Concrete Sampling and Testing
Assunpink Creek Broad Street Culvert
Trenton, New Jersey

Final Report

Prepared for:

U.S. Army Corps of Engineers
Philadelphia District

Under:

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Task Order 003

June 2014

Environmental Decisions

Final Report
Concrete Sampling and Testing
Assunpink Creek Broad Street Culvert
Trenton, New Jersey

Prepared for:

United States Army Corps of Engineers
Philadelphia, Pennsylvania

June 2014

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EXECUTIVE SUMMARY

The United States Army Corps of Engineers (USACE) is preparing for the removal of an existing box culvert and subsequent stream restoration along a section of the Assunpink Creek located in Trenton, New Jersey. An environmental investigation was performed during March 2014 to assist in assessing the structural stability and potential chemical impacts to the concrete from previously identified historic fill in the area of investigation. A portion of the box culvert is proposed to be left in place to support existing utilities that are supported by the culvert near South Broad Street, with the remainder of the culvert to be removed.

AMO Environmental Decisions (AMO) performed a concrete coring and testing program to assess the structural integrity of the concrete. Six concrete cores were collected from the vertical walls of the culvert. The cores were submitted to GeoStructures, Inc., of King of Prussia, Pennsylvania for compressive strength testing. The results of the compressive strength testing are provided in Table 1 of this Report. The results of the compressive strength test will need to be evaluated by a professional engineer to assess the structural stability of the culvert for support of the existing utilities. The evaluation of the structural stability of the culvert is not part of AMO's work scope and thus not addressed in this Report.

AMO also collected concrete chip samples from four of the six locations selected for concrete coring. The concrete chip samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica) for chemical analysis to evaluate if the concrete could be recycled, or would need to be disposed of offsite. No analytes were detected at concentrations greater than the New Jersey Department of Environmental Protection Residential Direct Contact Soil Remediation Standards or Toxicity Characteristic Leaching Procedure Regulatory Limits. Thus, the analytical results indicate that the concrete can be recycled.

1.0 INTRODUCTION

1.1 Site Description

Under Contract No. W912BU-13-D-0007, Task Order No. 003, the U.S. Army Corps of Engineers (USACE), Philadelphia District authorized AMO Environmental Decisions (AMO) to provide site project plans for concrete coring, sampling and testing on portions of the Broad Street Culvert. These plans included a Work Plan, Site Health and Safety Plan, and Sampling and Analysis Plan (including a Quality Assurance Project Plan). The plans detailed work scopes to perform utility clearance in work areas, collect concrete core and chip samples for structural testing and chemical testing, respectively, and produce draft and final project summary reports. The project tasks are described in detail in the Task Order 003 Scope of Work (SOW), which is included as **Appendix A**.

As shown on **Figure 1**, the project area for this investigation was a 500-foot section of the lower Assunpink Creek in downtown Trenton where the creek is contained within a buried concrete box culvert known as the Broad Street Culvert. The investigation area is situated in an open grassy area adjacent to the State of New Jersey Department of Human Services (DHS) building and is bound by East Lafayette St. to the North, South Warren St. to the West, Assunpink Dr. to the South, and South Broad St. to the East. The City of Trenton is the owner of the site property.

1.2 Project Background

The U.S. Army Corps of Engineers, Philadelphia District (USACE) has previously performed site investigation work under prior task orders with other contractors to support their efforts with this project. As part of the District's needs, an additional environmental investigation was required at this site to sample and test the portions of the box culvert to evaluate disposal options and to evaluate the structural integrity of the concrete. The structural integrity testing was performed to determine whether a small portion of the culvert that supports existing utilities can be left in place. The results of the current site investigation will be used to supplement existing information by USACE for removal of the existing culvert.

1.3 Project Objectives and Summary of Activities

The purpose of the work performed under this task order was to sample and test concrete from the exterior walls of the Broad Street Culvert to evaluate structural stability and potential chemical impacts for evaluation of concrete disposal options. The concrete sampling locations are shown on **Figure 2**. AMO activities included:

- Performed a Site reconnaissance.
- Prepared and provided site project plans including a Work Plan (WP), site Health and Safety Plan (HASP), and Sampling and Analysis Plan (SAP).
- Performed utility clearance in the selected work areas.
- Collected and submitted concrete core samples to GeoStructures, Inc., of King of Prussia, Pennsylvania for structural testing.
- Collected and submitted concrete chip samples to TestAmerica Laboratories, Inc., of Denver, Colorado and Edison, New Jersey for chemical testing.

- Produced this draft project summary report.

This report presents the results of compressive strength testing and chemical testing for each sample submitted for analysis. The results of the chemical testing have been evaluated in accordance with NJDEP Guidance for Characterization of Concrete and Clean Material Certification for Recycling, which is included as **Appendix B**.

1.4 Deviations from Work Plan Scope

A Work Plan and Sampling and Analysis Plan were developed by AMO based on the Scope of Work provided by USACE. The plans, dated February 2014, were approved by USACE in an email dated February 21, 2014.

Several deviations from the approved Scope of Work occurred. Originally, the Scope of Work called for clearing of vegetation at each of the six investigation areas to allow geophysical survey work and utility clearance markouts and to be completed. Due to the heavy amount of snow received during winter, the vegetation was matted down, and the utility locating subcontractor (ERT) stated that clearing of vegetation was not necessary. ERT performed utility clearance at the six locations selected for investigation on March 4, 2014.

As shown in Appendix A, the USACE Scope of Work, the analytical program originally stipulated that concrete chip samples were to be submitted for analysis of TCL VOCs, TCL SVOCs, TCL pesticides, TCL herbicides, TCL PCBs, TAL metals, EPH, TCLP metals, TCLP pesticides, and TCLP herbicides. During initiation of the sampling tasks, USACE requested that TCLP VOCs, TCLP SVOCs, ignitability, Corrosivity, reactivity as sulfide, and reactivity as cyanide be added to the requested analyses. USACE provided Modification No. 1 to Task Order 003 to finalize the requested change on April 3, 2014.

2.0 METHODOLOGY/FIELD ACTIVITIES

The field activities for the Assunpink Creek Concrete Sampling and Testing consisted of:

- Performing a geophysical survey to more accurately locate underground utilities within the selected work areas;
- Excavation of six pits to accommodate concrete coring equipment for collection of six concrete core samples for structural testing;
- Collection of concrete chip samples from four of the six locations for chemical analyses;
- Backfilling the excavations, grading, and compacting the excavations with the bucket of excavator after the samples had been collected.

A detailed scope of work and summary of field methods employed are provided in the remainder of this section.

2.1 Utility Markout/Geophysical Survey

AMO and Lewis Environmental (Lewis [excavation and coring subcontractor]) contacted New Jersey One Call at 1-800-272-1000 to arrange utility markouts at the site prior to any intrusive work. Additionally, AMO subcontracted ERT Corporation of Laurel, Maryland to perform a geophysical survey at each sampling location to detect active or abandoned subsurface metal, plastic, or ceramic pipes/utilities and other subsurface features. The geophysical survey was performed on March 4, 2014. ERT marked the locations of potential utilities in the field; ERT did not prepare a report detailing the results of the survey.

The survey areas consisted of the six selected sampling locations, adjacent to the culvert outer walls where soil was to be excavated in order to collect concrete testing samples. Each cleared area measured approximately 30-feet x 30-feet to allow minor field adjustments at the excavation/sampling locations. Each area was cleared using a metal detector, ground penetrating radar, and a magnetic field instrument. These devices have a proven track record of being able to detect buried pipes and conduits made of various materials.

2.2.1 Metal Detection

The work areas were scanned with a Pipehorn Model 100 pipe and cable locator and tracer. In pipe and cable search mode, the Pipehorn is essentially a deep-sensing metal detector which detects any electrically conductive materials by creating an electromagnetic field with a transmitting coil. The field strength was measured by a receiving coil at a fixed separation from the transmitter. As the instrument was swept along the ground surface, subsurface metallic bodies distorted the transmitted field. The change in field strength was sensed by the receiver, setting off an audible alarm and/or causing deflection of an analog meter.

ERT also employed a Radio-detection RD400 digital cable and pipe locator and transmitter. The transmitter was directly coupled to exposed portions of a pipe, or indirectly (inductively) to a subsurface metallic utility of known location/orientation. The transmitter produced an electromagnetic field around the metallic utility at a frequency selected by the operator (512 Hz, 8 kHz, 33 kHz, or 65 kHz), which was received at the ground surface by the locator.

2.2.2 Ground Penetrating Radar

The work areas were also scanned with Ground Penetrating Radar (GPR) to identify any nonmetallic or metallic utilities/structures beneath the property. The GPR system produced cross-sectional images of subsurface features and layers by continuously emitting pulses of radar frequency energy from a scanning antenna as it was pushed along the work areas (**Photograph 2**). The radar pulses were reflected by interfaces between materials with differing dielectric properties. The reflections returned to the antenna and were printed on a strip chart recorder or displayed on a video monitor as a continuous cross section in real time. Since the electrical properties of metal are distinctly different from soil and backfill materials, metallic pipes and other structures produced dramatic and characteristic reflections. Fiberglass, plastic, concrete, and terra-cotta pipes and structures also produced recognizable, but less dramatic reflections.

2.2.3 Magnetic

The work areas were also scanned with a Schoenstedt GA-52CX instrument which contains two elements that measure the difference in total strength of the earth's magnetic field between two fixed heights above the ground surface (i.e. the magnetic gradient). In the absence of artificial magnetic fields or buried ferromagnetic objects, the natural gradient of the earth's field is relatively constant. Where buried magnetic or ferromagnetic objects (e.g. magnetite or iron/steel respectively) are present, the gradient varies rapidly as the instrument is swept along the ground surface, triggering an audible alarm. The magnetic instrument employed for this survey can nominally detect a 2-inch steel pipe to a depth of 4 feet. Following completion of each phase of the geophysical survey, ERT marked locations of potential underground utilities.

2.3 Permits, Certifications, Licenses, and Site Access

AMO and Lewis complied with applicable Federal, State and local laws, regulations and ordinances relating to the performance of this work. AMO previously determined that no permits were required to perform the utility clearing and concrete sampling work. All excavation and sampling and related work was performed in accordance with City of Trenton requirements. Access to the site and excavation locations was obtained by the USACE.

2.4 Concrete Sampling and Testing

AMO planned, executed, and oversaw concrete core collection and chip sampling. This Draft Report has been prepared by AMO and provides a description of and procedures for this work. All sampling and testing was completed in accordance with the requirements of the Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP).

Concrete samples were collected by AMO for both physical (structural) testing and chemical (environmental) characterization. Concrete core sampling was only performed on the two outer vertical walls of the culvert. The roof, floor, and inner vertical walls were not sampled during this phase of work.

Lewis used a mini-excavator to excavate a hole or pit adjacent to the outer wall of the culvert (see photos in **Appendix C**). This exposed the outer surface of the vertical culvert wall and allowed core and chip sampling of the wall to be performed. During excavation activities, AMO used a photoionization detector (PID) to monitor the work areas and to evaluate whether hydrocarbons or other organic contaminants were present in

soil at any of the sampling locations. No PID readings were recorded at concentrations above background during the work. After excavating the pit for coring activities, the surface of the vertical wall was examined for signs of structural deficiencies. If any signs of structural deficiencies were observed, AMO attempted to obtain a core from the deficient area. The only deficient area observed was at location AC4, which is depicted in **Figure 2**. Photographs of the concrete core obtained from the AC4 location are presented in **Appendix C**.

Core sampling equipment was attached to the vertical culvert wall securely so that it was immobile during sampling and did not require being held manually. A hammer drill was used to install temporary concrete anchor bolts into the wall, and the core machine was fastened to the wall using the anchor bolts. No free standing or manually held electric drill type sampling equipment was used to collect concrete core samples (see photographs in **Appendix C**). Once the core machine was bolted to the culvert wall, a diamond impregnated, wet concrete coring bit was attached. A water hose was then attached to a fitting on the coring machine that directed water through the bit during coring to cool the bit and flush cut concrete particles from the borehole.

2.4.1 Structural Samples

AMO collected six (6) core samples (AC1 through AC6, shown on **Figure 2**) from the walls of the culvert for compressive strength testing. The samples were taken at a minimum depth of 2-feet from the top of the culvert and the samples were spaced a minimum of 50-feet apart along the length of the culvert. The sample locations and distances from the Broad Street end of the box culvert are presented in **Table 1**. AMO submitted the six concrete cores for compressive strength testing in accordance with ASTM C42/C42M-13 and ASTM C39/C39-12a. The concrete cores were collected on March 12th and 13th, 2014. Lewis used a concrete core machine and diamond core bit designed to drill perpendicular to the vertical surface of the culvert wall. The concrete cores obtained were approximately 4-inch diameter.

AMO and Lewis attempted to obtain cores with a length to diameter ratio as close to 2.0 as possible. It was anticipated that the cores would be 4-inches in diameter by 8-inches long. In several locations, the concrete cores cracked at lengths shorter than eight inches after coring was completed. Cores from these locations needed to be saw cut to lengths shorter than eight inches, and the appropriate correction factors contained in the USACE Work Scope applied (the correction factors are also presented below). After the concrete core was obtained, water was wiped from the surface of the core, and the core was allowed to dry. When the surfaces of the core appeared dry, AMO labeled each core with the location where it was obtained and sealed the core in bubble wrap for transportation to GeoStructures. This process was repeated at all six coring locations.

Prior to testing, the length of the capped specimen was determined to the nearest 0.1 in. Calculations of the compressive strength of each specimen were performed using the measured diameter. If the ratio of the length to diameter was appreciably less than two, allowance was made by multiplying the compressive strength by the applicable factor as follows:

Ratio of Length to Diameter (L / d)	Strength Correction Factor
2.00	1.00
1.75	0.98
1.50	0.96
1.25	0.93
1.00	0.87

The concrete cores were submitted to GeoStructures, Inc. of King of Prussia, Pennsylvania for compressive strength testing. Mr. Eric Seksinsky of GeoStructures served as the Laboratory Project Manager and was responsible for the laboratory's Quality Assurance and Quality Control activities associated with the project. His specific duties included determining whether analyses were conducted within the appropriate project and method requirements. The Laboratory Project Manager or his designee monitored daily precision and accuracy records and maintained detailed copies of all procedures. A summary of the concrete core diameters, lengths, and corrected compressive strengths are provided in **Table 2.** The GeoStructures laboratory report is provided as **Appendix D**.

2.4.2 Environmental Samples

AMO collected concrete chip samples from the vertical culvert walls for chemical analysis. Environmental sampling and testing procedures were performed in accordance with the New Jersey Department of Environmental Protection (NJDEP) Solid and Hazardous Waste Management Program Guidance for Characterization of Concrete and Clean Material Certification for Recycling (see **Appendix B**). The concrete chip samples were obtained from the same excavated sections of the culvert as the concrete cores on March 13, 2014. Two concrete chip samples were obtained from northern wall of the culvert (AC5 and AC6) and two concrete chip samples were obtained from the southern wall of the culvert (AC1 and AC3). No concrete cores or concrete chip samples were obtained from the center wall, roof, or base of the culvert due to the USACE restriction of personnel, equipment, vehicles, or machinery from being on top of or within the culvert.

According to the USACE, the dimensions of the concrete box culvert are:

- Total length = 510 feet
- Wall height = 9 feet
- Wall thickness = 8 inches or greater

Based on these dimensions, the total volume of each vertical outer culvert wall is approximately 115 cubic yards (CY). Thus, the total volume of concrete in the two outer vertical walls equals approximately 2 x 115 CY = 230 CY. NJDEP guidance indicates that for volumes less than 400 CY, one grab sample per 100 CY of concrete be obtained (i.e., 3 samples in this instance). However, in accordance with USACE Task Order 003, AMO collected four concrete chip samples for chemical characterization.

2.4.3 Sample Analysis

The four concrete chip samples collected from the vertical outer culvert walls were submitted to TestAmerica Laboratories, Inc. (TestAmerica) of Denver, Colorado and Edison, New Jersey for analysis of the following:

- TCL VOC – SW 846 Method 8260B
- TCL SVOC – SW 846 Method 8270C
- TCL Pesticides – SW 846 Method 8081B
- TCL Herbicides – SW 846 Method 8151A
- TCL Polychlorinated biphenyls – SW 846 Method 8082A
- TAL Metals (including Hg) and Cyanide – SW 846 Method 6010B

- Extractable Petroleum Hydrocarbons (EPH) – NJDEP Method
- TCLP VOCs – SW 846 Method 8260B
- TCLP SVOCs – SW 846 Method 8270D
- TCLP Metals – SW 846 Method 6010B
- TCLP Pesticides – SW 846 Method 8081B
- TCLP Herbicides – SW 846 Method 8151A
- Corrosivity (as pH) – SW 846 Method 9045D
- Reactivity as Sulfide – SW 846 Method 9034
- Reactivity as Cyanide – SW 846 Method 9012B
- Ignitability, Solids – SW 846 Method 7.1.2

TestAmerica is certified by NJDEP and NELAC, and complies with the DOD Quality System Manual. The samples were initially submitted for analysis of reactivity as sulfide and reactivity as cyanide. EPA withdrew guidance for using reactivity for the determination of hazardous waste. Therefore, the laboratory analyzed the samples for total sulfide and total cyanide.

2.4.4 Sample Preservation, Shipping and Holding Times

Sample preservation and holding times were in accordance with their applicable method. Concrete chip samples were transported to the TestAmerica service center in King of Prussia, Pennsylvania on the second day of sample collection by AMO. The service center packaged the samples for shipment to TestAmerica's Denver Colorado laboratory (TestAmerica's DOD approved laboratory). Samples submitted for analysis of NJDEP EPH were transported to TestAmerica's Edison, New Jersey laboratory.

2.4.5 Laboratory Reporting Requirements

The analytical data reports, which are included as **Appendix E**, consist of legally defensible data reports which are fully data validatable by an external third party. The data packages conform to the requirements of the Administrative Requirements for the Remediation of Contaminated Sites (ARRCS Rule)(N.J.A.C 7:26C-1.6) and the Technical Requirements for Site Remediation (N.J.A.C. 7:26E-1.6), which require that the results of analysis be provided in electronic format as specified in the SRP Electronic Data Interchange Manual (SRP-EDI). Data is maintained in a format that can be imported to an Access database to permit rapid selection and mathematical manipulation of data. Hard copy data reporting packages include at a minimum, the following information: sample delivery group, sample identifier (field and laboratory), test method, dilution factor, client sample ID, lab sample ID, sample depth, date sampled, data received, data analyzed, CAS number, parameter, results, qualifier, units, matrix, level (low/high), detection/reporting limit, method, qualifier explanation, and moisture content.

Additionally, the reports contain definitive data, produced using rigorous analytical methods, such as EPA reference methods. The definitive data packages include a cover sheet; table of contents; case narrative; analytical results; sample documentation information; and internal laboratory QA/QC information. Each data package has sequentially numbered pages.

2.5 FIELD OPERATIONS, DOCUMENTATION, AND NOTEBOOKS

Information obtained during the concrete sampling activities was documented in accordance with protocols described in USACE EM 200-1-3, *Requirements for Preparation of Sampling and Analysis Plan.* Required field data sheets, described below, as well as copies of field notes are included as **Appendix F**.

