLANK 3**	EPA 900.0	RADC/27510		
92281063004	**MF STORMWATER N**	EPA 903.1	RADC/27416		
92281063005	**MF STORMWATER W**	EPA 903.1	RADC/27416		
92281063008	**SILAR RINSE BLANK 3**	EPA 903.1	RADC/27488		
92281063004	**MF STORMWATER N**	EPA 904.0	RADC/27482		
92281063005	**MF STORMWATER W**	EPA 904.0	RADC/27482		
92281063008	**SILAR RINSE BLANK 3**	EPA 904.0	RADC/27484		
92281063004	**MF STORMWATER N**	ASTM D5174-97	RADC/27443		
92281063005	**MF STORMWATER W**	ASTM D5174-97	RADC/27443		
92281063008	**SILAR RINSE BLANK 3**	ASTM D5174-97	RADC/27443		

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WRIGHT CHEMICAL SITE
Pace Project No.: 92281063

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92281063004	**MF STORMWATER N**	EPA 9040	WET/42196		
92281063005	**MF STORMWATER W**	EPA 9040	WET/42196		
92281063008	**SILAR RINSE BLANK 3**	EPA 9040	WET/42282		
92281063004	**MF STORMWATER N**	EPA 300.0	WETA/25935		
92281063005	**MF STORMWATER W**	EPA 300.0	WETA/25935		
92281063006	**SWOF-009**	EPA 300.0	WETA/25935		
92281063008	**SILAR RINSE BLANK 3**	EPA 300.0	WETA/25944		
92281063004	**MF STORMWATER N**	EPA 350.1	WETA/25963		
92281063005	**MF STORMWATER W**	EPA 350.1	WETA/25963		
92281063008	**SILAR RINSE BLANK 3**	EPA 350.1	WETA/25985		
92281063004	**MF STORMWATER N**	EPA 353.2	WETA/25922		
92281063005	**MF STORMWATER W**	EPA 353.2	WETA/25922		
92281063006	**SWOF-009**	EPA 353.2	WETA/25922		
92281063008	**SILAR RINSE BLANK 3**	EPA 353.2	WETA/25966		
92281063008	**SILAR RINSE BLANK 3**	EPA 353.2	WETA/25984		
92281063004	**MF STORMWATER N**	EPA 365.1	WETA/25918		
92281063005	**MF STORMWATER W**	EPA 365.1	WETA/25918		
92281063008	**SILAR RINSE BLANK 3**	EPA 365.1	WETA/26003		
92281063004	**MF STORMWATER N**	SM 4500-Cl-E	WETA/25955		
92281063005	**MF STORMWATER W**	SM 4500-Cl-E	WETA/25955		
92281063008	**SILAR RINSE BLANK 3**	SM 4500-Cl-E	WETA/25955		
92281063004	**MF STORMWATER N**	SM 4500-CN-E	WETA/25951		
92281063005	**MF STORMWATER W**	SM 4500-CN-E	WETA/25951		
92281063008	**SILAR RINSE BLANK 3**	SM 4500-CN-E	WETA/25952		
92281063004	**MF STORMWATER N**	SM 4500-P E	WETA/25910		
92281063005	**MF STORMWATER W**	SM 4500-P E	WETA/25910		
92281063008	**SILAR RINSE BLANK 3**	SM 4500-P E	WETA/25953		
92281063006	**SWOF-009**	EPA 9012B	WETA/25967	EPA 9012B	WETA/25969

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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:

Company: Shield Engineering
Address: 4301 Taggart Creek Rd
Charlotte, NC 28208
Email To: dstanton@shieldengineering.com
Phone: 704-394-0913 Fax: 704-394-0968
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: David Stoner
Copy To:
Purchase Order No.:
Project Name: Wright Chemical Site
Project Number: 1100044-05

Section C Invoice Information:

Attention: David Stoner
Company Name: Shield
Address: 4301 Taggart Creek Rd
Pace Quote Reference:
Pace Project Manager: Nicole Gasiorowski
Pace Profile #: NMG 7344-6,48 1739

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

Valid Matrix Codes

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): VOCs + TICs	SVOCs + TICs	TCL Pesticides	TAL Metals	Cyanide	NH_3/PO_4	NO_2/NO_3 Chloride P	pH/Cl/F/SO_4	RAD	Formaldehyde	Fluoride/Sulfate	Nitrate/Nitrite	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SA2 SS/SB-42 0.5-1.5	SL	G			12/22	0915		6	1						1	4	X													001
2	SA2 SS/SB-22 0.5-1.0	SL	G				0940		6	1						1	4	X													002
3	SA2 SS/SB-22 SPLIT	SL	G				0945		6	1						1	4	X													003
4	MF Stormwater N	WT	G				1330		17	8	1	4	3	1				X	X	X	X	X	X	X	X	X	X				004
5	MF Stormwater W	WT	G				1350		17	8	1	4	3	1				X	X	X	X	X	X	X	X	X	X				005
6	Solar Rinse Blank 3	WT	G				1410		17	8	1	4	3	1				X	X	X	X	X	X	X	X	X	X				008
7	SWOF-009	WT	G				1455		9	4		1	3	1				X	X		X	X						X	X		006
8	Trip Blank 1	WT	G				—		2				2					X													007
9	Trip Blank 2	WT	G				—		2				2					X													009
10																															
11																															
12																															

92281063

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Methanol & Acetone ASTs (PSA W-12)	[illegible] / Shield	12/22/15	1747	[illegible]	12/22	1747				
				[illegible]	12/23	11:15	4.5	✓	✓	✓
Note. TICs include methanol										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt Smith, Ayla Homer

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/22/15

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

WO#: 92281063

92281063

erms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-Feb-2007

Pace Analytical®	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: 26OCT2015 Page 1 of 2
	Document No.: F-CHR-CS-003-rev.17	Issuing Authority: Pace Huntersville Quality Office

Sample Condition Upon Receipt

Client Name: Shield

Project #:

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

Custody Seal on Cooler/Box Present? ☐ Yes ☐ No **Seals Intact?** ☐ Yes ☐ No

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

Thermometer Used: ☑ T1505

Type of Ice: ☐ Wet ☐ Blue ☑ None ☐ Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 4.5

Biological Tissue Frozen? ☐ Yes ☑ No ☐ N/A

Temp should be above freezing to 6°C **Correction Factor:** 0.0 °C **Date and Initials of Person Examining Contents:** AP 12-23-15

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

If Yes to either question, fill out a Regulated Soil Checklist and include with SCUR/COC paperwork.

				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 and/or Signature on COC?	☑ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☐ No	☑ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☐ Yes	☑ No	☐ N/A	8. missing item #6
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	only recieved 1 TB
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: wt	☐ Yes	☑ No	☐ N/A	12. No item 6
All containers needing acid/base preservation have been checked?	☑ Yes	☐ No	☐ N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg	☑ Yes	☐ No	☐ N/A	
Samples checked for dechlorization	☑ Yes	☐ No	☐ N/A	14.
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☑ No	☐ N/A	15.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	16. 1 TB
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 SCURF Review: NMG NMG **Date:** 12/23/15 12/28/15

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®	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: 26Oct2015 Page 1 of 2
	Document No.: F-CHR-CS-003-rev.17	Issuing Authority: Pace Huntersville Quality Office

Sample Condition Upon Receipt

Client Name: Stield

Project #:

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

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

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

Thermometer Used: ☑ T1505 **Type of Ice:** ☐ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.4 **Biological Tissue Frozen?** ☐ Yes ☑ No ☐ N/A

Temp should be above freezing to 6°C **Correction Factor:** 0.0 °C **Date and Initials of Person Examining Contents:** AP 12-24-15

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

If Yes to either question, fill out a Regulated Soil Checklist and include with SCUR/COC paperwork.