2.5.1 Field Notebooks

A bound field notebook was kept to provide information to reconstruct field operations. The notebook was maintained by field personnel and is part of the permanent project file. Field notebook entries were completed in ink and are legible and factual, providing sufficient detailed information so that field operations can be recreated. All field notebook entries include the time each entry was made. Corrections, if needed, were made by crossing out the mistake with one line, initialing the correction, and entering the date the correction was made. If custody of the notebook was transferred to another field team member, an entry indicated this transfer. Examples of bound field notebook entries are as follows:

- Name and location of site,
- Name and title of individual maintaining notebook,
- Change in custody of notebook,
- Date and time of beginning on-site activities,
- Weather description,
- Descriptions of each day's activities,
- References to field data sheets, if appropriate,
- Accident information,
- Field instruments used and readings,
- Type of waste generated,
- Description of equipment problems,
- Decontamination procedures.

2.5.2 Photographic Records

Photographs of excavation activities and concrete coring and sampling activities were taken with a digital camera to provide visual documentation of site work. In addition, unusual or relevant conditions were photographed. Photographs of site activities related to the concrete sampling program are included in **Appendix C**.

2.5.3 Concrete Coring and Sampling Forms

Forms to document the legal chain-of-custody (C-O-C) were initiated by the field geologist. The C-O-C forms were transported with the samples to the contract laboratories (TestAmerica and GeoStructures) where the sample custodian accepted custody of the samples by signing the C-O-C forms.

A TestAmerica C-O-C form was presented in the QAPP and completed C-O-C forms are included in the laboratory reports presented in **Appendix D** and **Appendix E**. AMO completed the C-O-C with site specific information and sample specific information at the time of sample collection, including the following:

- Sample designation.
- Date and time (military time, i.e., 0800, 1300, etc.) of sample collection.
- Checked the "Grab" column indicating that the sample represents a discrete sampling interval.
- Requested analytical name and parameter (example: lead, EPA Method SW846 3050B/6010B) for each sample.
- Signed the C-O-C and entered the date and time (military time), printed his/her name, and his/her title in the appropriate boxes at the bottom of the form.
- Indicated the required turn-around time and requested MS/MSDs (if applicable) in the 'comments' section on the right side of the form.

A copy of the C-O-C was maintained by the sampler. Shipping records were not generated because AMO transported the samples to GeoStructures and TestAmerica.

2.6 Data Management and Reporting

AMO has prepared this project summary Draft Report detailing all field operations and work completed as part of this task order. The laboratory analytical data reports and other field data are included in the appendices of this Draft Report.

AMO is initially submitting this Draft Report to USACE. Prior to submission of this Draft Report, AMO submitted a draft project report outline to USACE. The outline was submitted electronically via email in a Word document. The USACE Project Manager approved the Draft Report outline on April 8, 2014.

The final report, which will address comments provided by USACE, will be submitted to the USACE in both hard and digital copy. The final deliverable provided by AMO to USACE will consist of the following:

- CD ROM containing PDF file (i.e., electronic hard copy) of the entire report including all tables, figures, and appendices.
- Hard copies (five bound, one unbound) of the entire report.
- CD ROM containing electronic files (Word, Excel, etc.) of text, tables, figures, and other materials used to generate the report.
- CD ROM containing complete analytical laboratory reports in pdf format.

3.0 RESULTS

3.1 Structural Testing Results

The results of the structural testing performed by GeoStructures are summarized in **Table 2**. The diameters of the concrete cores ranged from 3.62-inches (AC5) to 3.70-inches (AC1), and the lengths of the cores ranged from 5.7-inches (AC6) to 7.5-inches (AC2). Corrected compressive strengths of the concrete cores ranged from a minimum 1,840 pounds per square inch (psi [AC4]) to a maximum of 4,180 psi (AC6). The minimum psi results for the core collected at AC4 were not unexpected, given that deterioration in the vertical culvert wall was noted at the time the core was collected (see photographs in **Appendix C**). At the AC4 location, the coring machine was mounted so that the core was collected from the deteriorated portion of the vertical wall. The concrete cores obtained from the five additional locations were all reported at greater than 3,000 psi corrected compressive strength.

3.2 Chemical Testing Results

Standard Analytical Testing

The analytical results of the concrete chip samples submitted to TestAmerica for analysis of total constituents are summarized in **Table 3**. With the exception of sporadic detections of acetone (four detections), 2-butanone (MEK [one detection]), dimethyl phthalate (one detection), isophorone (three detections), 4-4-DDE (one detection), and dicamba (one detection), consistently detected analytical constituents were inorganics. All detections of acetone were associated with detections in laboratory blanks. With the exception of one detection of isophorone, the remainder of the organic detections were at low, estimated concentrations. Additionally, none of the detections were at concentrations greater than the NJDEP Residential Direct Contact Soil Remediation Standards (RDCSRSs).

Inorganic constituents detected in all four samples submitted for chemical analyses included aluminum, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, molybdenum, nickel, potassium, sodium, vanadium, and zinc. None of the detected inorganics were at concentrations greater than the NJDEP RDCSRSs.

One analyte that requires consideration is benzidine. Benzidine was reported as not detected at limits of detection ranging from 3.9 milligrams per kilogram (mg/kg) to 4.3 mg/kg. However, the NJDEP RDCSRS for benzidine is 0.7 mg/kg, which is less than the limit of detection for benzidine. However, TestAmerica stated that each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method, and that a reporting limit of 0.7 mg/kg for benzidine is a difficult reporting limit to meet.

EPH was detected in each of the four samples submitted for chemical analysis at a concentration greater than the limit of detection, but below the NJDEP RDCSRS.

Toxicity Characteristic Leaching Procedure Testing

The analytical results of the concrete chip samples submitted for analysis of Toxicity Characteristic Leaching Procedure (TCLP) constituents are summarized in **Table 4**. With the exception of 2,4,5-Trichlorophenol, which was detected in two samples at estimated concentrations ranging from 0.0062 milligrams per liter

(mg/l) to 0.0077 mg/l, the only analytes detected were inorganics. Barium was detected in three samples at estimated concentrations ranging from 0.11 mg/l to 0.56 mg/l, cadmium was detected in one sample at an estimated concentrations of 0.0021 mg/l, chromium was detected in one sample at an estimated concentration of 0.019 mg/l, and selenium was detected in two samples at estimated concentrations ranging from 0.028 mg/l to 0.04 mg/l. No analytes were detected at concentrations greater than their respective TCLP regulatory limits.

The samples did not exhibit ignitability characteristics, and detected pH concentrations ranged from 12.2 standard units (SUs) to 12.4 SUs. Since the samples were collected from cured concrete, the relatively high pH measurements are not unexpected.

4.0 CONCLUSIONS

4.1 Structural Testing Conclusions

A summary of the results of the structural testing performed on the six concrete cores is provided on **Table 2**. These results, along with information concerning the diameter, length, and wall thickness of the existing steam pipes planned to be left in place will need to be evaluated by a structural engineer to determine if the box culvert is sound enough to support the steam pipes at the eastern end of the Site.

4.2 Chemical Testing Conclusions

Summaries of analytical testing performed on the concrete chip samples are provided in **Tables 3 and 4**. The reported concentrations did not exceed their respective NJDEP RDCSRSs or TCLP Regulatory level. Benzidine was reported as not detected in all four samples submitted for analysis; however, TestAmerica's limit of detection for benzidine was greater than the NJDEP RDCSRS for benzidine. As previously noted, a reporting limit of 0.7 mg/kg, which is the NJDEP RDCSRS for benzidine, is a difficult reporting limit to meet.

5.0 REFERENCES

USACE, February 2001. *Requirements for the Preparation of Sampling and Analysis Plans, EM 200-1-3.*

TABLES

Table 1

Summary of Sample Locations and Distances from Broad Street End of Culvert
Assunpink Creek Broad Street Culvert
Trenton, New Jersey

Test Location ID	Distance From Broad Street End of Culvert in Feet
AC 1	335
AC 2	285
AC 3	180
AC 4	100
AC 5	145
AC 6	80

Notes:
1. Distances measured by AMO during sampling activities.

Table 2

Summary of Concrete Core Strength Testing Results
Assunpink Creek Broad Street Culvert
Trenton, New Jersey

Sample ID	Sample Diameter (inches)	Sample Weight (grams)	Sample Length (inches)	Maximum Load (pounds)	Corrected Compressive Strength (pounds per square inch)
AC1	3.70	2,827.63	6.9	32,990	3,070
AC2	3.69	3,069.15	7.5	34,183	3,200
AC3	3.63	2,434.60	6.6	37,670	3,650
AC4	3.68	2,590.20	7.2	19,540	1,840
AC5	3.62	2,691.87	6.6	33,990	3,300
AC6	3.64	2,279.82	5.7	45,140	4,180

Notes:

1. Concrete cores were obtained by Lewis Environmental on March 12 and 13, 2014 under contract to AMO.
2. Concrete strength testing was performed by GeoStructures, Inc. of King of Prussia, Pennsylvania.

Table 3

Summary of Concrete Chip Analytical Results
Assunpink Creek Broad Street Culvert Concrete Samples
Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC1 CONCRETE	3/13/2014	Sulfide [9]	5.1	U H	5.1	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Aluminum	10,000		3.1	mg/Kg	78,000
AC1 CONCRETE	3/13/2014	Antimony	0.63	U	0.63	mg/Kg	31
AC1 CONCRETE	3/13/2014	Arsenic	3.7		1	mg/Kg	19
AC1 CONCRETE	3/13/2014	Barium	60		0.19	mg/Kg	16,000
AC1 CONCRETE	3/13/2014	Beryllium	0.42	J	0.073	mg/Kg	16
AC1 CONCRETE	3/13/2014	Cadmium	0.21	J Q	0.1	mg/Kg	78
AC1 CONCRETE	3/13/2014	Calcium	80,000		21	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Chromium	19	Q	0.16	mg/Kg	240
AC1 CONCRETE	3/13/2014	Cobalt	8.1		0.21	mg/Kg	1,600
AC1 CONCRETE	3/13/2014	Copper	12		0.52	mg/Kg	3,100
AC1 CONCRETE	3/13/2014	Iron	13,000		5.20	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Lead	23		0.84	mg/Kg	400
AC1 CONCRETE	3/13/2014	Magnesium	5,000		5.2	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Manganese	310		0.16	mg/Kg	11,000
AC1 CONCRETE	3/13/2014	Molybdenum	0.74	J	0.52	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Nickel	10		0.21	mg/Kg	1,600
AC1 CONCRETE	3/13/2014	Phosphorus	450		3.1	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Potassium	880		52	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Selenium	1.3	U	1.3	mg/Kg	390
AC1 CONCRETE	3/13/2014	Silver	0.21	U	0.21	mg/Kg	390
AC1 CONCRETE	3/13/2014	Sodium	150	J	100	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Thallium	1.3	U	1.3	mg/Kg	5
AC1 CONCRETE	3/13/2014	Vanadium	17		0.21	mg/Kg	78
AC1 CONCRETE	3/13/2014	Zinc	44		0.84	mg/Kg	23,000
AC1 CONCRETE	3/13/2014	Mercury	0.027		0.017	mg/Kg	23
AC1 CONCRETE	3/13/2014	4,4'-DDD	0.00073	U	0.00073	mg/Kg	3
AC1 CONCRETE	3/13/2014	4,4'-DDE	0.00097	J	0.00049	mg/Kg	2
AC1 CONCRETE	3/13/2014	4,4'-DDT	0.00073	U	0.00073	mg/Kg	2
AC1 CONCRETE	3/13/2014	Aldrin	0.00049	U	0.00049	mg/Kg	0.04
AC1 CONCRETE	3/13/2014	alpha-BHC	0.00049	U	0.00049	mg/Kg	0.1
AC1 CONCRETE	3/13/2014	alpha-Chlordane	0.00049	U	0.00049	mg/Kg	0.2
AC1 CONCRETE	3/13/2014	beta-BHC	0.00073	U	0.00073	mg/Kg	0.4
AC1 CONCRETE	3/13/2014	delta-BHC	0.00073	U	0.00073	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Dieldrin	0.00049	U	0.00049	mg/Kg	0.04
AC1 CONCRETE	3/13/2014	Endosulfan I	0.00049	U	0.00049	mg/Kg	470
AC1 CONCRETE	3/13/2014	Endosulfan II	0.00049	U	0.00049	mg/Kg	470
AC1 CONCRETE	3/13/2014	Endosulfan sulfate	0.00049	U	0.00049	mg/Kg	470
AC1 CONCRETE	3/13/2014	Endrin	0.00049	U	0.00049	mg/Kg	23
AC1 CONCRETE	3/13/2014	Endrin aldehyde	0.00049	U	0.00049	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Endrin ketone	0.00073	U	0.00073	mg/Kg	NS
AC1 CONCRETE	3/13/2014	gamma-BHC (Lindane)	0.00073	U	0.00073	mg/Kg	0.4
AC1 CONCRETE	3/13/2014	gamma-Chlordane	0.00073	U	0.00073	mg/Kg	0.2
AC1 CONCRETE	3/13/2014	Heptachlor	0.00049	U	0.00049	mg/Kg	0.1
AC1 CONCRETE	3/13/2014	Heptachlor epoxide	0.00073	U	0.00073	mg/Kg	0.07
AC1 CONCRETE	3/13/2014	Methoxychlor	0.00073	U	0.00073	mg/Kg	390
AC1 CONCRETE	3/13/2014	Toxaphene	0.029	U	0.029	mg/Kg	0.6
AC1 CONCRETE	3/13/2014	PCB-1016	0.011	U	0.011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	PCB-1221	0.021	U	0.021	mg/Kg	NS
AC1 CONCRETE	3/13/2014	PCB-1232	0.016	U	0.016	mg/Kg	NS
AC1 CONCRETE	3/13/2014	PCB-1242	0.011	U	0.011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	PCB-1248	0.011	U	0.011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	PCB-1254	0.011	U	0.011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	PCB-1260	0.011	U	0.011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	2,4,5-T	0.0059	U	0.0059	mg/Kg	NS
AC1 CONCRETE	3/13/2014	2,4-D	0.02	U	0.02	mg/Kg	NS
AC1 CONCRETE	3/13/2014	2,4-DB	0.033	J	0.021	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Dalapon	0.0059	U	0.0059	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Dicamba	0.021	J	0.0059	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Dichlorprop	0.0059	U	0.0059	mg/Kg	NS
AC1 CONCRETE	3/13/2014	MCPA	5	U	5	mg/Kg	NS
AC1 CONCRETE	3/13/2014	MCPP	5	U	5	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Silvex (2,4,5-TP)	0.0059	U	0.0059	mg/Kg	NS
AC1 CONCRETE	3/13/2014	1,1,1,2-Tetrachloroethane	0.0011	U Q	0.0011	mg/Kg	NS

Table 3

Summary of Concrete Chip Analytical Results
Assunpink Creek Broad Street Culvert Concrete Samples
Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC1 CONCRETE	3/13/2014	1,1,1-Trichloroethane	0.0011	U Q	0.0011	mg/Kg	290
AC1 CONCRETE	3/13/2014	1,1,2,2-Tetrachloroethane	0.0011	U Q	0.0011	mg/Kg	1
AC1 CONCRETE	3/13/2014	1,1,2-Trichloroethane	0.0011	U	0.0011	mg/Kg	2
AC1 CONCRETE	3/13/2014	1,1-Dichloroethane	0.00086	U	0.00086	mg/Kg	8
AC1 CONCRETE	3/13/2014	1,1-Dichloroethene	0.0011	U Q	0.0011	mg/Kg	11
AC1 CONCRETE	3/13/2014	1,1-Dichloropropene	0.0011	U	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	1,2,3-Trichlorobenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	1,2,3-Trichloropropane	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	1,2,4-Trichlorobenzene	0.0011	U Q	0.0011	mg/Kg	73
AC1 CONCRETE	3/13/2014	1,2,4-Trimethylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	1,2-Dibromo-3-Chloropropane	0.0011	U Q	0.0011	mg/Kg	0.1
AC1 CONCRETE	3/13/2014	1,2-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5,300
AC1 CONCRETE	3/13/2014	1,2-Dichloroethane	0.0011	U	0.0011	mg/Kg	0.9
AC1 CONCRETE	3/13/2014	1,2-Dichloroethene, Total	0.0011	U	0.0011	mg/Kg	230
AC1 CONCRETE	3/13/2014	1,2-Dichloropropane	0.0011	U	0.0011	mg/Kg	2
AC1 CONCRETE	3/13/2014	1,3,5-Trimethylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	1,3-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5,300
AC1 CONCRETE	3/13/2014	1,3-Dichloropropane	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	1,4-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5
AC1 CONCRETE	3/13/2014	2,2-Dichloropropane	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	2-Butanone (MEK)	0.0069	U	0.0069	mg/Kg	3,100
AC1 CONCRETE	3/13/2014	2-Chlorotoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	2-Hexanone	0.011	U	0.011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	4-Chlorotoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	4-Isopropyltoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	4-Methyl-2-pentanone (MIBK)	0.011	U	0.011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Acetone	0.016	J Q B	0.011	mg/Kg	70,000
AC1 CONCRETE	3/13/2014	Benzene	0.0011	U	0.0011	mg/Kg	2
AC1 CONCRETE	3/13/2014	Bromobenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Bromoform	0.00086	U Q	0.00086	mg/Kg	81
AC1 CONCRETE	3/13/2014	Bromomethane	0.0011	U	0.0011	mg/Kg	25
AC1 CONCRETE	3/13/2014	Carbon disulfide	0.0011	U	0.0011	mg/Kg	7,800
AC1 CONCRETE	3/13/2014	Carbon tetrachloride	0.0011	U	0.0011	mg/Kg	0.6
AC1 CONCRETE	3/13/2014	Chlorobenzene	0.0011	U Q	0.0011	mg/Kg	510
AC1 CONCRETE	3/13/2014	Chlorobromomethane	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Chlorodibromomethane	0.0011	U Q	0.0011	mg/Kg	3
AC1 CONCRETE	3/13/2014	Chloroethane	0.0011	U Q	0.0011	mg/Kg	220
AC1 CONCRETE	3/13/2014	Chloroform	0.0011	U Q	0.0011	mg/Kg	0.6
AC1 CONCRETE	3/13/2014	Chloromethane	0.0011	U Q	0.0011	mg/Kg	4
AC1 CONCRETE	3/13/2014	cis-1,2-Dichloroethene	0.0011	U Q	0.0011	mg/Kg	230
AC1 CONCRETE	3/13/2014	cis-1,3-Dichloropropene	0.0021	U	0.0021	mg/Kg	2
AC1 CONCRETE	3/13/2014	Dibromomethane	0.0011	U	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Dichlorobromomethane	0.00086	U	0.00086	mg/Kg	1
AC1 CONCRETE	3/13/2014	Dichlorodifluoromethane	0.0011	U Q	0.0011	mg/Kg	490
AC1 CONCRETE	3/13/2014	Ethylbenzene	0.0011	U Q	0.0011	mg/Kg	7,800
AC1 CONCRETE	3/13/2014	Ethylene Dibromide	0.0011	U Q	0.0011	mg/Kg	0.008
AC1 CONCRETE	3/13/2014	Hexachlorobutadiene	0.0011	U Q	0.0011	mg/Kg	6
AC1 CONCRETE	3/13/2014	Isopropylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Methyl tert-butyl ether	0.0011	U	0.0011	mg/Kg	110
AC1 CONCRETE	3/13/2014	Methylene Chloride	0.0034	U Q	0.0034	mg/Kg	34
AC1 CONCRETE	3/13/2014	m-Xylene & p-Xylene	0.0021	U Q	0.0021	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Naphthalene	0.0011	U Q	0.0011	mg/Kg	6
AC1 CONCRETE	3/13/2014	n-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	N-Propylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	o-Xylene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	sec-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Styrene	0.0011	U Q	0.0011	mg/Kg	90
AC1 CONCRETE	3/13/2014	tert-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Tetrachloroethene	0.0011	U Q	0.0011	mg/Kg	2
AC1 CONCRETE	3/13/2014	Toluene	0.0011	U	0.0011	mg/Kg	6,300
AC1 CONCRETE	3/13/2014	trans-1,2-Dichloroethene	0.0011	U	0.0011	mg/Kg	300
AC1 CONCRETE	3/13/2014	trans-1,3-Dichloropropene	0.0011	U	0.0011	mg/Kg	2
AC1 CONCRETE	3/13/2014	Trichloroethene	0.00086	U	0.00086	mg/Kg	7
AC1 CONCRETE	3/13/2014	Trichlorofluoromethane	0.0021	U	0.0021	mg/Kg	23,000

Table 3

Summary of Concrete Chip Analytical Results
Assunpink Creek Broad Street Culvert Concrete Samples
Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC1 CONCRETE	3/13/2014	Vinyl chloride	0.0021	U Q	0.0021	mg/Kg	0.7
AC1 CONCRETE	3/13/2014	1,2,4,5-Tetrachlorobenzene	0.070	U	0.07	mg/Kg	NS
AC1 CONCRETE	3/13/2014	1,2,4-Trichlorobenzene	0.035	U	0.035	mg/Kg	73
AC1 CONCRETE	3/13/2014	1,2-Dichlorobenzene	0.035	U	0.035	mg/Kg	5,300
AC1 CONCRETE	3/13/2014	1,2-Diphenylhydrazine	0.035	U Q	0.035	mg/Kg	0.7
AC1 CONCRETE	3/13/2014	1,3-Dichlorobenzene	0.035	U	0.035	mg/Kg	5,300
AC1 CONCRETE	3/13/2014	1,4-Dichlorobenzene	0.035	U	0.035	mg/Kg	5
AC1 CONCRETE	3/13/2014	2,2'-oxybis[1-chloropropane]	0.035	U	0.035	mg/Kg	23
AC1 CONCRETE	3/13/2014	2,4,5-Trichlorophenol	0.14	U Q	0.14	mg/Kg	6,100
AC1 CONCRETE	3/13/2014	2,4,6-Trichlorophenol	0.069	U Q	0.069	mg/Kg	19
AC1 CONCRETE	3/13/2014	2,4-Dichlorophenol	0.069	U Q	0.069	mg/Kg	180
AC1 CONCRETE	3/13/2014	2,4-Dimethylphenol	0.14	U Q	0.14	mg/Kg	1,200
AC1 CONCRETE	3/13/2014	2,4-Dinitrophenol	0.7	U Q	0.70	mg/Kg	120
AC1 CONCRETE	3/13/2014	2,4-Dinitrotoluene	0.14	U	0.14	mg/Kg	0.7
AC1 CONCRETE	3/13/2014	2,6-Dichlorophenol	0.14	U	0.14	mg/Kg	NS
AC1 CONCRETE	3/13/2014	2,6-Dinitrotoluene	0.069	U	0.069	mg/Kg	0.7
AC1 CONCRETE	3/13/2014	2-Chloronaphthalene	0.035	U	0.035	mg/Kg	NS
AC1 CONCRETE	3/13/2014	2-Chlorophenol	0.035	U Q	0.035	mg/Kg	310
AC1 CONCRETE	3/13/2014	2-Methylnaphthalene	0.035	U	0.035	mg/Kg	230
AC1 CONCRETE	3/13/2014	2-Methylphenol	0.035	U Q	0.035	mg/Kg	310
AC1 CONCRETE	3/13/2014	2-Nitroaniline	0.069	U	0.069	mg/Kg	39
AC1 CONCRETE	3/13/2014	2-Nitrophenol	0.069	U Q	0.069	mg/Kg	NS
AC1 CONCRETE	3/13/2014	3 & 4 Methylphenol	0.069	U Q	0.069	mg/Kg	31
AC1 CONCRETE	3/13/2014	3,3'-Dichlorobenzidine	0.35	U	0.35	mg/Kg	1
AC1 CONCRETE	3/13/2014	3-Nitroaniline	0.14	U	0.14	mg/Kg	NS
AC1 CONCRETE	3/13/2014	4,6-Dinitro-2-methylphenol	0.69	U Q	0.69	mg/Kg	6
AC1 CONCRETE	3/13/2014	4-Bromophenyl phenyl ether	0.04	U	0.035	mg/Kg	NS
AC1 CONCRETE	3/13/2014	4-Chloro-3-methylphenol	0.14	U Q	0.14	mg/Kg	NS
AC1 CONCRETE	3/13/2014	4-Chloroaniline	0.14	U	0.14	mg/Kg	NS
AC1 CONCRETE	3/13/2014	4-Chlorophenyl phenyl ether	0.069	U	0.069	mg/Kg	NS
AC1 CONCRETE	3/13/2014	4-Nitroaniline	0.14	U	0.14	mg/Kg	NS
AC1 CONCRETE	3/13/2014	4-Nitrophenol	0.35	U Q	0.35	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Acenaphthene	0.018	U	0.018	mg/Kg	3,400
AC1 CONCRETE	3/13/2014	Acenaphthylene	0.035	U	0.035	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Anthracene	0.035	U	0.035	mg/Kg	17,000
AC1 CONCRETE	3/13/2014	Benzidine	4.2	U	4.2	mg/Kg	0.7
AC1 CONCRETE	3/13/2014	Benzo[a]anthracene	0.035	U	0.035	mg/Kg	0.6
AC1 CONCRETE	3/13/2014	Benzo[a]pyrene	0.035	U	0.035	mg/Kg	0.2
AC1 CONCRETE	3/13/2014	Benzo[b]fluoranthene	0.035	U	0.035	mg/Kg	0.6
AC1 CONCRETE	3/13/2014	Benzo[g,h,i]perylene	0.035	U	0.035	mg/Kg	380,000
AC1 CONCRETE	3/13/2014	Benzo[k]fluoranthene	0.069	U	0.069	mg/Kg	6
AC1 CONCRETE	3/13/2014	Benzoic acid	0.690	U Q	0.690	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Benzyl alcohol	0.035	U	0.035	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Bis(2-chloroethoxy)methane	0.069	U	0.069	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Bis(2-chloroethyl)ether	0.035	U	0.035	mg/Kg	0.4
AC1 CONCRETE	3/13/2014	Bis(2-ethylhexyl) phthalate	0.069	U	0.069	mg/Kg	35
AC1 CONCRETE	3/13/2014	Butyl benzyl phthalate	0.069	U	0.069	mg/Kg	1,200
AC1 CONCRETE	3/13/2014	Carbazole	0.07	U	0.07	mg/Kg	24
AC1 CONCRETE	3/13/2014	Chrysene	0.035	U	0.035	mg/Kg	62
AC1 CONCRETE	3/13/2014	Dibenz(a,h)anthracene	0.035	U	0.035	mg/Kg	0.2
AC1 CONCRETE	3/13/2014	Dibenzofuran	0.035	U	0.035	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Diethyl phthalate	0.035	U	0.035	mg/Kg	49,000
AC1 CONCRETE	3/13/2014	Dimethyl phthalate	0.035	U	0.035	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Di-n-butyl phthalate	0.035	U	0.035	mg/Kg	6,100
AC1 CONCRETE	3/13/2014	Di-n-octyl phthalate	0.069	U	0.069	mg/Kg	2,400
AC1 CONCRETE	3/13/2014	Fluoranthene	0.069	U	0.069	mg/Kg	2,300
AC1 CONCRETE	3/13/2014	Fluorene	0.035	U	0.035	mg/Kg	2,300
AC1 CONCRETE	3/13/2014	Hexachlorobenzene	0.069	U	0.069	mg/Kg	0.3
AC1 CONCRETE	3/13/2014	Hexachlorobutadiene	0.069	U	0.069	mg/Kg	6
AC1 CONCRETE	3/13/2014	Hexachlorocyclopentadiene	0.069	U Q	0.069	mg/Kg	45
AC1 CONCRETE	3/13/2014	Hexachloroethane	0.035	U	0.035	mg/Kg	35
AC1 CONCRETE	3/13/2014	Indeno[1,2,3-cd]pyrene	0.035	U	0.035	mg/Kg	0.6
AC1 CONCRETE	3/13/2014	Isophorone	0.095	J	0.035	mg/Kg	510
AC1 CONCRETE	3/13/2014	Naphthalene	0.069	U	0.069	mg/Kg	6

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Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC1 CONCRETE	3/13/2014	Nitrobenzene	0.035	U	0.035	mg/Kg	31
AC1 CONCRETE	3/13/2014	N-Nitrosodimethylamine	0.069	U Q	0.069	mg/Kg	0.7
AC1 CONCRETE	3/13/2014	N-Nitrosodi-n-propylamine	0.069	U	0.069	mg/Kg	0.2
AC1 CONCRETE	3/13/2014	N-Nitrosodiphenylamine	0.035	U	0.035	mg/Kg	99
AC1 CONCRETE	3/13/2014	N-Nitrosopyrrolidine	0.14	U Q	0.14	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Pentachlorophenol	0.7	U Q	0.70	mg/Kg	3
AC1 CONCRETE	3/13/2014	Phenanthrene	0.035	U	0.035	mg/Kg	NS
AC1 CONCRETE	3/13/2014	Phenol	0.035	U Q	0.035	mg/Kg	18,000
AC1 CONCRETE	3/13/2014	Pyrene	0.035	U	0.035	mg/Kg	1,700
AC1 CONCRETE	3/13/2014	Cyanide, Total [9]	0.26	U	0.26	mg/Kg	1,600
AC1 CONCRETE	3/13/2014	Total EPH (C9-C40)	46		0.0	mg/Kg	1,700
AC3 CONCRETE	3/13/2014	Sulfide [9]	5.2	U H	5.2	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Aluminum	9,100		3.1	mg/Kg	78,000
AC3 CONCRETE	3/13/2014	Antimony	0.62	U	0.62	mg/Kg	31
AC3 CONCRETE	3/13/2014	Arsenic	4		1	mg/Kg	19
AC3 CONCRETE	3/13/2014	Barium	60		0.19	mg/Kg	16,000
AC3 CONCRETE	3/13/2014	Beryllium	0.37	J	0.073	mg/Kg	16
AC3 CONCRETE	3/13/2014	Cadmium	0.15	J Q	0.1	mg/Kg	78
AC3 CONCRETE	3/13/2014	Calcium	76,000		21	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Chromium	18	Q	0.16	mg/Kg	240
AC3 CONCRETE	3/13/2014	Cobalt	16		0.21	mg/Kg	1,600
AC3 CONCRETE	3/13/2014	Copper	14		0.52	mg/Kg	3,100
AC3 CONCRETE	3/13/2014	Iron	19,000		5.2	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Lead	7.6		0.83	mg/Kg	400
AC3 CONCRETE	3/13/2014	Magnesium	4,400		5.2	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Manganese	270		0.16	mg/Kg	11,000
AC3 CONCRETE	3/13/2014	Molybdenum	0.61	J	0.52	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Nickel	10		0.21	mg/Kg	1,600
AC3 CONCRETE	3/13/2014	Phosphorus	300	J	3.1	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Potassium	610		52	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Selenium	1.2	U	1.2	mg/Kg	390
AC3 CONCRETE	3/13/2014	Silver	0.21	U	0.21	mg/Kg	390
AC3 CONCRETE	3/13/2014	Sodium	99	J	100	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Thallium	1.2	U	1.2	mg/Kg	5
AC3 CONCRETE	3/13/2014	Vanadium	15		0.21	mg/Kg	78
AC3 CONCRETE	3/13/2014	Zinc	27		0.83	mg/Kg	23,000
AC3 CONCRETE	3/13/2014	Mercury	0.013	J	0.015	mg/Kg	23
AC3 CONCRETE	3/13/2014	4,4'-DDD	0.00075	U	0.00075	mg/Kg	3
AC3 CONCRETE	3/13/2014	4,4'-DDE	0.0005	U	0.0005	mg/Kg	2
AC3 CONCRETE	3/13/2014	4,4'-DDT	0.00075	U	0.00075	mg/Kg	2
AC3 CONCRETE	3/13/2014	Aldrin	0.0005	U	0.0005	mg/Kg	0.04
AC3 CONCRETE	3/13/2014	alpha-BHC	0.0005	U	0.0005	mg/Kg	0.1
AC3 CONCRETE	3/13/2014	alpha-Chlordane	0.0005	U	0.0005	mg/Kg	0.2
AC3 CONCRETE	3/13/2014	beta-BHC	0.00075	U	0.00075	mg/Kg	0.4
AC3 CONCRETE	3/13/2014	delta-BHC	0.00075	U	0.00075	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Dieldrin	0.0005	U	0.0005	mg/Kg	0.04
AC3 CONCRETE	3/13/2014	Endosulfan I	0.0005	U	0.0005	mg/Kg	470
AC3 CONCRETE	3/13/2014	Endosulfan II	0.0005	U	0.0005	mg/Kg	470
AC3 CONCRETE	3/13/2014	Endosulfan sulfate	0.0005	U	0.0005	mg/Kg	470
AC3 CONCRETE	3/13/2014	Endrin	0.0005	U	0.0005	mg/Kg	23
AC3 CONCRETE	3/13/2014	Endrin aldehyde	0.0005	U	0.0005	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Endrin ketone	0.00075	U	0.00075	mg/Kg	NS
AC3 CONCRETE	3/13/2014	gamma-BHC (Lindane)	0.00075	U	0.00075	mg/Kg	0.4
AC3 CONCRETE	3/13/2014	gamma-Chlordane	0.00075	U	0.00075	mg/Kg	0.2
AC3 CONCRETE	3/13/2014	Heptachlor	0.0005	U	0.0005	mg/Kg	0.1
AC3 CONCRETE	3/13/2014	Heptachlor epoxide	0.00075	U	0.00075	mg/Kg	0.07
AC3 CONCRETE	3/13/2014	Methoxychlor	0.00075	U	0.00075	mg/Kg	390
AC3 CONCRETE	3/13/2014	Toxaphene	0.029	U	0.029	mg/Kg	0.6
AC3 CONCRETE	3/13/2014	PCB-1016	0.011	U	0.011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	PCB-1221	0.022	U	0.022	mg/Kg	NS
AC3 CONCRETE	3/13/2014	PCB-1232	0.016	U	0.016	mg/Kg	NS
AC3 CONCRETE	3/13/2014	PCB-1242	0.011	U	0.011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	PCB-1248	0.011	U	0.011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	PCB-1254	0.011	U	0.011	mg/Kg	NS

Table 3

Summary of Concrete Chip Analytical Results
Assunpink Creek Broad Street Culvert Concrete Samples
Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC3 CONCRETE	3/13/2014	PCB-1260	0.011	U	0.011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	2,4,5-T	0.0059	U	0.0059	mg/Kg	NS
AC3 CONCRETE	3/13/2014	2,4-D	0.02	U	0.02	mg/Kg	NS
AC3 CONCRETE	3/13/2014	2,4-DB	0.02	U	0.022	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Dalapon	0.0059	U	0.0059	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Dicamba	0.0059	U Q	0.0059	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Dichlorprop	0.0059	U	0.0059	mg/Kg	NS
AC3 CONCRETE	3/13/2014	MCPA	5	U	5.00	mg/Kg	NS
AC3 CONCRETE	3/13/2014	MCPP	5	U	5.00	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Silvex (2,4,5-TP)	0.0059	U	0.0059	mg/Kg	NS
AC3 CONCRETE	3/13/2014	1,1,1,2-Tetrachloroethane	0.0011	U	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	1,1,1-Trichloroethane	0.0011	U Q	0.0011	mg/Kg	290
AC3 CONCRETE	3/13/2014	1,1,2,2-Tetrachloroethane	0.0011	U Q	0.0011	mg/Kg	1
AC3 CONCRETE	3/13/2014	1,1,2-Trichloroethane	0.0011	U	0.0011	mg/Kg	2
AC3 CONCRETE	3/13/2014	1,1-Dichloroethane	0.00088	U	0.00088	mg/Kg	8
AC3 CONCRETE	3/13/2014	1,1-Dichloroethene	0.0011	U Q	0.0011	mg/Kg	11
AC3 CONCRETE	3/13/2014	1,1-Dichloropropene	0.0011	U	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	1,2,3-Trichlorobenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	1,2,3-Trichloropropane	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	1,2,4-Trichlorobenzene	0.0011	U Q	0.0011	mg/Kg	73
AC3 CONCRETE	3/13/2014	1,2,4-Trimethylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	1,2-Dibromo-3-Chloropropane	0.0011	U Q	0.0011	mg/Kg	0.08
AC3 CONCRETE	3/13/2014	1,2-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5,300
AC3 CONCRETE	3/13/2014	1,2-Dichloroethane	0.0011	U	0.0011	mg/Kg	0.9
AC3 CONCRETE	3/13/2014	1,2-Dichloroethene, Total	0.0011	U	0.0011	mg/Kg	230
AC3 CONCRETE	3/13/2014	1,2-Dichloropropane	0.0011	U	0.0011	mg/Kg	2
AC3 CONCRETE	3/13/2014	1,3,5-Trimethylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	1,3-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5,300
AC3 CONCRETE	3/13/2014	1,3-Dichloropropane	0.0011	U	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	1,4-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5
AC3 CONCRETE	3/13/2014	2,2-Dichloropropane	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	2-Butanone (MEK)	0.0024	J	0.007	mg/Kg	3,100
AC3 CONCRETE	3/13/2014	2-Chlorotoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	2-Hexanone	0.0110	U	0.011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	4-Chlorotoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	4-Isopropyltoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	4-Methyl-2-pentanone (MIBK)	0.0110	U	0.011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Acetone	0.030	Q B	0.011	mg/Kg	70,000
AC3 CONCRETE	3/13/2014	Benzene	0.0011	U	0.0011	mg/Kg	2
AC3 CONCRETE	3/13/2014	Bromobenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Bromoform	0.00088	U	0.00088	mg/Kg	81
AC3 CONCRETE	3/13/2014	Bromomethane	0.0011	U	0.0011	mg/Kg	25
AC3 CONCRETE	3/13/2014	Carbon disulfide	0.0011	U	0.0011	mg/Kg	7,800
AC3 CONCRETE	3/13/2014	Carbon tetrachloride	0.0011	U	0.0011	mg/Kg	0.6
AC3 CONCRETE	3/13/2014	Chlorobenzene	0.0011	U	0.0011	mg/Kg	510
AC3 CONCRETE	3/13/2014	Chlorobromomethane	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Chlorodibromomethane	0.0011	U	0.0011	mg/Kg	3
AC3 CONCRETE	3/13/2014	Chloroethane	0.0011	U Q	0.0011	mg/Kg	220
AC3 CONCRETE	3/13/2014	Chloroform	0.0011	U Q	0.0011	mg/Kg	0.6
AC3 CONCRETE	3/13/2014	Chloromethane	0.0011	U Q	0.0011	mg/Kg	4
AC3 CONCRETE	3/13/2014	cis-1,2-Dichloroethene	0.0011	U Q	0.0011	mg/Kg	230
AC3 CONCRETE	3/13/2014	cis-1,3-Dichloropropene	0.0022	U	0.0022	mg/Kg	2
AC3 CONCRETE	3/13/2014	Dibromomethane	0.0011	U	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Dichlorobromomethane	0.00088	U	0.00088	mg/Kg	1
AC3 CONCRETE	3/13/2014	Dichlorodifluoromethane	0.0011	U Q	0.0011	mg/Kg	490
AC3 CONCRETE	3/13/2014	Ethylbenzene	0.0011	U	0.0011	mg/Kg	7,800
AC3 CONCRETE	3/13/2014	Ethylene Dibromide	0.0011	U	0.0011	mg/Kg	0.008
AC3 CONCRETE	3/13/2014	Hexachlorobutadiene	0.0011	U Q	0.0011	mg/Kg	6
AC3 CONCRETE	3/13/2014	Isopropylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Methyl tert-butyl ether	0.0011	U	0.0011	mg/Kg	110
AC3 CONCRETE	3/13/2014	Methylene Chloride	0.0035	U Q	0.0035	mg/Kg	34
AC3 CONCRETE	3/13/2014	m-Xylene & p-Xylene	0.0022	U	0.0022	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Naphthalene	0.0011	U Q	0.0011	mg/Kg	6
AC3 CONCRETE	3/13/2014	n-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS

Table 3

Summary of Concrete Chip Analytical Results
Assunpink Creek Broad Street Culvert Concrete Samples
Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC3 CONCRETE	3/13/2014	N-Propylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	o-Xylene	0.0011	U	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	sec-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Styrene	0.0011	U	0.0011	mg/Kg	90
AC3 CONCRETE	3/13/2014	tert-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Tetrachloroethene	0.0011	U	0.0011	mg/Kg	2
AC3 CONCRETE	3/13/2014	Toluene	0.0011	U	0.0011	mg/Kg	6,300
AC3 CONCRETE	3/13/2014	trans-1,2-Dichloroethene	0.0011	U	0.0011	mg/Kg	300
AC3 CONCRETE	3/13/2014	trans-1,3-Dichloropropene	0.0011	U	0.0011	mg/Kg	2
AC3 CONCRETE	3/13/2014	Trichloroethene	0.00088	U	0.00088	mg/Kg	7
AC3 CONCRETE	3/13/2014	Trichlorofluoromethane	0.0022	U	0.0022	mg/Kg	23,000
AC3 CONCRETE	3/13/2014	Vinyl chloride	0.0022	U Q	0.0022	mg/Kg	0.7
AC3 CONCRETE	3/13/2014	1,2,4,5-Tetrachlorobenzene	0.072	U	0.072	mg/Kg	NS
AC3 CONCRETE	3/13/2014	1,2,4-Trichlorobenzene	0.036	U	0.036	mg/Kg	73
AC3 CONCRETE	3/13/2014	1,2-Dichlorobenzene	0.036	U	0.036	mg/Kg	5,300
AC3 CONCRETE	3/13/2014	1,2-Diphenylhydrazine	0.036	U Q	0.036	mg/Kg	0.7
AC3 CONCRETE	3/13/2014	1,3-Dichlorobenzene	0.036	U	0.036	mg/Kg	5,300
AC3 CONCRETE	3/13/2014	1,4-Dichlorobenzene	0.036	U	0.036	mg/Kg	5
AC3 CONCRETE	3/13/2014	2,2'-oxybis[1-chloropropane]	0.036	U	0.036	mg/Kg	23
AC3 CONCRETE	3/13/2014	2,4,5-Trichlorophenol	0.14	U Q	0.14	mg/Kg	6,100
AC3 CONCRETE	3/13/2014	2,4,6-Trichlorophenol	0.071	U Q	0.071	mg/Kg	19
AC3 CONCRETE	3/13/2014	2,4-Dichlorophenol	0.071	U Q	0.071	mg/Kg	180
AC3 CONCRETE	3/13/2014	2,4-Dimethylphenol	0.14	U Q	0.14	mg/Kg	1,200
AC3 CONCRETE	3/13/2014	2,4-Dinitrophenol	0.72	U Q	0.72	mg/Kg	120
AC3 CONCRETE	3/13/2014	2,4-Dinitrotoluene	0.14	U	0.14	mg/Kg	0.7
AC3 CONCRETE	3/13/2014	2,6-Dichlorophenol	0.14	U	0.14	mg/Kg	NS
AC3 CONCRETE	3/13/2014	2,6-Dinitrotoluene	0.071	U	0.071	mg/Kg	0.7
AC3 CONCRETE	3/13/2014	2-Chloronaphthalene	0.036	U	0.036	mg/Kg	NS
AC3 CONCRETE	3/13/2014	2-Chlorophenol	0.036	U Q	0.036	mg/Kg	310
AC3 CONCRETE	3/13/2014	2-Methylnaphthalene	0.036	U	0.036	mg/Kg	230
AC3 CONCRETE	3/13/2014	2-Methylphenol	0.036	U Q	0.036	mg/Kg	310
AC3 CONCRETE	3/13/2014	2-Nitroaniline	0.071	U	0.071	mg/Kg	39
AC3 CONCRETE	3/13/2014	2-Nitrophenol	0.071	U Q	0.071	mg/Kg	NS
AC3 CONCRETE	3/13/2014	3 & 4 Methylphenol	0.071	U Q	0.071	mg/Kg	31
AC3 CONCRETE	3/13/2014	3,3'-Dichlorobenzidine	0.36	U	0.36	mg/Kg	1
AC3 CONCRETE	3/13/2014	3-Nitroaniline	0.14	U	0.14	mg/Kg	NS
AC3 CONCRETE	3/13/2014	4,6-Dinitro-2-methylphenol	0.71	U Q	0.71	mg/Kg	6
AC3 CONCRETE	3/13/2014	4-Bromophenyl phenyl ether	0.036	U	0.036	mg/Kg	NS
AC3 CONCRETE	3/13/2014	4-Chloro-3-methylphenol	0.14	U Q	0.14	mg/Kg	NS
AC3 CONCRETE	3/13/2014	4-Chloroaniline	0.14	U	0.14	mg/Kg	NS
AC3 CONCRETE	3/13/2014	4-Chlorophenyl phenyl ether	0.071	U	0.071	mg/Kg	NS
AC3 CONCRETE	3/13/2014	4-Nitroaniline	0.14	U	0.14	mg/Kg	NS
AC3 CONCRETE	3/13/2014	4-Nitrophenol	0.36	U Q	0.36	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Acenaphthene	0.018	U	0.018	mg/Kg	3,400
AC3 CONCRETE	3/13/2014	Acenaphthylene	0.036	U	0.036	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Anthracene	0.036	U	0.036	mg/Kg	17,000
AC3 CONCRETE	3/13/2014	Benzidine	4.3	U	4.30	mg/Kg	0.7
AC3 CONCRETE	3/13/2014	Benzo[a]anthracene	0.036	U	0.036	mg/Kg	0.6
AC3 CONCRETE	3/13/2014	Benzo[a]pyrene	0.036	U	0.036	mg/Kg	0.2
AC3 CONCRETE	3/13/2014	Benzo[b]fluoranthene	0.036	U	0.036	mg/Kg	0.6
AC3 CONCRETE	3/13/2014	Benzo[g,h,i]perylene	0.036	U	0.036	mg/Kg	380,000
AC3 CONCRETE	3/13/2014	Benzo[k]fluoranthene	0.071	U	0.071	mg/Kg	6
AC3 CONCRETE	3/13/2014	Benzoic acid	0.71	U Q	0.71	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Benzyl alcohol	0.036	U	0.036	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Bis(2-chloroethoxy)methane	0.071	U	0.071	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Bis(2-chloroethyl)ether	0.036	U	0.036	mg/Kg	0.4
AC3 CONCRETE	3/13/2014	Bis(2-ethylhexyl) phthalate	0.071	U	0.071	mg/Kg	35
AC3 CONCRETE	3/13/2014	Butyl benzyl phthalate	0.071	U	0.071	mg/Kg	1,200
AC3 CONCRETE	3/13/2014	Carbazole	0.072	U	0.072	mg/Kg	24
AC3 CONCRETE	3/13/2014	Chrysene	0.036	U	0.036	mg/Kg	62
AC3 CONCRETE	3/13/2014	Dibenz(a,h)anthracene	0.036	U	0.036	mg/Kg	0.2
AC3 CONCRETE	3/13/2014	Dibenzofuran	0.036	U	0.036	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Diethyl phthalate	0.036	U	0.036	mg/Kg	49,000
AC3 CONCRETE	3/13/2014	Dimethyl phthalate	0.036	U	0.036	mg/Kg	NS

Table 3

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Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC3 CONCRETE	3/13/2014	Di-n-butyl phthalate	0.036	U	0.036	mg/Kg	6,100
AC3 CONCRETE	3/13/2014	Di-n-octyl phthalate	0.071	U	0.071	mg/Kg	2,400
AC3 CONCRETE	3/13/2014	Fluoranthene	0.071	U	0.071	mg/Kg	2,300
AC3 CONCRETE	3/13/2014	Fluorene	0.036	U	0.036	mg/Kg	2,300
AC3 CONCRETE	3/13/2014	Hexachlorobenzene	0.071	U	0.071	mg/Kg	0.3
AC3 CONCRETE	3/13/2014	Hexachlorobutadiene	0.071	U	0.071	mg/Kg	6
AC3 CONCRETE	3/13/2014	Hexachlorocyclopentadiene	0.071	U Q	0.071	mg/Kg	45
AC3 CONCRETE	3/13/2014	Hexachloroethane	0.036	U	0.036	mg/Kg	35
AC3 CONCRETE	3/13/2014	Indeno[1,2,3-cd]pyrene	0.036	U	0.036	mg/Kg	0.6
AC3 CONCRETE	3/13/2014	Isophorone	0.036	U	0.036	mg/Kg	510
AC3 CONCRETE	3/13/2014	Naphthalene	0.071	U	0.071	mg/Kg	6
AC3 CONCRETE	3/13/2014	Nitrobenzene	0.036	U	0.036	mg/Kg	31
AC3 CONCRETE	3/13/2014	N-Nitrosodimethylamine	0.071	U Q	0.071	mg/Kg	0.7
AC3 CONCRETE	3/13/2014	N-Nitrosodi-n-propylamine	0.071	U	0.071	mg/Kg	0.2
AC3 CONCRETE	3/13/2014	N-Nitrosodiphenylamine	0.036	U	0.036	mg/Kg	99
AC3 CONCRETE	3/13/2014	N-Nitrosopyrrolidine	0.14	U Q	0.14	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Pentachlorophenol	0.72	U Q	0.72	mg/Kg	3
AC3 CONCRETE	3/13/2014	Phenanthrene	0.036	U	0.036	mg/Kg	NS
AC3 CONCRETE	3/13/2014	Phenol	0.036	U Q	0.036	mg/Kg	18,000
AC3 CONCRETE	3/13/2014	Pyrene	0.036	U	0.036	mg/Kg	1,700
AC3 CONCRETE	3/13/2014	Cyanide, Total [9]	0.28	U	0.28	mg/Kg	1,600
AC3 CONCRETE	3/13/2014	Total EPH (C9-C40)	89		0.0	mg/Kg	1,700
AC5 CONCRETE	3/13/2014	Sulfide [9]	5.4	H	5	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Aluminum	10,000		3.1	mg/Kg	78,000
AC5 CONCRETE	3/13/2014	Antimony	0.63	U	0.63	mg/Kg	31
AC5 CONCRETE	3/13/2014	Arsenic	3.1		1	mg/Kg	19
AC5 CONCRETE	3/13/2014	Barium	49		0.19	mg/Kg	16,000
AC5 CONCRETE	3/13/2014	Beryllium	0.31	J	0.073	mg/Kg	16
AC5 CONCRETE	3/13/2014	Cadmium	0.16	J Q	0.1	mg/Kg	78
AC5 CONCRETE	3/13/2014	Calcium	65,000		21	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Chromium	12	Q	0.16	mg/Kg	240
AC5 CONCRETE	3/13/2014	Cobalt	27		0.21	mg/Kg	1,600
AC5 CONCRETE	3/13/2014	Copper	31		0.52	mg/Kg	3,100
AC5 CONCRETE	3/13/2014	Iron	13,000		5.2	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Lead	9.6		0.83	mg/Kg	400
AC5 CONCRETE	3/13/2014	Magnesium	5,000		5.2	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Manganese	330		0.16	mg/Kg	11,000
AC5 CONCRETE	3/13/2014	Molybdenum	0.46	J	0.52	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Nickel	9.4		0.21	mg/Kg	1,600
AC5 CONCRETE	3/13/2014	Phosphorus	370		3.1	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Potassium	1,000		52	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Selenium	1.3	U	1.3	mg/Kg	390
AC5 CONCRETE	3/13/2014	Silver	0.21	U	0.21	mg/Kg	390
AC5 CONCRETE	3/13/2014	Sodium	480	J	100	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Thallium	1.3	U	1.30	mg/Kg	5
AC5 CONCRETE	3/13/2014	Vanadium	23		0.21	mg/Kg	78
AC5 CONCRETE	3/13/2014	Zinc	29		0.83	mg/Kg	23,000
AC5 CONCRETE	3/13/2014	Mercury	0.021		0.016	mg/Kg	23
AC5 CONCRETE	3/13/2014	4,4'-DDD	0.00072	U	0.00072	mg/Kg	3
AC5 CONCRETE	3/13/2014	4,4'-DDE	0.00048	U	0.00048	mg/Kg	2
AC5 CONCRETE	3/13/2014	4,4'-DDT	0.00072	U	0.00072	mg/Kg	2
AC5 CONCRETE	3/13/2014	Aldrin	0.00048	U	0.00048	mg/Kg	0.04
AC5 CONCRETE	3/13/2014	alpha-BHC	0.00048	U	0.00048	mg/Kg	0.1
AC5 CONCRETE	3/13/2014	alpha-Chlordane	0.00048	U	0.00048	mg/Kg	0.2
AC5 CONCRETE	3/13/2014	beta-BHC	0.00072	U	0.00072	mg/Kg	0.4
AC5 CONCRETE	3/13/2014	delta-BHC	0.00072	U	0.00072	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Dieldrin	0.00048	U	0.00048	mg/Kg	0.04
AC5 CONCRETE	3/13/2014	Endosulfan I	0.00048	U	0.00048	mg/Kg	470
AC5 CONCRETE	3/13/2014	Endosulfan II	0.00048	U	0.00048	mg/Kg	470
AC5 CONCRETE	3/13/2014	Endosulfan sulfate	0.00048	U	0.00048	mg/Kg	470
AC5 CONCRETE	3/13/2014	Endrin	0.00048	U	0.00048	mg/Kg	23
AC5 CONCRETE	3/13/2014	Endrin aldehyde	0.00048	U	0.00048	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Endrin ketone	0.00072	U	0.00072	mg/Kg	NS
AC5 CONCRETE	3/13/2014	gamma-BHC (Lindane)	0.00072	U	0.00072	mg/Kg	0.4

Table 3

Summary of Concrete Chip Analytical Results
Assunpink Creek Broad Street Culvert Concrete Samples
Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC5 CONCRETE	3/13/2014	gamma-Chlordane	0.00072	U	0.00072	mg/Kg	0.2
AC5 CONCRETE	3/13/2014	Heptachlor	0.00048	U	0.00048	mg/Kg	0.1
AC5 CONCRETE	3/13/2014	Heptachlor epoxide	0.00072	U	0.00072	mg/Kg	0.07
AC5 CONCRETE	3/13/2014	Methoxychlor	0.00072	U	0.00072	mg/Kg	390
AC5 CONCRETE	3/13/2014	Toxaphene	0.028	U	0.028	mg/Kg	0.6
AC5 CONCRETE	3/13/2014	PCB-1016	0.01	U	0.01	mg/Kg	NS
AC5 CONCRETE	3/13/2014	PCB-1221	0.021	U	0.021	mg/Kg	NS
AC5 CONCRETE	3/13/2014	PCB-1232	0.016	U	0.02	mg/Kg	NS
AC5 CONCRETE	3/13/2014	PCB-1242	0.01	U	0.01	mg/Kg	NS
AC5 CONCRETE	3/13/2014	PCB-1248	0.01	U	0.01	mg/Kg	NS
AC5 CONCRETE	3/13/2014	PCB-1254	0.01	U	0.01	mg/Kg	NS
AC5 CONCRETE	3/13/2014	PCB-1260	0.01	U	0.01	mg/Kg	NS
AC5 CONCRETE	3/13/2014	2,4,5-T	0.0057	U	0.0057	mg/Kg	NS
AC5 CONCRETE	3/13/2014	2,4-D	0.019	U	0.019	mg/Kg	NS
AC5 CONCRETE	3/13/2014	2,4-DB	0.021	U	0.021	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Dalapon	0.0057	U	0.0057	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Dicamba	0.0057	U	0.0057	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Dichlorprop	0.0057	U	0.0057	mg/Kg	NS
AC5 CONCRETE	3/13/2014	MCPA	4.8	U	4.8	mg/Kg	NS
AC5 CONCRETE	3/13/2014	MCPP	4.9	U	4.9	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Silvex (2,4,5-TP)	0.0057	U	0.0057	mg/Kg	NS
AC5 CONCRETE	3/13/2014	1,1,1,2-Tetrachloroethane	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	1,1,1-Trichloroethane	0.0011	U Q	0.0011	mg/Kg	290
AC5 CONCRETE	3/13/2014	1,1,2,2-Tetrachloroethane	0.0011	U Q	0.0011	mg/Kg	1
AC5 CONCRETE	3/13/2014	1,1,2-Trichloroethane	0.0011	U	0.0011	mg/Kg	2
AC5 CONCRETE	3/13/2014	1,1-Dichloroethane	0.00085	U	0.00085	mg/Kg	8
AC5 CONCRETE	3/13/2014	1,1-Dichloroethene	0.0011	U Q	0.0011	mg/Kg	11
AC5 CONCRETE	3/13/2014	1,1-Dichloropropene	0.0011	U	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	1,2,3-Trichlorobenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	1,2,3-Trichloropropane	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	1,2,4-Trichlorobenzene	0.0011	U Q	0.0011	mg/Kg	73
AC5 CONCRETE	3/13/2014	1,2,4-Trimethylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	1,2-Dibromo-3-Chloropropane	0.0011	U Q	0.0011	mg/Kg	0.08
AC5 CONCRETE	3/13/2014	1,2-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5,300
AC5 CONCRETE	3/13/2014	1,2-Dichloroethane	0.0011	U	0.0011	mg/Kg	0.9
AC5 CONCRETE	3/13/2014	1,2-Dichloroethene, Total	0.0011	U	0.0011	mg/Kg	230
AC5 CONCRETE	3/13/2014	1,2-Dichloropropane	0.0011	U	0.0011	mg/Kg	2
AC5 CONCRETE	3/13/2014	1,3,5-Trimethylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	1,3-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5,300
AC5 CONCRETE	3/13/2014	1,3-Dichloropropane	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	1,4-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5
AC5 CONCRETE	3/13/2014	2,2-Dichloropropane	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	2-Butanone (MEK)	0.0068	U	0.0068	mg/Kg	3,100
AC5 CONCRETE	3/13/2014	2-Chlorotoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	2-Hexanone	0.0110	U	0.0110	mg/Kg	NS
AC5 CONCRETE	3/13/2014	4-Chlorotoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	4-Isopropyltoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	4-Methyl-2-pentanone (MIBK)	0.011	U	0.011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Acetone	0.026	Q B	0.011	mg/Kg	70,000
AC5 CONCRETE	3/13/2014	Benzene	0.0011	U	0.0011	mg/Kg	2
AC5 CONCRETE	3/13/2014	Bromobenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Bromoform	0.00085	U Q	0.00085	mg/Kg	81
AC5 CONCRETE	3/13/2014	Bromomethane	0.0011	U	0.0011	mg/Kg	25
AC5 CONCRETE	3/13/2014	Carbon disulfide	0.0011	U	0.0011	mg/Kg	7,800
AC5 CONCRETE	3/13/2014	Carbon tetrachloride	0.0011	U	0.0011	mg/Kg	0.6
AC5 CONCRETE	3/13/2014	Chlorobenzene	0.0011	U Q	0.0011	mg/Kg	510
AC5 CONCRETE	3/13/2014	Chlorobromomethane	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Chlorodibromomethane	0.0011	U Q	0.0011	mg/Kg	3
AC5 CONCRETE	3/13/2014	Chloroethane	0.0011	U Q	0.0011	mg/Kg	220
AC5 CONCRETE	3/13/2014	Chloroform	0.0011	U Q	0.0011	mg/Kg	0.6
AC5 CONCRETE	3/13/2014	Chloromethane	0.0011	U Q	0.0011	mg/Kg	4
AC5 CONCRETE	3/13/2014	cis-1,2-Dichloroethene	0.0011	U Q	0.0011	mg/Kg	230
AC5 CONCRETE	3/13/2014	cis-1,3-Dichloropropene	0.0021	U	0.0021	mg/Kg	2
AC5 CONCRETE	3/13/2014	Dibromomethane	0.0011	U	0.0011	mg/Kg	NS