				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 and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☐ Yes	☑ No	☐ N/A	5. Nitrate
Short Hold Time Analysis (<72 hr)?	☑ Yes	☐ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☐ Yes	☑ No	☐ N/A	8. only received item #6
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9. and TB
-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. Note if sediment is visible in the dissolved container
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix:	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked?	☑ Yes	☐ No	☐ N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg	☑ Yes	☐ No	☐ N/A	
Samples checked for dechlorization	☐ Yes	☐ No	☐ N/A	14.
Headspace in VOA Vials (>5-6mm)?	☐ 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?** ☐ Yes ☐ No

Person Contacted: David Wallace, David Stoner Date/Time: 12/24/15 12:57

Comments/Resolution: Silar Rinse Blank 3 and Trip Blank 2 received via FedEX on 12/24/15 at 11:20. These two samples added to WO #92281013.

Project Manager SCURF Review: NMG **Date:** 12/24/15

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).

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

December 31, 2015

Nicole Gasiorowski
Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville NC 28078

TEL: (704) 875-9092
FAX: (704) 875-9091

RE: 92281063

Dear Nicole Gasiorowski: Order No: 1512J36

Analytical Environmental Services, Inc. received 2 samples on December 24, 2015 12:45 pm for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/15-06/30/16.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Dorothy J deBruyn

Dorothy deBruyn
Project Manager

~~1512~~ 12/24 1512536

Chain of Custody

Pace Analytical
www.pacelabs.com

Work Order: 92281063 Work Order Name: WRIGHT CHEMICAL SITE Results Requested: 1/4/2016

Report Invoice To | Subcontract To | Requested Analysis

Nicole Gasiorowski
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
Phone (704)875-9092
Email: nicole.gasiorowski@pacelabs.com

AES

P.O. NMG 15173

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Formaldehyde	LAB USE ONLY
1	MF STORMWATER N	12/22/2015 13:30	92281063004	Water	2	X	
2	MF STORMWATER W	12/22/2015 13:50	92281063005	Water	2	X	
3							
4							
5							

Comments

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] PACE	12/23/15 17:00	FEDEX	
2			[signature]	12/24/15 12:45
3				

Cooler Temperature on Receipt ____ °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.

Analytical Environmental Services, Inc

Date: 29-Dec-15

Client:	Pace Analytical Services, Inc.	**Client Sample ID:**	MF STORMWATER N
Project Name:	92281063	**Collection Date:**	12/22/2015 1:30:00 PM
Lab ID:	1512J36-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbonyl Compounds by HPLC SW8315A								
Formaldehyde	BRL	50		ug/L	217554	1	12/24/2015 17:51	RF

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 29-Dec-15

Client:	Pace Analytical Services, Inc.	**Client Sample ID:**	MF STORMWATER W
Project Name:	92281063	**Collection Date:**	12/22/2015 1:50:00 PM
Lab ID:	1512J36-002	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbonyl Compounds by HPLC SW8315A								
Formaldehyde	BRL	50		ug/L	217554	1	12/24/2015 18:32	RF

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client PACE Work Order Number 1512J36

Checklist completed by [signature] 12/24/15
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.7' Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by MS

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\\Aes_server\I\Sample Receipt\My Documents\COCs and pH Adjustment Sheet\Sample_Cooler_Recipt_Checklist_Rev1.rtf

Analytical Environmental Services, Inc

Date: 30-Dec-15

Client: Pace Analytical Services, Inc.
Project Name: 92281063
Lab Order: 1512J36

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1512J36-001A	MF STORMWATER N	12/22/2015 1:30:00PM	Aqueous	Carbonyl Compounds by HPLC SW8315		12/24/2015 1:00:00PM	12/24/2015
1512J36-002A	MF STORMWATER W	12/22/2015 1:50:00PM	Aqueous	Carbonyl Compounds by HPLC SW8315		12/24/2015 1:00:00PM	12/24/2015

Client: Pace Analytical Services, Inc.
Project Name: 92281063
Workorder: 1512J36

ANALYTICAL QC SUMMARY REPORT

BatchID: **217554**

Sample ID: **MB-217554** Client ID: Units: **ug/L** Prep Date: **12/23/2015** Run No: **307240**
SampleType: **MBLK** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217554** Analysis Date: **12/23/2015** Seq No: **6592012**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	BRL	50									

Sample ID: **LCS-217554** Client ID: Units: **ug/L** Prep Date: **12/23/2015** Run No: **307240**
SampleType: **LCS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217554** Analysis Date: **12/23/2015** Seq No: **6592013**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1142	50	1000		114	70	130				

Sample ID: **1512J36-001AMS-2** Client ID: **MF STORMWATER N** Units: **ug/L** Prep Date: **12/24/2015** Run No: **307241**
SampleType: **MS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217554** Analysis Date: **12/24/2015** Seq No: **6592028**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	881.7	50	1000		88.2	44.7	135				

Sample ID: **1512K45-001AMS** Client ID: Units: **ug/L** Prep Date: **12/23/2015** Run No: **307240**
SampleType: **MS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217554** Analysis Date: **12/23/2015** Seq No: **6592020**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1286	50	1000	95.39	119	44.7	135				H

Sample ID: **1512J36-001AMSD-2** Client ID: **MF STORMWATER N** Units: **ug/L** Prep Date: **12/24/2015** Run No: **307241**
SampleType: **MSD** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217554** Analysis Date: **12/24/2015** Seq No: **6592029**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	911.5	50	1000		91.2	44.7	135	0	0	27.3	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc

Date: 29-Dec-15

Client: Pace Analytical Services, Inc.
Project Name: 92281063
Workorder: 1512J36

ANALYTICAL QC SUMMARY REPORT

BatchID: **217554**

Sample ID: **1512K45-001AMSD** Client ID:
SampleType: **MSD** TestCode: **Carbonyl Compounds by HPLC SW8315A**
Units: **ug/L** BatchID: **217554**
Prep Date: **12/23/2015** Analysis Date: **12/23/2015**
Run No: **307240** Seq No: **6592021**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1346	50	1000	95.39	125	44.7	135	1286	4.51	27.3	H

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

January 05, 2016

Nicole Gasiorowski
Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville NC 28078

TEL: (704) 875-9092
FAX: (704) 875-9091

RE: 92281063

Dear Nicole Gasiorowski: Order No: 1512N48

Analytical Environmental Services, Inc. received 1 samples on 12/29/2015 10:15:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative. AES' certifications are as follows:
-South Carolina Certification number 98016003 for Clean Water Act and for Solid and Hazardous Waste, effective until 6/30/16.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

Dorothy deBruyn
Project Manager

3080 Presidential Drive • Atlanta, Georgia 30340 • Tel: 770.457.8177 • Fax: 770.457.8188 • Toll Free: 800.972.4889
www.aesatlanta.com

1572N48

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 92281063 **Workorder Name:** WRIGHT CHEMICAL SITE **Results Requested** 1/4/2016

Report / Invoice To

Nicole Gasiorowski
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
Phone (704)875-9092
Email: nicole.gasiorowski@pacelabs.com

Subcontract To

AES

P.O. NMG 15175

Requested Analysis

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Formaldehyde	LAB USE ONLY
1	~~MF STORMWATER N~~	~~12/22/2015 13:30~~	~~92281063004~~	~~Water~~		X	
2	~~MF STORMWATER W~~	~~12/22/2015 13:50~~	~~92281063005~~	~~Water~~		X	
3	SILAR RINSE BLANK 3	12/22/2015 16:10	92281063008	Water	2	X	
4							
5							