Table 3

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Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC5 CONCRETE	3/13/2014	Dichlorobromomethane	0.00085	U	0.00085	mg/Kg	1
AC5 CONCRETE	3/13/2014	Dichlorodifluoromethane	0.0011	U Q	0.0011	mg/Kg	490
AC5 CONCRETE	3/13/2014	Ethylbenzene	0.0011	U Q	0.0011	mg/Kg	7,800
AC5 CONCRETE	3/13/2014	Ethylene Dibromide	0.0011	U Q	0.0011	mg/Kg	0.008
AC5 CONCRETE	3/13/2014	Hexachlorobutadiene	0.0011	U Q	0.0011	mg/Kg	6
AC5 CONCRETE	3/13/2014	Isopropylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Methyl tert-butyl ether	0.0011	U	0.0011	mg/Kg	110
AC5 CONCRETE	3/13/2014	Methylene Chloride	0.0034	U Q	0.0034	mg/Kg	34
AC5 CONCRETE	3/13/2014	m-Xylene & p-Xylene	0.0021	U Q	0.0021	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Naphthalene	0.0011	U Q	0.0011	mg/Kg	6
AC5 CONCRETE	3/13/2014	n-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	N-Propylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	o-Xylene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	sec-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Styrene	0.0011	U Q	0.0011	mg/Kg	90
AC5 CONCRETE	3/13/2014	tert-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Tetrachloroethene	0.0011	U Q	0.0011	mg/Kg	2
AC5 CONCRETE	3/13/2014	Toluene	0.0011	U	0.0011	mg/Kg	6,300
AC5 CONCRETE	3/13/2014	trans-1,2-Dichloroethene	0.0011	U	0.0011	mg/Kg	300
AC5 CONCRETE	3/13/2014	trans-1,3-Dichloropropene	0.0011	U	0.0011	mg/Kg	2
AC5 CONCRETE	3/13/2014	Trichloroethene	0.00085	U	0.00085	mg/Kg	7
AC5 CONCRETE	3/13/2014	Trichlorofluoromethane	0.0021	U	0.0021	mg/Kg	23,000
AC5 CONCRETE	3/13/2014	Vinyl chloride	0.0021	U Q	0.0021	mg/Kg	0.7
AC5 CONCRETE	3/13/2014	1,2,4,5-Tetrachlorobenzene	0.066	U	0.066	mg/Kg	NS
AC5 CONCRETE	3/13/2014	1,2,4-Trichlorobenzene	0.032	U	0.032	mg/Kg	73
AC5 CONCRETE	3/13/2014	1,2-Dichlorobenzene	0.032	U	0.032	mg/Kg	5,300
AC5 CONCRETE	3/13/2014	1,2-Diphenylhydrazine	0.032	U Q	0.032	mg/Kg	0.7
AC5 CONCRETE	3/13/2014	1,3-Dichlorobenzene	0.032	U	0.032	mg/Kg	5,300
AC5 CONCRETE	3/13/2014	1,4-Dichlorobenzene	0.032	U	0.032	mg/Kg	5
AC5 CONCRETE	3/13/2014	2,2'-oxybis[1-chloropropane]	0.032	U	0.032	mg/Kg	23
AC5 CONCRETE	3/13/2014	2,4,5-Trichlorophenol	0.13	U Q	0.13	mg/Kg	6,100
AC5 CONCRETE	3/13/2014	2,4,6-Trichlorophenol	0.065	U Q	0.065	mg/Kg	19
AC5 CONCRETE	3/13/2014	2,4-Dichlorophenol	0.065	U Q	0.065	mg/Kg	180
AC5 CONCRETE	3/13/2014	2,4-Dimethylphenol	0.13	U Q	0.13	mg/Kg	1,200
AC5 CONCRETE	3/13/2014	2,4-Dinitrophenol	0.66	U Q	0.66	mg/Kg	120
AC5 CONCRETE	3/13/2014	2,4-Dinitrotoluene	0.13	U	0.13	mg/Kg	0.7
AC5 CONCRETE	3/13/2014	2,6-Dichlorophenol	0.13	U	0.13	mg/Kg	NS
AC5 CONCRETE	3/13/2014	2,6-Dinitrotoluene	0.065	U	0.065	mg/Kg	0.7
AC5 CONCRETE	3/13/2014	2-Chloronaphthalene	0.032	U	0.032	mg/Kg	NS
AC5 CONCRETE	3/13/2014	2-Chlorophenol	0.032	U Q	0.032	mg/Kg	310
AC5 CONCRETE	3/13/2014	2-Methylnaphthalene	0.032	U	0.032	mg/Kg	230
AC5 CONCRETE	3/13/2014	2-Methylphenol	0.032	U Q	0.032	mg/Kg	310
AC5 CONCRETE	3/13/2014	2-Nitroaniline	0.065	U	0.065	mg/Kg	39
AC5 CONCRETE	3/13/2014	2-Nitrophenol	0.065	U Q	0.065	mg/Kg	NS
AC5 CONCRETE	3/13/2014	3 & 4 Methylphenol	0.065	U Q	0.065	mg/Kg	31
AC5 CONCRETE	3/13/2014	3,3'-Dichlorobenzidine	0.32	U	0.32	mg/Kg	1
AC5 CONCRETE	3/13/2014	3-Nitroaniline	0.13	U	0.13	mg/Kg	NS
AC5 CONCRETE	3/13/2014	4,6-Dinitro-2-methylphenol	0.65	U Q	0.65	mg/Kg	6
AC5 CONCRETE	3/13/2014	4-Bromophenyl phenyl ether	0.032	U	0.032	mg/Kg	NS
AC5 CONCRETE	3/13/2014	4-Chloro-3-methylphenol	0.13	U Q	0.13	mg/Kg	NS
AC5 CONCRETE	3/13/2014	4-Chloroaniline	0.13	U	0.13	mg/Kg	NS
AC5 CONCRETE	3/13/2014	4-Chlorophenyl phenyl ether	0.065	U	0.065	mg/Kg	NS
AC5 CONCRETE	3/13/2014	4-Nitroaniline	0.13	U	0.13	mg/Kg	NS
AC5 CONCRETE	3/13/2014	4-Nitrophenol	0.32	U Q	0.32	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Acenaphthene	0.017	U	0.017	mg/Kg	3,400
AC5 CONCRETE	3/13/2014	Acenaphthylene	0.032	U	0.032	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Anthracene	0.032	U	0.032	mg/Kg	17,000
AC5 CONCRETE	3/13/2014	Benzidine	3.9	U	3.90	mg/Kg	0.7
AC5 CONCRETE	3/13/2014	Benzo[a]anthracene	0.032	U	0.032	mg/Kg	0.6
AC5 CONCRETE	3/13/2014	Benzo[a]pyrene	0.032	U	0.032	mg/Kg	0.2
AC5 CONCRETE	3/13/2014	Benzo[b]fluoranthene	0.032	U	0.032	mg/Kg	0.6
AC5 CONCRETE	3/13/2014	Benzo[g,h,i]perylene	0.032	U	0.032	mg/Kg	380,000
AC5 CONCRETE	3/13/2014	Benzo[k]fluoranthene	0.065	U	0.065	mg/Kg	6
AC5 CONCRETE	3/13/2014	Benzoic acid	0.65	U Q	0.65	mg/Kg	NS

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Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC5 CONCRETE	3/13/2014	Benzyl alcohol	0.032	U	0.032	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Bis(2-chloroethoxy)methane	0.07	U	0.065	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Bis(2-chloroethyl)ether	0.032	U	0.032	mg/Kg	0.4
AC5 CONCRETE	3/13/2014	Bis(2-ethylhexyl) phthalate	0.065	U	0.065	mg/Kg	35
AC5 CONCRETE	3/13/2014	Butyl benzyl phthalate	0.065	U	0.065	mg/Kg	1,200
AC5 CONCRETE	3/13/2014	Carbazole	0.066	U	0.066	mg/Kg	24
AC5 CONCRETE	3/13/2014	Chrysene	0.032	U	0.032	mg/Kg	62
AC5 CONCRETE	3/13/2014	Dibenz(a,h)anthracene	0.032	U	0.032	mg/Kg	0.2
AC5 CONCRETE	3/13/2014	Dibenzofuran	0.032	U	0.032	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Diethyl phthalate	0.032	U	0.032	mg/Kg	49,000
AC5 CONCRETE	3/13/2014	Dimethyl phthalate	0.025	J	0.032	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Di-n-butyl phthalate	0.032	U	0.032	mg/Kg	6,100
AC5 CONCRETE	3/13/2014	Di-n-octyl phthalate	0.065	U	0.065	mg/Kg	2,400
AC5 CONCRETE	3/13/2014	Fluoranthene	0.065	U	0.065	mg/Kg	2,300
AC5 CONCRETE	3/13/2014	Fluorene	0.032	U	0.032	mg/Kg	2,300
AC5 CONCRETE	3/13/2014	Hexachlorobenzene	0.065	U	0.065	mg/Kg	0.3
AC5 CONCRETE	3/13/2014	Hexachlorobutadiene	0.065	U	0.065	mg/Kg	6
AC5 CONCRETE	3/13/2014	Hexachlorocyclopentadiene	0.065	U Q	0.065	mg/Kg	45
AC5 CONCRETE	3/13/2014	Hexachloroethane	0.032	U	0.032	mg/Kg	35
AC5 CONCRETE	3/13/2014	Indeno[1,2,3-cd]pyrene	0.032	U	0.032	mg/Kg	0.6
AC5 CONCRETE	3/13/2014	Isophorone	0.6		0.032	mg/Kg	510
AC5 CONCRETE	3/13/2014	Naphthalene	0.065	U	0.065	mg/Kg	6
AC5 CONCRETE	3/13/2014	Nitrobenzene	0.032	U	0.032	mg/Kg	31
AC5 CONCRETE	3/13/2014	N-Nitrosodimethylamine	0.065	U Q	0.065	mg/Kg	0.7
AC5 CONCRETE	3/13/2014	N-Nitrosodi-n-propylamine	0.065	U	0.065	mg/Kg	0.2
AC5 CONCRETE	3/13/2014	N-Nitrosodiphenylamine	0.032	U	0.032	mg/Kg	99
AC5 CONCRETE	3/13/2014	N-Nitrosopyrrolidine	0.13	U Q	0.13	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Pentachlorophenol	0.66	U Q	0.66	mg/Kg	3
AC5 CONCRETE	3/13/2014	Phenanthrene	0.032	U	0.032	mg/Kg	NS
AC5 CONCRETE	3/13/2014	Phenol	0.032	U Q	0.032	mg/Kg	18,000
AC5 CONCRETE	3/13/2014	Pyrene	0.032	U	0.032	mg/Kg	1,700
AC5 CONCRETE	3/13/2014	Cyanide, Total [9]	0.13	J	0.27	mg/Kg	1,600
AC5 CONCRETE	3/13/2014	Total EPH (C9-C40)	36		0.0	mg/Kg	1,700
AC6 CONCRETE	3/13/2014	Sulfide [9]	5.2	U H	5.2	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Aluminum	8,200	J	3	mg/Kg	78,000
AC6 CONCRETE	3/13/2014	Antimony	0.6	U J	0.6	mg/Kg	31
AC6 CONCRETE	3/13/2014	Arsenic	2.1	J	1	mg/Kg	19
AC6 CONCRETE	3/13/2014	Barium	91	J	0.18	mg/Kg	16,000
AC6 CONCRETE	3/13/2014	Beryllium	0.2	J	0.07	mg/Kg	16
AC6 CONCRETE	3/13/2014	Cadmium	0.16	J Q	0.1	mg/Kg	78
AC6 CONCRETE	3/13/2014	Calcium	80,000	J	20	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Chromium	9.5	Q	0.15	mg/Kg	240
AC6 CONCRETE	3/13/2014	Cobalt	13		0.2	mg/Kg	1,600
AC6 CONCRETE	3/13/2014	Copper	22	J	0.5	mg/Kg	3,100
AC6 CONCRETE	3/13/2014	Iron	8,800	J	5	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Lead	8.7		0.8	mg/Kg	400
AC6 CONCRETE	3/13/2014	Magnesium	5,300		5	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Manganese	260	J	0.15	mg/Kg	11,000
AC6 CONCRETE	3/13/2014	Molybdenum	0.48	J	0.5	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Nickel	6.1		0.2	mg/Kg	1,600
AC6 CONCRETE	3/13/2014	Phosphorus	320		3	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Potassium	460		50	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Selenium	1.2	U	1.2	mg/Kg	390
AC6 CONCRETE	3/13/2014	Silver	0.2	U	0.2	mg/Kg	390
AC6 CONCRETE	3/13/2014	Sodium	340	J	100	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Thallium	1.2	U	1.2	mg/Kg	5
AC6 CONCRETE	3/13/2014	Vanadium	22		0.2	mg/Kg	78
AC6 CONCRETE	3/13/2014	Zinc	22		0.8	mg/Kg	23,000
AC6 CONCRETE	3/13/2014	Mercury	0.033		0.016	mg/Kg	23
AC6 CONCRETE	3/13/2014	4,4'-DDD	0.00074	U	0.00074	mg/Kg	3
AC6 CONCRETE	3/13/2014	4,4'-DDE	0.00049	U	0.00049	mg/Kg	2
AC6 CONCRETE	3/13/2014	4,4'-DDT	0.00074	U	0.00074	mg/Kg	2
AC6 CONCRETE	3/13/2014	Aldrin	0.00049	U	0.00049	mg/Kg	0.04
AC6 CONCRETE	3/13/2014	alpha-BHC	0.00049	U	0.00049	mg/Kg	0.1

Table 3

Summary of Concrete Chip Analytical Results
Assunpink Creek Broad Street Culvert Concrete Samples
Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC6 CONCRETE	3/13/2014	alpha-Chlordane	0.00049	U	0.00049	mg/Kg	0.2
AC6 CONCRETE	3/13/2014	beta-BHC	0.00074	U	0.00074	mg/Kg	0.4
AC6 CONCRETE	3/13/2014	delta-BHC	0.00074	U	0.00074	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Dieldrin	0.00049	U	0.00049	mg/Kg	0.0
AC6 CONCRETE	3/13/2014	Endosulfan I	0.00049	U	0.00049	mg/Kg	470
AC6 CONCRETE	3/13/2014	Endosulfan II	0.00049	U	0.00049	mg/Kg	470
AC6 CONCRETE	3/13/2014	Endosulfan sulfate	0.00049	U	0.00049	mg/Kg	470
AC6 CONCRETE	3/13/2014	Endrin	0.00049	U	0.00049	mg/Kg	23
AC6 CONCRETE	3/13/2014	Endrin aldehyde	0.00049	U	0.00049	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Endrin ketone	0.00074	U	0.00074	mg/Kg	NS
AC6 CONCRETE	3/13/2014	gamma-BHC (Lindane)	0.00074	U	0.00074	mg/Kg	0.4
AC6 CONCRETE	3/13/2014	gamma-Chlordane	0.00074	U	0.00074	mg/Kg	0.2
AC6 CONCRETE	3/13/2014	Heptachlor	0.00049	U	0.00049	mg/Kg	0.1
AC6 CONCRETE	3/13/2014	Heptachlor epoxide	0.00074	U	0.00074	mg/Kg	0.1
AC6 CONCRETE	3/13/2014	Methoxychlor	0.00074	U	0.00074	mg/Kg	390
AC6 CONCRETE	3/13/2014	Toxaphene	0.029	U	0.029	mg/Kg	0.6
AC6 CONCRETE	3/13/2014	PCB-1016	0.011	U	0.011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	PCB-1221	0.021	U	0.021	mg/Kg	NS
AC6 CONCRETE	3/13/2014	PCB-1232	0.016	U	0.016	mg/Kg	NS
AC6 CONCRETE	3/13/2014	PCB-1242	0.011	U	0.011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	PCB-1248	0.011	U	0.011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	PCB-1254	0.011	U	0.011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	PCB-1260	0.011	U	0.011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	2,4,5-T	0.006	U	0.006	mg/Kg	NS
AC6 CONCRETE	3/13/2014	2,4-D	0.020	U	0.02	mg/Kg	NS
AC6 CONCRETE	3/13/2014	2,4-DB	0.022	U	0.022	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Dalapon	0.006	U	0.006	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Dicamba	0.006	U	0.006	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Dichlorprop	0.006	U	0.006	mg/Kg	NS
AC6 CONCRETE	3/13/2014	MCPA	5.1	U	5.1	mg/Kg	NS
AC6 CONCRETE	3/13/2014	MCPP	5.1	U	5.1	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Silvex (2,4,5-TP)	0.006	U	0.006	mg/Kg	NS
AC6 CONCRETE	3/13/2014	1,1,1,2-Tetrachloroethane	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	1,1,1-Trichloroethane	0.0011	U Q	0.0011	mg/Kg	290
AC6 CONCRETE	3/13/2014	1,1,2,2-Tetrachloroethane	0.0011	U Q	0.0011	mg/Kg	1
AC6 CONCRETE	3/13/2014	1,1,2-Trichloroethane	0.0011	U	0.0011	mg/Kg	2
AC6 CONCRETE	3/13/2014	1,1-Dichloroethane	0.00088	U	0.00088	mg/Kg	8
AC6 CONCRETE	3/13/2014	1,1-Dichloroethene	0.0011	U Q	0.0011	mg/Kg	11
AC6 CONCRETE	3/13/2014	1,1-Dichloropropene	0.0011	U	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	1,2,3-Trichlorobenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	1,2,3-Trichloropropane	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	1,2,4-Trichlorobenzene	0.0011	U Q	0.0011	mg/Kg	73
AC6 CONCRETE	3/13/2014	1,2,4-Trimethylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	1,2-Dibromo-3-Chloropropane	0.0011	U Q	0.0011	mg/Kg	0.1
AC6 CONCRETE	3/13/2014	1,2-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5,300
AC6 CONCRETE	3/13/2014	1,2-Dichloroethane	0.0011	U	0.0011	mg/Kg	0.9
AC6 CONCRETE	3/13/2014	1,2-Dichloroethene, Total	0.0011	U	0.0011	mg/Kg	230
AC6 CONCRETE	3/13/2014	1,2-Dichloropropane	0.0011	U	0.0011	mg/Kg	2
AC6 CONCRETE	3/13/2014	1,3,5-Trimethylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	1,3-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5,300
AC6 CONCRETE	3/13/2014	1,3-Dichloropropane	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	1,4-Dichlorobenzene	0.0011	U Q	0.0011	mg/Kg	5
AC6 CONCRETE	3/13/2014	2,2-Dichloropropane	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	2-Butanone (MEK)	0.007	U	0.007	mg/Kg	3,100
AC6 CONCRETE	3/13/2014	2-Chlorotoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	2-Hexanone	0.011	U	0.011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	4-Chlorotoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	4-Isopropyltoluene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	4-Methyl-2-pentanone (MIBK)	0.011	U	0.011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Acetone	0.0095	J Q B	0.011	mg/Kg	70,000
AC6 CONCRETE	3/13/2014	Benzene	0.0011	U	0.0011	mg/Kg	2
AC6 CONCRETE	3/13/2014	Bromobenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Bromoform	0.00088	U Q	0.00088	mg/Kg	81
AC6 CONCRETE	3/13/2014	Bromomethane	0.0011	U	0.0011	mg/Kg	25