Transfers	Released By	Date/Time	Received By	Date/Time
1	M Gasiorowski PACE	12/28/15 17:00	FEDEX	
2			Mwendtaurat	12/29 10:15 AM (FedEx)
3				

Comments

Cooler Temperature on Receipt _____ °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.*

1572N48

A

ORIGIN ID:SRWA (704) 875-9092
PACE ANALYTICAL SERVICES, INC.
PACE ANALYTICAL SERVICES, INC.
9800 KINCEY AVENUE
SUITE 100
HUNTERSVILLE, NC 28078
UNITED STATES US

SHIP DATE: 28DEC15
ACTWGT: 28.1 LB MAN
CAD: 0050643/CAFE2912

BILL SENDER

TO RECEIVING
AES
3080 PRESIDENTIAL DR

ATLANTA GA 30340
(770) 457-8177
DEPT: 9203 SUB OUT

FedEx Express

TUE - 29 DEC 3:00P
STANDARD OVERNIGHT

TRK# 0201 461 7299 2782

30340
GA-US ATL

37 MGEA

Part # 154254-354 RIT2 09/15

Client: Pace Analytical Services, Inc.
Project: 92281063
Lab ID: 1512N48

Case Narrative

Sample for formaldehyde was received out of hold. The laboratory proceeded with analysis per Nicole Gasiorowski via email 12/30/2015.

Analytical Environmental Services, Inc

Date: 5-Jan-16

Client:	Pace Analytical Services, Inc.	**Client Sample ID:**	SILAR RINSE BLANK 3
Project Name:	92281063	**Collection Date:**	12/22/2015 4:10:00 PM
Lab ID:	1512N48-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbonyl Compounds by HPLC SW8315A								
Formaldehyde	BRL	50	H	ug/L	217851	1	12/31/2015 17:59	RF

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Pace Analytical Work Order Number 1512N48

Checklist completed by [signature] 12/29/2015
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.1°C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes __ No ✓

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by MP

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\\Aes_server\I\Sample Receipt\My Documents\COCs and pH Adjustment Sheet\Sample_Cooler_Recipt_Checklist_Rev1.rtf

Analytical Environmental Services, Inc

Date: 5-Jan-16

Client: Pace Analytical Services, Inc.
Project Name: 92281063
Lab Order: 1512N48

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1512N48-001A	SILAR RINSE BLANK 3	12/22/2015 4:10:00PM	Aqueous	Carbonyl Compounds by HPLC SW8315		12/31/2015 10:00:00AM	12/31/2015

Client: Pace Analytical Services, Inc.
Project Name: 92281063
Workorder: 1512N48

ANALYTICAL QC SUMMARY REPORT

BatchID: **217851**

Sample ID: **MB-217851** Client ID: Units: **ug/L** Prep Date: **12/31/2015** Run No: **307547**
SampleType: **MBLK** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217851** Analysis Date: **12/31/2015** Seq No: **6600090**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	BRL	50									

Sample ID: **LCS-217851** Client ID: Units: **ug/L** Prep Date: **12/31/2015** Run No: **307547**
SampleType: **LCS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217851** Analysis Date: **12/31/2015** Seq No: **6600091**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	1027	50	1000		103	70	130				

Sample ID: **1512O89-001AMS** Client ID: Units: **ug/L** Prep Date: **12/31/2015** Run No: **307547**
SampleType: **MS** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217851** Analysis Date: **12/31/2015** Seq No: **6600101**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	54640	5000	10000	47510	71.2	44.7	135				

Sample ID: **1512O89-001AMSD** Client ID: Units: **ug/L** Prep Date: **12/31/2015** Run No: **307547**
SampleType: **MSD** TestCode: **Carbonyl Compounds by HPLC SW8315A** BatchID: **217851** Analysis Date: **12/31/2015** Seq No: **6600102**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Formaldehyde	38330	5000	10000	47510	-91.9	44.7	135	54640	35.1	27.3	SR

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		