Table 3

Summary of Concrete Chip Analytical Results
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Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC6 CONCRETE	3/13/2014	Carbon disulfide	0.0011	U	0.0011	mg/Kg	7,800
AC6 CONCRETE	3/13/2014	Carbon tetrachloride	0.0011	U	0.0011	mg/Kg	0.6
AC6 CONCRETE	3/13/2014	Chlorobenzene	0.0011	U Q	0.0011	mg/Kg	510
AC6 CONCRETE	3/13/2014	Chlorobromomethane	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Chlorodibromomethane	0.0011	U Q	0.0011	mg/Kg	3
AC6 CONCRETE	3/13/2014	Chloroethane	0.0011	U Q	0.0011	mg/Kg	220
AC6 CONCRETE	3/13/2014	Chloroform	0.0011	U Q	0.0011	mg/Kg	0.6
AC6 CONCRETE	3/13/2014	Chloromethane	0.0011	U Q	0.0011	mg/Kg	4
AC6 CONCRETE	3/13/2014	cis-1,2-Dichloroethene	0.0011	U Q	0.0011	mg/Kg	230
AC6 CONCRETE	3/13/2014	cis-1,3-Dichloropropene	0.0022	U	0.0022	mg/Kg	2
AC6 CONCRETE	3/13/2014	Dibromomethane	0.0011	U	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Dichlorobromomethane	0.00088	U	0.00088	mg/Kg	1
AC6 CONCRETE	3/13/2014	Dichlorodifluoromethane	0.0011	U Q	0.0011	mg/Kg	490
AC6 CONCRETE	3/13/2014	Ethylbenzene	0.0011	U Q	0.0011	mg/Kg	7,800
AC6 CONCRETE	3/13/2014	Ethylene Dibromide	0.0011	U Q	0.0011	mg/Kg	0.008
AC6 CONCRETE	3/13/2014	Hexachlorobutadiene	0.0011	U Q	0.0011	mg/Kg	6
AC6 CONCRETE	3/13/2014	Isopropylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Methyl tert-butyl ether	0.0011	U	0.0011	mg/Kg	110
AC6 CONCRETE	3/13/2014	Methylene Chloride	0.0035	U Q	0.0035	mg/Kg	34
AC6 CONCRETE	3/13/2014	m-Xylene & p-Xylene	0.0022	U Q	0.0022	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Naphthalene	0.0011	U Q	0.0011	mg/Kg	6
AC6 CONCRETE	3/13/2014	n-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	N-Propylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	o-Xylene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	sec-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Styrene	0.0011	U Q	0.0011	mg/Kg	90
AC6 CONCRETE	3/13/2014	tert-Butylbenzene	0.0011	U Q	0.0011	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Tetrachloroethene	0.0011	U Q	0.0011	mg/Kg	2
AC6 CONCRETE	3/13/2014	Toluene	0.0011	U	0.0011	mg/Kg	6,300
AC6 CONCRETE	3/13/2014	trans-1,2-Dichloroethene	0.0011	U	0.0011	mg/Kg	300
AC6 CONCRETE	3/13/2014	trans-1,3-Dichloropropene	0.0011	U	0.0011	mg/Kg	2
AC6 CONCRETE	3/13/2014	Trichloroethene	0.00088	U	0.00088	mg/Kg	7
AC6 CONCRETE	3/13/2014	Trichlorofluoromethane	0.0022	U	0.0022	mg/Kg	23,000
AC6 CONCRETE	3/13/2014	Vinyl chloride	0.0022	U Q	0.0022	mg/Kg	0.7
AC6 CONCRETE	3/13/2014	1,2,4,5-Tetrachlorobenzene	0.072	U	0.072	mg/Kg	NS
AC6 CONCRETE	3/13/2014	1,2,4-Trichlorobenzene	0.036	U	0.036	mg/Kg	73
AC6 CONCRETE	3/13/2014	1,2-Dichlorobenzene	0.036	U	0.036	mg/Kg	5,300
AC6 CONCRETE	3/13/2014	1,2-Diphenylhydrazine	0.036	U Q	0.036	mg/Kg	0.7
AC6 CONCRETE	3/13/2014	1,3-Dichlorobenzene	0.036	U	0.036	mg/Kg	5,300
AC6 CONCRETE	3/13/2014	1,4-Dichlorobenzene	0.036	U	0.036	mg/Kg	5
AC6 CONCRETE	3/13/2014	2,2'-oxybis[1-chloropropane]	0.036	U	0.036	mg/Kg	23
AC6 CONCRETE	3/13/2014	2,4,5-Trichlorophenol	0.14	U Q	0.14	mg/Kg	6,100
AC6 CONCRETE	3/13/2014	2,4,6-Trichlorophenol	0.071	U Q	0.071	mg/Kg	19
AC6 CONCRETE	3/13/2014	2,4-Dichlorophenol	0.071	U Q	0.071	mg/Kg	180
AC6 CONCRETE	3/13/2014	2,4-Dimethylphenol	0.14	U Q	0.14	mg/Kg	1,200
AC6 CONCRETE	3/13/2014	2,4-Dinitrophenol	0.72	U Q	0.72	mg/Kg	120
AC6 CONCRETE	3/13/2014	2,4-Dinitrotoluene	0.14	U	0.14	mg/Kg	0.7
AC6 CONCRETE	3/13/2014	2,6-Dichlorophenol	0.14	U	0.14	mg/Kg	NS
AC6 CONCRETE	3/13/2014	2,6-Dinitrotoluene	0.071	U	0.071	mg/Kg	0.7
AC6 CONCRETE	3/13/2014	2-Chloronaphthalene	0.036	U	0.036	mg/Kg	NS
AC6 CONCRETE	3/13/2014	2-Chlorophenol	0.036	U Q	0.036	mg/Kg	310
AC6 CONCRETE	3/13/2014	2-Methylnaphthalene	0.036	U	0.036	mg/Kg	230
AC6 CONCRETE	3/13/2014	2-Methylphenol	0.036	U Q	0.036	mg/Kg	310
AC6 CONCRETE	3/13/2014	2-Nitroaniline	0.071	U	0.071	mg/Kg	39
AC6 CONCRETE	3/13/2014	2-Nitrophenol	0.071	U Q	0.071	mg/Kg	NS
AC6 CONCRETE	3/13/2014	3 & 4 Methylphenol	0.071	U Q	0.071	mg/Kg	31
AC6 CONCRETE	3/13/2014	3,3'-Dichlorobenzidine	0.36	U	0.36	mg/Kg	1
AC6 CONCRETE	3/13/2014	3-Nitroaniline	0.14	U	0.14	mg/Kg	NS
AC6 CONCRETE	3/13/2014	4,6-Dinitro-2-methylphenol	0.71	U Q	0.71	mg/Kg	6
AC6 CONCRETE	3/13/2014	4-Bromophenyl phenyl ether	0.036	U	0.036	mg/Kg	NS
AC6 CONCRETE	3/13/2014	4-Chloro-3-methylphenol	0.14	U Q	0.14	mg/Kg	NS
AC6 CONCRETE	3/13/2014	4-Chloroaniline	0.14	U	0.14	mg/Kg	NS
AC6 CONCRETE	3/13/2014	4-Chlorophenyl phenyl ether	0.071	U	0.071	mg/Kg	NS
AC6 CONCRETE	3/13/2014	4-Nitroaniline	0.14	U	0.14	mg/Kg	NS

Table 3

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Trenton, New Jersey

Sample ID	Sample Collection Date	Analyte	Result	Qualifier	Limit of Detection	Units	NJDEP Residential Direct Contact Soil Remediation Standard
AC6 CONCRETE	3/13/2014	4-Nitrophenol	0.36	U Q	0.36	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Acenaphthene	0.018	U	0.018	mg/Kg	3,400
AC6 CONCRETE	3/13/2014	Acenaphthylene	0.036	U	0.036	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Anthracene	0.036	U	0.036	mg/Kg	17,000
AC6 CONCRETE	3/13/2014	Benzidine	4.3	U	4.30	mg/Kg	0.7
AC6 CONCRETE	3/13/2014	Benzo[a]anthracene	0.036	U	0.036	mg/Kg	0.6
AC6 CONCRETE	3/13/2014	Benzo[a]pyrene	0.036	U	0.036	mg/Kg	0.2
AC6 CONCRETE	3/13/2014	Benzo[b]fluoranthene	0.036	U	0.036	mg/Kg	0.6
AC6 CONCRETE	3/13/2014	Benzo[g,h,i]perylene	0.036	U	0.036	mg/Kg	380,000
AC6 CONCRETE	3/13/2014	Benzo[k]fluoranthene	0.071	U	0.071	mg/Kg	6
AC6 CONCRETE	3/13/2014	Benzoic acid	0.71	U Q	0.71	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Benzyl alcohol	0.036	U	0.036	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Bis(2-chloroethoxy)methane	0.071	U	0.071	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Bis(2-chloroethyl)ether	0.036	U	0.036	mg/Kg	0.4
AC6 CONCRETE	3/13/2014	Bis(2-ethylhexyl) phthalate	0.071	U	0.071	mg/Kg	35
AC6 CONCRETE	3/13/2014	Butyl benzyl phthalate	0.071	U	0.071	mg/Kg	1,200
AC6 CONCRETE	3/13/2014	Carbazole	0.072	U	0.072	mg/Kg	24
AC6 CONCRETE	3/13/2014	Chrysene	0.036	U	0.036	mg/Kg	62
AC6 CONCRETE	3/13/2014	Dibenz(a,h)anthracene	0.036	U	0.036	mg/Kg	0.2
AC6 CONCRETE	3/13/2014	Dibenzofuran	0.036	U	0.036	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Diethyl phthalate	0.036	U	0.036	mg/Kg	49,000
AC6 CONCRETE	3/13/2014	Dimethyl phthalate	0.036	U	0.036	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Di-n-butyl phthalate	0.036	U	0.036	mg/Kg	6,100
AC6 CONCRETE	3/13/2014	Di-n-octyl phthalate	0.071	U	0.071	mg/Kg	2,400
AC6 CONCRETE	3/13/2014	Fluoranthene	0.071	U	0.071	mg/Kg	2,300
AC6 CONCRETE	3/13/2014	Fluorene	0.036	U	0.036	mg/Kg	2,300
AC6 CONCRETE	3/13/2014	Hexachlorobenzene	0.071	U	0.071	mg/Kg	0.3
AC6 CONCRETE	3/13/2014	Hexachlorobutadiene	0.071	U	0.071	mg/Kg	6
AC6 CONCRETE	3/13/2014	Hexachlorocyclopentadiene	0.071	U Q	0.071	mg/Kg	45
AC6 CONCRETE	3/13/2014	Hexachloroethane	0.036	U	0.036	mg/Kg	35
AC6 CONCRETE	3/13/2014	Indeno[1,2,3-cd]pyrene	0.036	U	0.036	mg/Kg	0.6
AC6 CONCRETE	3/13/2014	Isophorone	0.2	J	0.036	mg/Kg	510
AC6 CONCRETE	3/13/2014	Naphthalene	0.071	U	0.07	mg/Kg	6
AC6 CONCRETE	3/13/2014	Nitrobenzene	0.036	U	0.036	mg/Kg	31
AC6 CONCRETE	3/13/2014	N-Nitrosodimethylamine	0.071	U Q	0.07	mg/Kg	0.7
AC6 CONCRETE	3/13/2014	N-Nitrosodi-n-propylamine	0.071	U	0.07	mg/Kg	0.2
AC6 CONCRETE	3/13/2014	N-Nitrosodiphenylamine	0.036	U	0.036	mg/Kg	99
AC6 CONCRETE	3/13/2014	N-Nitrosopyrrolidine	0.14	U Q	0.14	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Pentachlorophenol	0.72	U Q	0.72	mg/Kg	3
AC6 CONCRETE	3/13/2014	Phenanthrene	0.036	U	0.036	mg/Kg	NS
AC6 CONCRETE	3/13/2014	Phenol	0.036	U Q	0.036	mg/Kg	18,000
AC6 CONCRETE	3/13/2014	Pyrene	0.036	U	0.036	mg/Kg	1,700
AC6 CONCRETE	3/13/2014	Cyanide, Total [9]	0.18	J	0.28	mg/Kg	1,600
AC6 CONCRETE	3/13/2014	Total EPH (C9-C40)	2.2	U	0.0	mg/Kg	1,700

Explanation:
1. mg/Kg - milligrams per kilogram.
2. U - not detected at a concentration greater than the Limit of Detection.
3. H - sample was prepped or analyzed beyond the specified hold time.
4. J - estimated. The analyte was positively identified; the quantitation is an estimate.
5. Q - one or more quality control criteria failed.
6. B - blank contamination. The analyte was detected at a concentration greater than one-half the reporting limit in an associated blank.
7. NS - no Soil Remediation Standard has been developed for these analytes.
8. Samples were analyzed by TestAmerica Laboratories, Inc. of Denver, Colorado and Edison, New Jersey.
9. Samples were initially submitted for analysis of reactivity as sulfide and reactivity as cyanide. EPA withdrew guidance for using reactivity for the determination of hazardous waste. Therefore, the laboratory analyzed the samples for total sulfide and total cyanide.

- indicates that the Limit of Detection is greater than the NJDEP Residential Direct Contact Soil Remediation Standard.

Table 4

Summary of TCLP Analytical Results
Assunpink Creek Broad Street Culvert Concrete Samples
Trenton, New Jersey

Sample ID	Sample Collection Date	Analysis Method	Analyte	Result	Flag	Unit	TCLP Regulatory Level
AC1 CONCRETE	3/13/2014	6010C	Arsenic	0.065	U	mg/L	5
AC1 CONCRETE	3/13/2014	6010C	Barium	0.45	J	mg/L	100
AC1 CONCRETE	3/13/2014	6010C	Cadmium	0.0021	J	mg/L	1
AC1 CONCRETE	3/13/2014	6010C	Chromium	0.0045	U	mg/L	5
AC1 CONCRETE	3/13/2014	6010C	Lead	0.035	U	mg/L	5
AC1 CONCRETE	3/13/2014	6010C	Selenium	0.04	J	mg/L	1
AC1 CONCRETE	3/13/2014	6010C	Silver	0.015	U	mg/L	5
AC1 CONCRETE	3/13/2014	7.1.2	Ignitability	0.0		NA	NL
AC1 CONCRETE	3/13/2014	7470A	Mercury	0.00008	U	mg/L	0.2
AC1 CONCRETE	3/13/2014	8081B	Endrin	0.000099	U	mg/L	0.02
AC1 CONCRETE	3/13/2014	8081B	gamma-BHC (Lindane)	0.000099	U	mg/L	0.4
AC1 CONCRETE	3/13/2014	8081B	Heptachlor	0.000099	U	mg/L	0.008
AC1 CONCRETE	3/13/2014	8081B	Heptachlor epoxide	0.000099	U	mg/L	0.008
AC1 CONCRETE	3/13/2014	8081B	Methoxychlor	0.0002	U	mg/L	10
AC1 CONCRETE	3/13/2014	8081B	Technical Chlordane	0.0048	U	mg/L	0.03
AC1 CONCRETE	3/13/2014	8081B	Toxaphene	0.0079	U	mg/L	0.5
AC1 CONCRETE	3/13/2014	8151A	2,4-D	0.0092	U	mg/L	10
AC1 CONCRETE	3/13/2014	8151A	Silvex (2,4,5-TP)	0.0028	U	mg/L	1
AC1 CONCRETE	3/13/2014	8260B	1,1-Dichloroethene	0.004	U	mg/L	0.7
AC1 CONCRETE	3/13/2014	8260B	1,2-Dichloroethane	0.004	U	mg/L	0.5
AC1 CONCRETE	3/13/2014	8260B	2-Butanone (MEK)	0.032	U	mg/L	200
AC1 CONCRETE	3/13/2014	8260B	Benzene	0.002	U	mg/L	0.5
AC1 CONCRETE	3/13/2014	8260B	Carbon tetrachloride	0.004	U	mg/L	0.5
AC1 CONCRETE	3/13/2014	8260B	Chlorobenzene	0.002	U	mg/L	100
AC1 CONCRETE	3/13/2014	8260B	Chloroform	0.002	U	mg/L	6
AC1 CONCRETE	3/13/2014	8260B	Tetrachloroethene	0.004	U	mg/L	0.7
AC1 CONCRETE	3/13/2014	8260B	Trichloroethene	0.002	U	mg/L	0.5
AC1 CONCRETE	3/13/2014	8260B	Vinyl chloride	0.008	U	mg/L	0.2
AC1 CONCRETE	3/13/2014	8270D	1,4-Dichlorobenzene	0.005	U	mg/L	7.5
AC1 CONCRETE	3/13/2014	8270D	2,4,5-Trichlorophenol	0.0062	J	mg/L	400
AC1 CONCRETE	3/13/2014	8270D	2,4,6-Trichlorophenol	0.005	U	mg/L	2
AC1 CONCRETE	3/13/2014	8270D	2,4-Dinitrotoluene	0.02	U	mg/L	0.13
AC1 CONCRETE	3/13/2014	8270D	2-Methylphenol	0.02	U	mg/L	200
AC1 CONCRETE	3/13/2014	8270D	3 & 4 Methylphenol	0.005	U	mg/L	400
AC1 CONCRETE	3/13/2014	8270D	Hexachlorobenzene	0.005	U	mg/L	0.13
AC1 CONCRETE	3/13/2014	8270D	Hexachlorobutadiene	0.05	U	mg/L	0.5
AC1 CONCRETE	3/13/2014	8270D	Hexachloroethane	0.02	U	mg/L	3
AC1 CONCRETE	3/13/2014	8270D	Nitrobenzene	0.01	U	mg/L	2
AC1 CONCRETE	3/13/2014	8270D	Pentachlorophenol	0.2	U	mg/L	100
AC1 CONCRETE	3/13/2014	8270D	Pyridine	0.01	U J	mg/L	5
AC1 CONCRETE	3/13/2014	9045D	pH	12.2		SU	<2 or >12.5
AC3 CONCRETE	3/13/2014	6010C	Arsenic	0.065	U	mg/L	5
AC3 CONCRETE	3/13/2014	6010C	Barium	0.51	J	mg/L	100
AC3 CONCRETE	3/13/2014	6010C	Cadmium	0.007	U	mg/L	1
AC3 CONCRETE	3/13/2014	6010C	Chromium	0.0045	U	mg/L	5
AC3 CONCRETE	3/13/2014	6010C	Lead	0.035	U	mg/L	5
AC3 CONCRETE	3/13/2014	6010C	Selenium	0.025	J	mg/L	1
AC3 CONCRETE	3/13/2014	6010C	Silver	0.015	U	mg/L	5
AC3 CONCRETE	3/13/2014	7.1.2	Ignitability	0.0		NA	NL

Table 4

Summary of TCLP Analytical Results
Assunpink Creek Broad Street Culvert Concrete Samples
Trenton, New Jersey

Sample ID	Sample Collection Date	Analysis Method	Analyte	Result	Flag	Unit	TCLP Regulatory Level
AC3 CONCRETE	3/13/2014	7470A	Mercury	0.00008	U	mg/L	0.2
AC3 CONCRETE	3/13/2014	8081B	Endrin	0.000099	U	mg/L	0.02
AC3 CONCRETE	3/13/2014	8081B	gamma-BHC (Lindane)	0.000099	U	mg/L	0.4
AC3 CONCRETE	3/13/2014	8081B	Heptachlor	0.000099	U	mg/L	0.008
AC3 CONCRETE	3/13/2014	8081B	Heptachlor epoxide	0.000099	U	mg/L	0.008
AC3 CONCRETE	3/13/2014	8081B	Methoxychlor	0.0002	U	mg/L	10
AC3 CONCRETE	3/13/2014	8081B	Technical Chlordane	0.0048	U	mg/L	0.03
AC3 CONCRETE	3/13/2014	8081B	Toxaphene	0.0079	U	mg/L	0.5
AC3 CONCRETE	3/13/2014	8151A	2,4-D	0.009	U	mg/L	10
AC3 CONCRETE	3/13/2014	8151A	Silvex (2,4,5-TP)	0.0027	U	mg/L	1
AC3 CONCRETE	3/13/2014	8260B	1,1-Dichloroethene	0.004	U	mg/L	0.7
AC3 CONCRETE	3/13/2014	8260B	1,2-Dichloroethane	0.004	U	mg/L	0.5
AC3 CONCRETE	3/13/2014	8260B	2-Butanone (MEK)	0.032	U	mg/L	200
AC3 CONCRETE	3/13/2014	8260B	Benzene	0.002	U	mg/L	0.5
AC3 CONCRETE	3/13/2014	8260B	Carbon tetrachloride	0.004	U	mg/L	0.5
AC3 CONCRETE	3/13/2014	8260B	Chlorobenzene	0.002	U	mg/L	100
AC3 CONCRETE	3/13/2014	8260B	Chloroform	0.002	U	mg/L	6
AC3 CONCRETE	3/13/2014	8260B	Tetrachloroethene	0.004	U	mg/L	0.7
AC3 CONCRETE	3/13/2014	8260B	Trichloroethene	0.002	U	mg/L	0.5
AC3 CONCRETE	3/13/2014	8260B	Vinyl chloride	0.008	U	mg/L	0.2
AC3 CONCRETE	3/13/2014	8270D	1,4-Dichlorobenzene	0.005	U	mg/L	7.5
AC3 CONCRETE	3/13/2014	8270D	2,4,5-Trichlorophenol	0.0077	J	mg/L	400
AC3 CONCRETE	3/13/2014	8270D	2,4,6-Trichlorophenol	0.005	U	mg/L	2
AC3 CONCRETE	3/13/2014	8270D	2,4-Dinitrotoluene	0.02	U	mg/L	0.13
AC3 CONCRETE	3/13/2014	8270D	2-Methylphenol	0.02	U	mg/L	200
AC3 CONCRETE	3/13/2014	8270D	3 & 4 Methylphenol	0.005	U	mg/L	400
AC3 CONCRETE	3/13/2014	8270D	Hexachlorobenzene	0.005	U	mg/L	0.13
AC3 CONCRETE	3/13/2014	8270D	Hexachlorobutadiene	0.050	U	mg/L	0.5
AC3 CONCRETE	3/13/2014	8270D	Hexachloroethane	0.02	U	mg/L	3
AC3 CONCRETE	3/13/2014	8270D	Nitrobenzene	0.0099	U	mg/L	2
AC3 CONCRETE	3/13/2014	8270D	Pentachlorophenol	0.2	U	mg/L	100
AC3 CONCRETE	3/13/2014	8270D	Pyridine	0.0099	U	mg/L	5
AC3 CONCRETE	3/13/2014	9045D	pH	12.4		SU	<2 or >12.5
AC5 CONCRETE	3/13/2014	6010C	Arsenic	0.065	U	mg/L	5
AC5 CONCRETE	3/13/2014	6010C	Barium	0.11	J	mg/L	100
AC5 CONCRETE	3/13/2014	6010C	Cadmium	0.007	U	mg/L	1
AC5 CONCRETE	3/13/2014	6010C	Chromium	0.019	J	mg/L	5
AC5 CONCRETE	3/13/2014	6010C	Lead	0.035	U	mg/L	5
AC5 CONCRETE	3/13/2014	6010C	Selenium	0.075	U	mg/L	1
AC5 CONCRETE	3/13/2014	6010C	Silver	0.015	U	mg/L	5
AC5 CONCRETE	3/13/2014	7.1.2	Ignitability	0.0		NA	NL
AC5 CONCRETE	3/13/2014	7470A	Mercury	0.00008	U	mg/L	0.2
AC5 CONCRETE	3/13/2014	8081B	Endrin	0.0001	U	mg/L	0.02
AC5 CONCRETE	3/13/2014	8081B	gamma-BHC (Lindane)	0.0001	U	mg/L	0.4
AC5 CONCRETE	3/13/2014	8081B	Heptachlor	0.0001	U	mg/L	0.008
AC5 CONCRETE	3/13/2014	8081B	Heptachlor epoxide	0.0001	U	mg/L	0.008
AC5 CONCRETE	3/13/2014	8081B	Methoxychlor	0.0002	U	mg/L	10
AC5 CONCRETE	3/13/2014	8081B	Technical Chlordane	0.0048	U	mg/L	0.03
AC5 CONCRETE	3/13/2014	8081B	Toxaphene	0.008	U	mg/L	0.5

Table 4

Summary of TCLP Analytical Results
Assunpink Creek Broad Street Culvert Concrete Samples
Trenton, New Jersey

Sample ID	Sample Collection Date	Analysis Method	Analyte	Result	Flag	Unit	TCLP Regulatory Level
AC5 CONCRETE	3/13/2014	8151A	2,4-D	0.0094	U	mg/L	10
AC5 CONCRETE	3/13/2014	8151A	Silvex (2,4,5-TP)	0.0029	U	mg/L	1
AC5 CONCRETE	3/13/2014	8260B	1,1-Dichloroethene	0.004	U	mg/L	0.7
AC5 CONCRETE	3/13/2014	8260B	1,2-Dichloroethane	0.004	U	mg/L	0.5
AC5 CONCRETE	3/13/2014	8260B	2-Butanone (MEK)	0.032	U	mg/L	200
AC5 CONCRETE	3/13/2014	8260B	Benzene	0.002	U	mg/L	0.5
AC5 CONCRETE	3/13/2014	8260B	Carbon tetrachloride	0.004	U	mg/L	0.5
AC5 CONCRETE	3/13/2014	8260B	Chlorobenzene	0.002	U	mg/L	100
AC5 CONCRETE	3/13/2014	8260B	Chloroform	0.002	U	mg/L	6
AC5 CONCRETE	3/13/2014	8260B	Tetrachloroethene	0.004	U	mg/L	0.7
AC5 CONCRETE	3/13/2014	8260B	Trichloroethene	0.002	U	mg/L	0.5
AC5 CONCRETE	3/13/2014	8260B	Vinyl chloride	0.008	U	mg/L	0.2
AC5 CONCRETE	3/13/2014	8270D	1,4-Dichlorobenzene	0.005	U	mg/L	7.5
AC5 CONCRETE	3/13/2014	8270D	2,4,5-Trichlorophenol	0.005	U	mg/L	400
AC5 CONCRETE	3/13/2014	8270D	2,4,6-Trichlorophenol	0.005	U	mg/L	2
AC5 CONCRETE	3/13/2014	8270D	2,4-Dinitrotoluene	0.02	U	mg/L	0.13
AC5 CONCRETE	3/13/2014	8270D	2-Methylphenol	0.02	U	mg/L	200
AC5 CONCRETE	3/13/2014	8270D	3 & 4 Methylphenol	0.005	U	mg/L	400
AC5 CONCRETE	3/13/2014	8270D	Hexachlorobenzene	0.005	U	mg/L	0.13
AC5 CONCRETE	3/13/2014	8270D	Hexachlorobutadiene	0.05	U	mg/L	0.5
AC5 CONCRETE	3/13/2014	8270D	Hexachloroethane	0.02	U	mg/L	3
AC5 CONCRETE	3/13/2014	8270D	Nitrobenzene	0.01	U	mg/L	2
AC5 CONCRETE	3/13/2014	8270D	Pentachlorophenol	0.2	U	mg/L	100
AC5 CONCRETE	3/13/2014	8270D	Pyridine	0.01	U J	mg/L	5
AC5 CONCRETE	3/13/2014	9045D	pH	12.3		SU	<2 or >12.5
AC6 CONCRETE	3/13/2014	6010C	Arsenic	0.065	U	mg/L	5
AC6 CONCRETE	3/13/2014	6010C	Barium	0.56	J	mg/L	100
AC6 CONCRETE	3/13/2014	6010C	Cadmium	0.007	U	mg/L	1
AC6 CONCRETE	3/13/2014	6010C	Chromium	0.0045	U	mg/L	5
AC6 CONCRETE	3/13/2014	6010C	Lead	0.035	U	mg/L	5
AC6 CONCRETE	3/13/2014	6010C	Selenium	0.028	J	mg/L	1
AC6 CONCRETE	3/13/2014	6010C	Silver	0.015	U	mg/L	5
AC6 CONCRETE	3/13/2014	7.1.2	Ignitability	0.0		NA	NL
AC6 CONCRETE	3/13/2014	7470A	Mercury	0.00008	U	mg/L	0.2
AC6 CONCRETE	3/13/2014	8081B	Endrin	0.000098	U	mg/L	0.02
AC6 CONCRETE	3/13/2014	8081B	gamma-BHC (Lindane)	0.000098	U	mg/L	0.4
AC6 CONCRETE	3/13/2014	8081B	Heptachlor	0.000098	U	mg/L	0.008
AC6 CONCRETE	3/13/2014	8081B	Heptachlor epoxide	0.000098	U	mg/L	0.008
AC6 CONCRETE	3/13/2014	8081B	Methoxychlor	0.0002	U	mg/L	10
AC6 CONCRETE	3/13/2014	8081B	Technical Chlordane	0.0047	U	mg/L	0.03
AC6 CONCRETE	3/13/2014	8081B	Toxaphene	0.0078	U	mg/L	0.5
AC6 CONCRETE	3/13/2014	8151A	2,4-D	0.0092	U	mg/L	10
AC6 CONCRETE	3/13/2014	8151A	Silvex (2,4,5-TP)	0.0028	U	mg/L	1
AC6 CONCRETE	3/13/2014	8260B	1,1-Dichloroethene	0.004	U	mg/L	0.7
AC6 CONCRETE	3/13/2014	8260B	1,2-Dichloroethane	0.004	U	mg/L	0.5
AC6 CONCRETE	3/13/2014	8260B	2-Butanone (MEK)	0.032	U	mg/L	200
AC6 CONCRETE	3/13/2014	8260B	Benzene	0.002	U	mg/L	0.5
AC6 CONCRETE	3/13/2014	8260B	Carbon tetrachloride	0.004	U	mg/L	0.5
AC6 CONCRETE	3/13/2014	8260B	Chlorobenzene	0.002	U	mg/L	100

Table 4

Summary of TCLP Analytical Results
Assunpink Creek Broad Street Culvert Concrete Samples
Trenton, New Jersey

Sample ID	Sample Collection Date	Analysis Method	Analyte	Result	Flag	Unit	TCLP Regulatory Level
AC6 CONCRETE	3/13/2014	8260B	Chloroform	0.002	U	mg/L	6
AC6 CONCRETE	3/13/2014	8260B	Tetrachloroethene	0.004	U	mg/L	0.7
AC6 CONCRETE	3/13/2014	8260B	Trichloroethene	0.002	U	mg/L	0.5
AC6 CONCRETE	3/13/2014	8260B	Vinyl chloride	0.008	U	mg/L	0.2
AC6 CONCRETE	3/13/2014	8270D	1,4-Dichlorobenzene	0.005	U	mg/L	7.5
AC6 CONCRETE	3/13/2014	8270D	2,4,5-Trichlorophenol	0.005	U	mg/L	400
AC6 CONCRETE	3/13/2014	8270D	2,4,6-Trichlorophenol	0.005	U	mg/L	2
AC6 CONCRETE	3/13/2014	8270D	2,4-Dinitrotoluene	0.02	U	mg/L	0.13
AC6 CONCRETE	3/13/2014	8270D	2-Methylphenol	0.02	U	mg/L	200
AC6 CONCRETE	3/13/2014	8270D	3 & 4 Methylphenol	0.005	U	mg/L	400
AC6 CONCRETE	3/13/2014	8270D	Hexachlorobenzene	0.005	U	mg/L	0.13
AC6 CONCRETE	3/13/2014	8270D	Hexachlorobutadiene	0.05	U	mg/L	0.5
AC6 CONCRETE	3/13/2014	8270D	Hexachloroethane	0.02	U	mg/L	3
AC6 CONCRETE	3/13/2014	8270D	Nitrobenzene	0.01	U	mg/L	2
AC6 CONCRETE	3/13/2014	8270D	Pentachlorophenol	0.2	U	mg/L	100
AC6 CONCRETE	3/13/2014	8270D	Pyridine	0.01	U	mg/L	5
AC6 CONCRETE	3/13/2014	9045D	pH	12.3		SU	<2 or >12.5

1. U - not detected at a concentration greater than the laboratory reporting limit.
2. J - detected at a concentration greater than the laboratory method detection limit, but at a concentration less than the laboratory reporting limit. Reported concentration is an estimate.
3. mg/L - milligrams per liter.
4. SU - standard units.
5. NA - no units are associated with ignitability.
6. Samples were analyzed by TestAmerica Laboratories, Inc. of Denver, Colorado.
7. Samples were initially submitted for analysis of reactivity as sulfide and reactivity as cyanide. EPA withdrew guidance for using reactivity for the determination of hazardous waste. Therefore, the laboratory analyzed the samples for total sulfide and total cyanide see Table 3).

FIGURES

Figure 1
Aerial Photograph of Site Location
Assunpink Creek Broad Street Culvert
Trenton, New Jersey

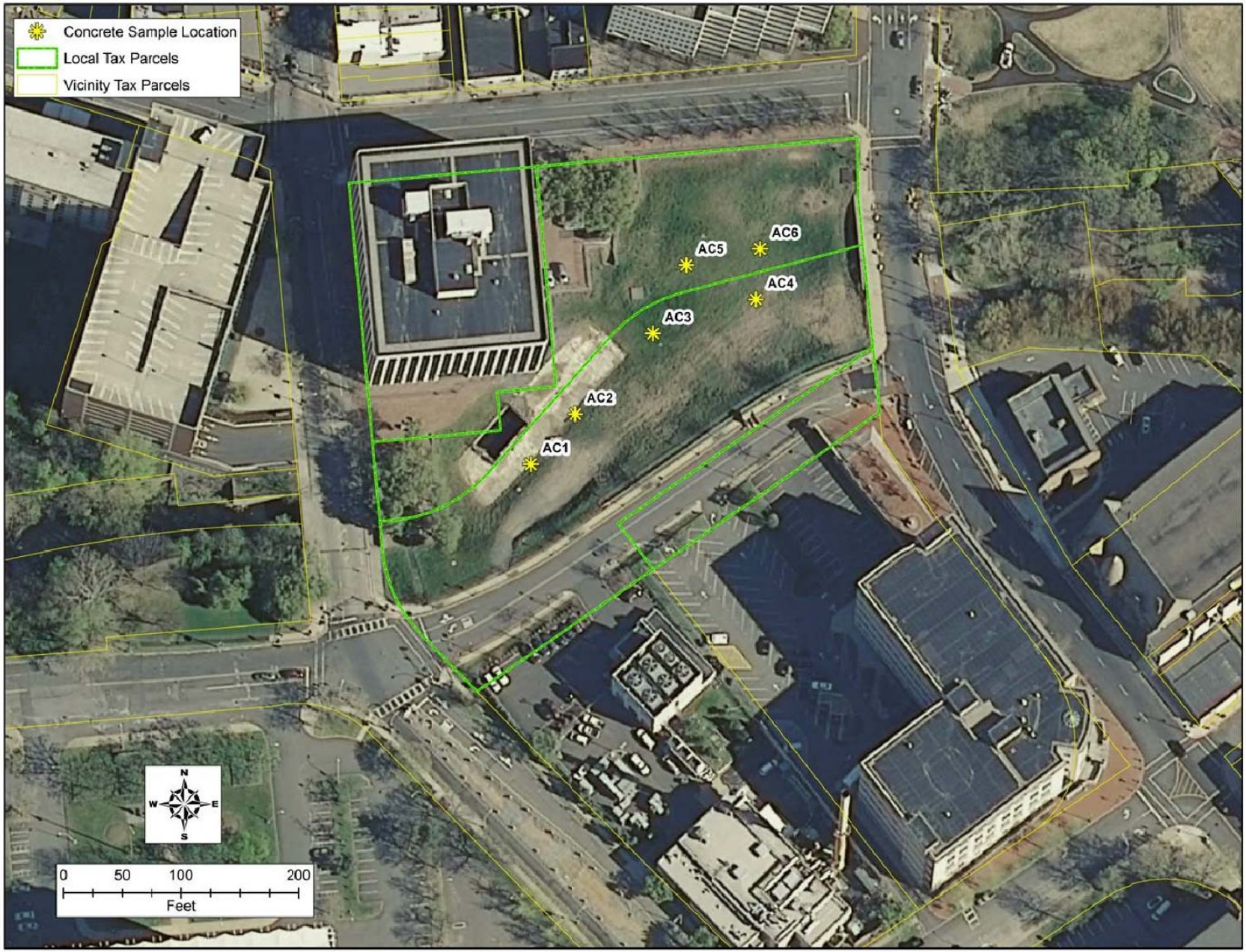

Figure 2
Concrete Sample Locations
Assunpink Creek Broad Street Culvert
Trenton, New Jersey

APPENDIX A

USACE SCOPE OF WORK-TASK ORDER 003 (COMPACT DISC)

Scope of Work
Architect Engineer Services
Concrete Sampling and Testing
Assunpink Creek, Trenton, New Jersey
11/27/13

1.0 GENERAL:

1.1 Contract Number:	W912BU-13-D-0007
1.2 Contract Action:	Task Order: 0003
1.3Name and Location of Project	Concrete Sampling and Testing, Assunpink Creek, Trenton, NJ
1.4 Firm Name, Address	AMO Environmental Decisions 4327 Point Pleasant Drive PO Box 410 Danboro, PA 18916

1.5 Name of Sub-Contractors

Laboratory: Accutest Laboratories
Driller: TBD
Surveyor: TBD

1.6 Points of Contact:	A/E: Guy Sheets 215-230-8282 USACE: Mike Mohn (EC-EV) 215-656-6887

1.7 Project Overview:

The U.S. Army Corps of Engineers, Philadelphia District (USACE) is presently preparing for the removal of an existing culvert and subsequent stream restoration along a section of the Assunpink Creek located in Trenton, NJ. As part of the District's needs, a follow up environmental investigation will be required at this site. USACE contractors have already performed site investigation work in previous task orders to support the efforts of USACE in this project. The results of these site investigations will be added to existing background

characterization information for USACE in the removal of the existing culvert and the design and construction of the new stream channel.

The project area for this investigation is a 500-foot section of the lower Assunpink Creek in downtown Trenton where the creek is contained within a buried concrete box culvert known as the Broad Street Culvert. The investigation area is situated in an open grassy area adjacent to the State of New Jersey Department of Human Services (DHS) building and is bound by East Lafayette St. to the North, South Warren St. to the West, Assunpink Dr. to the South, and South Broad St. to the East. The City of Trenton is the owner of the site property.

Philadelphia USACE will require the services of an AE firm in order to provide support to this design project. The AE firm will perform the site investigation, which is detailed in this scope of work document.

2.0 SCOPE OF WORK

The work consists of preparing planning documents, and furnishing all plant, labor, materials, supplies, and accessories required to accomplish the investigations and associated laboratory testing, together with all other operations incidental to the work, in strict accordance with these specifications. The work may be performed on exposed soil, open grass, gravel or pavement covered areas, as well as in sediments. Draft and final deliverable products will be required in this task order.

The Contractor shall provide qualified personnel to complete the following major work items as part of the base task order:

- Provide site project plans including work plan (WP), site health and safety plan (HASP), and sampling and analysis plan (SAP)
- Perform utility clearance in work area
- Collect and analyze concrete core samples
- Produce draft and final project summary report

Details of the work to be performed under this Task Order can be found in Attachment A.

3.0 DELIVERABLES

The contractor will be required to submit a draft and final project summary report, to include all of the tasks in this task order. See Attachment A for detail on this requirement.

4.0 COORDINATION AND EXECUTION OF WORK

The USACE Project Manager and point of contact for this Task Order will be Mike Mohn (215-656-6887). The contractor shall keep in close contact with the project manager who will be available for coordination with the document approvals, sampling activities, and laboratory analysis.

5.0 PROJECT SCHEDULE

The Contractor shall adhere to the following schedule:

- Schedule site visit and scoping meeting within 5 calendar days of receipt of this SOW.
- Provide schedule of activities within 7 calendar days after notice to proceed (NTP)
- Provide draft WP, SAP, and HASP within 30 calendar days of NTP (allows 30 calendar days)
- USACE to review plans and provide comments within 37 calendar days of NTP (allows USACE 7 calendar days)
- Provide final approved WP, SAP and HASP within 44 calendar days of NTP (allows 7 calendar days)
- Complete field work within 66 calendar days of NTP (allows 21 calendar days)
- Provide draft project summary report within 136 calendar days of NTP (allows 70 calendar days)
- USACE to review draft summary report and provide comments within 143 calendar days of NTP (allows USACE 7 calendar days)
- Provide final approved project summary report within 150 calendar days of NTP (allows 7 calendar days)

6.0 PERIOD OF PERFORMANCE

The total period of performance for this task order shall be 250 calendar days from the notice to proceed. Note: for this task order, Notice to Proceed shall be defined as the date of the next work day following the date stamped on the contract document signed by the USACE contracting officer.
Use of this definition will allow sufficient time for the contractor to receive the signed contract document (normally sent via overnight delivery immediately after signing) and ensure that there is no misunderstanding of the notice to proceed dating. No field work will begin until all project plans are approved by USACE and the Assunpink Creek project Licensed Site Remediation Professional (LSRP) retained by the City of Trenton.

7.0 SITE VISIT

A visit to the site is required and is described in Attachment A.

8.0 COMPENSATION TO THE CONTRACTOR

In consideration of the performance of the work under this delivery order, the Contractor shall be paid $_____ for the work described herein (Base task order).

This shall constitute complete payment for all services required and expenses incurred in the performance of the work.

_____	_____
Guy Sheets	Michael F. Mohn
Contractor's Representative Date	ProjectManager Date

_____

Megan Rogers Coll, P.E.
A/E Negotiator Date

Attachment A
Scope of Work
Architect Engineer Services
Concrete Sampling and Testing
Assunpink Creek, Trenton, New Jersey
11/27/13

1.0 GENERAL INFORMATION:

The U.S. Army Corps of Engineers, Philadelphia District (USACE) is presently preparing for the removal of an existing culvert and stream restoration along a section of the Assunpink Creek located in Trenton, NJ. As part of the District's needs, additional investigation of the site area will be required in order to characterize concrete from the culvert. The results of this site investigation will be used by USACE in the removal of the existing culvert and the design and construction of the new stream channel. The A/E firm is required to perform all work in accordance with procedures and schedules approved by the Government.

2.0 DETAILED SCOPE:

2.1 Site Visit and Scoping Meeting

In order to gain an understanding of the Assunpink Creek site it is required that the contractor make plans for a site visit in order to see site features, topography, vehicle access, etc. Please coordinate with Mike Mohn (215-656-6887) to arrange a site visit. The site visit shall serve as a scoping meeting for the project. The site visit shall be scheduled within approximately 5 calendar days of the receipt of this SOW.

2.2 Preparation of Site Plans

2.2.1 Work Plan

The contractor shall provide a work plan (WP), which shall include all work planning and on-site work that will be required to complete this task order. The WP will contain descriptions of the work to be performed on-site for each work item in this task order. The field work sequence in this task order will likely be:

- Perform utility clearance
- Excavate hole adjacent to outer wall of culvert
- Set up concrete coring equipment on exposed vertical culvert wall
- Collect cylindrical concrete core samples

- Backfill excavations

Vendor literature, specification sheets, and instructions/operating procedures for all tasks will be included in the WP for all supplies and equipment that is procured and used in this task order. A description of how the work will be performed will be included, including sequence of events and project schedule. The WP will also include a description of quality assurance monitoring during sampling and analysis, as well as any other quality assurance issues such as how corrective action will be taken if required. The WP will have descriptions of materials and equipment to be used.

The Contractor shall identify all field personnel by name who shall be present during all site work performed by either the Contractor or any subcontractor personnel. Any substitutions for this individual must be approved by USACE in writing. A field supervisor shall also be identified by name. This individual's responsibilities will include acting as supervisor for Contractor and subcontractor personnel, coordinating all field activities needed to perform the task order, acting as H&S specialist in the absence of any other designated H&S personnel, and acting as a contact for USACE. Key Contractor personnel, including key field supervisory personnel, will also be listed along with their responsibilities, as well as any subcontractors and subcontractor key supervisory field personnel and representatives. The WP will also include methods of performing, documenting, and ensuring quality control operations of the contractor and all subcontractors. The final WP will be approved by USACE prior to any field activities.

2.2.2 Site Health and Safety Plan

The contractor shall provide a site-specific health and safety plan (HASP). The HASP will be prepared in accordance with USACE publication EM 385-1-1 to cover all on-site work under this task order. The HASP will include emergency contact information, hospital directions, and health and safety requirements based on site-specific conditions. The final HASP will be approved by USACE prior to any field activities.

The HASP shall also identify onsite personnel who shall ensure that all contractor and subcontractor personnel perform all work in accordance with the site HASP. A minimum of one person with this responsibility shall be onsite at all times that field work is ongoing, by either the contractor or any subcontractors.

The Contractor shall assume that level D protection, with basic work clothes, steel toe boots, hard hat, and gloves shall be utilized while drilling and sampling activities are occurring.

Note: Previous engineering inspections performed by others have shown that the roof deck of the culvert is a safety hazard and could collapse at any time. For this reason, no personnel or equipment shall be permitted to go on top of any portion of the culvert, including the patio area paved with bricks.

2.2.3 Sampling and Analysis Plan

The contractor shall produce a Sampling and Analysis Plan (SAP), which shall describe all sampling and testing requirements for environmental and structural samples. This document shall be reviewed and approved prior to initiating any field work by the Assunpink Creek project Licensed Site Remediation Professional (LSRP) retained by the City of Trenton. The contractor shall perform all sampling and testing in accordance with this SAP.

The SAP shall comply with and be prepared in accordance with EM 200-1-3, (USACE, February 2001) and the NJDEP Field Sampling Procedures Manual (2005). The SAP will include a Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP).

The SAP shall cover the following items:

- Project objectives and rationale
- Sampling procedures to be used
- Equipment to be used during sampling
- Equipment decontamination procedure
- Samples to be collected (primary and quality control)
- Summary tables of primary and quality control samples and analyses to be performed
- Analyses to be performed and methods used
- Analytical laboratory selected
- List of reporting limits and method detection limits for analytical parameters
- Applicable regulatory criteria to be used to compare soil data against
- Data usability and validation requirements
- Data deliverable format and type of deliverables from laboratory and contractor
- Waste disposal
- Individual well locations to be sampled
- Laboratory certifications
- Organization chart and project personnel responsibilities and duties

2.2.4 Submission of WP, HASP, and SAP

The contractor shall submit 3 bound copies and one complete PDF (with tables, graphs, and attachments, if applicable) of the draft WP, SAP, and HASP to USACE for review within 30 calendar days of the issuance of the notice to proceed. USACE and the project LSRP will review the documents and provide comments to the Contractor within 7 days of receipt of the documents. The final versions of the documents shall be submitted

within 7 days of receipt of comments from USACE. The contractor shall submit the final WP, SAP, and HASP to USACE, with all review comments addressed.

For each of these final documents, 3 bound copies, one unbound copy, a CD ROM pdf of the complete document (including tables, graphs, appendices and attachments), and all electronic files (Word/Excel files, tables, graphs, ACAD figures, etc) will be submitted to USACE.

2.3 Prior to Intrusive Work

2.3.1 Vegetation Clearing

The contractor shall use a brush hog, lawn mower, or other equipment to clear vegetation from the study areas in order to allow utility clearance markouts and geophysical survey work to be complete. The area above the culvert shall not be cleared.

2.3.2 Utility Markout/Geophysical Survey

The contractor shall contact New Jersey One Call at 1-800-272-1000 in order to arrange utility markouts at the site prior to any intrusive work.

The Contractor shall also obtain the services of a subcontractor to identify and mark all subsurface features and utilities within the study area. The Contractor shall perform a surface geophysical survey at each sampling location to detect active or abandoned subsurface metal, plastic, and ceramic pipes/utilities and other subsurface features. The study area will consist of six selected sampling locations, adjacent to the culvert outer walls where soil is to be excavated in order to collect concrete testing samples. Each study area should be adjacent to the culvert outer wall and will be approximately 30 ft x 30 ft to allow minor field adjustments in digging/sampling location.

2.3.3 Permits, Certifications, Licenses, and Site Access

The contractor shall comply with all Federal, State and local laws, regulations and ordinances relating to the performance of this work. The contractor shall determine what, if any, permits are required to perform this work. The contractor shall procure all required permits, certifications and licenses required by Federal, State, and local law for the execution of this work. All excavation and sampling and related work shall be in accordance with City of Trenton requirements.

Access to the site and excavation locations will be obtained by the Government. There is currently a chain link fence with locked gates surrounding the entire site. However, portions of the site are open and accessible to members of the public, thus site security cannot be guaranteed by USACE. Contractor personnel are responsible for security of their machines, equipment, supplies, etc.

2.4 Concrete Core Sampling and Testing

In this task order the contractor shall plan and execute concrete core sampling for environmental and structural evaluation. The site specific Work Plan (WP) and Sampling and Analysis Plan (SAP) developed by the contractor shall contain a description and procedures for this work. All sampling and testing shall be completed in accordance with the requirements of the WP and SAP.

Concrete samples shall be collected by the contractor for both chemical (environmental) characterization and physical (structural) testing.

Concrete core sampling shall be performed only on the two outer vertical walls of the culvert. The roof, floor, and inner vertical walls shall not be sampled at this time.

The top of the concrete culvert walls are currently at a depth of approximately 2 to 5 feet below ground surface, depending on specific location. The culvert walls are approximately 9 feet high and approximately 8 to 12 inches thick. Soil adjacent to the culvert wall will need to be removed in order to expose the vertical wall. The resulting excavation may require safety shoring, depending on its depth, in order to allow safe access by personnel.

The contractor shall use a backhoe or other means to excavate a hole or pit adjacent to the outer wall of the culvert. This will expose the outer surface of the culvert wall and allow core sampling of the wall to be performed. During excavation, the contractor shall use a photoionization detector (PID) to monitor the work area and to try to determine whether hydrocarbons or other organic materials are present at any of the sampling locations.

If required, the contractor shall shore up the excavation to permit sampling personnel to safely enter the excavation for sample collection activities. It should be noted that during previous test pitting operations at this site, sidewalls in several test pits often collapsed due to the presence of imported (historic) fill consisting primarily of silty sands and gravels with USCS classification SM and GM respectively. Typical depth to groundwater in test pits ranged from approximately 7 feet bgs (towards the eastern site boundary) to approximately 14 feet bgs (towards the western site boundary).

Core sampling equipment shall be attached to the vertical culvert wall securely so that it is immobile during sampling and does not require being held manually. No free standing or manually held electric drill type sampling equipment shall be used to collect samples.

It should be noted that, due to the relatively small size of the project site and its urban setting, there will be several constraints when working at the site, including:

- Presence of utilities or other subsurface features
- Presence of security fences, street guard railings, and other above ground features

- Relatively limited flat area
- Requirement that no personnel, heavy equipment, vehicles or machinery shall be allowed to go onto the culvert top or cross the culvert

However, USACE does not expect that these issues will negatively impact the scope of work of this task order.

The USACE Point of Contact should be notified at least 5 days prior to the commencement of the well installation operations. The well installation schedule will need to be approved by USACE to avoid schedule conflicts with several other USACE projects that are active at this time of year.

2.4.1 Structural Samples

Referenced Materials: The contractor shall obtain and test all concrete cores for compressive strength testing according to ASTM C42/C42M-13 and ASTM C39/C39-12a.

Core Drill: The contractor shall use equipment designed for use in core drilling operations. It shall be designed to drill perpendicular to the vertical surface of the culvert wall. The cores shall have a minimum diameter of 4 in. and the contractor shall use a diamond bit with the required diameter to accommodate this.

Location of Cores: The cores shall be obtained in conjunction with the environmental concrete testing on the culvert walls. If possible the contractor should use the same core samples for strength testing as well as the environmental testing, otherwise separate cores for the compressive strength testing shall be taken from the same excavated sections of the culvert as the environmental samples. The contractor shall take a total of six (6) core samples from the walls of the culvert for compressive strength testing. The samples shall be taken at a minimum of 2 ft. from the top of the wall and the samples shall be spaced at a minimum of 50 ft apart along the length of the culvert. At least two samples shall be obtained from each of the outer walls of the culvert. No samples shall be taken from the center wall of the culvert due to the restriction of personnel, equipment, vehicles, or machinery from being on top of the culvert.

Drilled Cores: The contractor shall obtain cores with a length to diameter ratio as close to 2.0 as possible. Alternatively the contractor may drill the cores to the complete wall thickness and then saw cut the cores to meet the 2.0 aspect ratio. The contractor shall use a rebar meter during coring operations to avoid drilling through steel reinforcement in the culvert wall. If steel reinforcement is included in the core sample, the location and size of the steel in the sample should be included in the final report. After drilling wipe off surface drill water and allow remaining surface moisture to evaporate. When surfaces appear dry the contractor shall label each core with a number and location it was obtained from and seal the cores in separate plastic bags to be transported to the lab for testing.

Compressive Strength Testing: The ends of the specimens to be tested shall be essentially smooth, perpendicular to the longitudinal axis, and of the same diameter as the body of the specimen. If necessary the ends of the specimen may be cut or ground to provide for a smooth surface. Any soil-cement or other matter adhering to the ends of the core shall be removed by appropriate means before length determination and capping for compressive tests. Prior to testing the length of the capped specimen shall be determined to the nearest 0.1 in. Calculations of the compressive strength of each specimen should be done using the measured diameter. If the ratio of the length to diameter is appreciably less than two, make allowance by multiplying the compressive strength by the applicable factor as follows:

Ratio of Length to Diameter (L / d)	Strength Correction Factor
2.00	1.00
1.75	0.98
1.50	0.96
1.25	0.93
1.00	0.87

Report: The report shall include the following information:

- Project
- Core Number
- Core Location
- Total Load
- Compressive Strength (corrected for length)
- Location and Size of Steel Reinforcement (if included in sample)
- Date Drilled
- Date Tested

2.4.2 Environmental Samples

The contractor shall collect concrete core samples from the vertical culvert walls for chemical analysis. Environmental sampling and testing procedures shall be performed in accordance with the New Jersey Department of Environmental Protection (NJDEP) Solid and Hazardous Waste Management Program Guidance for Characterization of Concrete and Clean Material Certification for Recycling.

The dimensions of the concrete box culvert are:

- Total length = 510 ft
- Wall height = 9 ft

- Wall thickness = 8 inches

Based on these dimensions the total volume of each vertical outer culvert wall is approximately 115 cubic yards (CY). The total volume of concrete in the materials to be sampled at this time equals approximately 2 x 115 CY = 230 CY. NJDEP guidance indicates that for volumes less than 400 CY, one grab sample per 100 CY of concrete shall be obtained (i.e., 3 samples in this instance). However, in this task order the contractor shall collect 4 concrete grab samples for chemical characterization.

Environmental sampling and testing procedures shall be performed in accordance with the New Jersey Department of Environmental Protection (NJDEP) Solid and Hazardous Waste Management Program Guidance for Characterization of Concrete and Clean Material Certification for Recycling.

The contractor shall collect 2 grab concrete samples from each side of the concrete culvert. The contractor shall select 2 of the 3 concrete sampling locations that will be sampled on each side of the culvert for the structural samples. These selections shall be based on the results of PID monitoring during excavation work at each location, as well as any visual observations of staining, oil sheens, etc. which may be present.

Note: concrete sampling of other portions of the culvert (i.e., roof, inner wall, and base) will be completed at another time following demolition of the culvert.

2.4.2.1 Sample Analysis

The four concrete samples collected from the vertical outer culvert walls will be analyzed for the following:

- TCL VOC – SW 846 8260B
- TCL SVOC – SW 846 8270C
- TCL Pesticides – SW 846 8081B
- TCL Herbicides – SW 846 8151A
- TCL Polychlorinated biphenyls – SW 846 8082A
- TAL Metals (including Hg) and Cyanide – SW 846 6010B
- Extractable Petroleum Hydrocarbons – NJDEP Method
- TCLP Metals – SW 846 6010B
- TCLP Pesticides – SW 846 8081B
- TCLP Herbicides SW 846 8151A

The contractor shall submit the samples to an analytical laboratory (see Section 2.3.7) that is certified by NJDEP and NELAC, and complies with the DOD Quality System Manual. The analytical samples will have a standard turnaround time.

2.4.3 Analytical Requirements

2.4.3.1 Sample Preservation, Shipping and Holding Times

Sample preservation and holding times shall be in accordance with their applicable method. It is required that samples be shipped the same day of sample collection via overnight carrier to the contracted laboratory. Each day that samples are received at the laboratory, a copy of the sample receipt form and chain of custody form shall be electronically sent or faxed to the USACE project manager and/or project chemist.

2.4.3.2 Laboratory Parameters of Interest, Data Quality Objectives, Quality Assurance and Quality Control (QA/QC), and Corresponding Methodologies

The parameter list shall be standardized for all wells included in the sampling event.

Data quality objectives will be met by ensuring that the proper blanks are collected for analysis along with the groundwater samples. Ten percent field quality control samples (blind field duplicates) are required during the sampling effort for all analytes.

Note: Information regarding the identities of the blind duplicates must be included in field notebooks where it can be retrieved and included in the summary report.

Rinsate blanks shall be collected at a rate of ten percent each day that sampling equipment decontamination is performed, and analyzed for all analytes. One trip blank for VOC analysis must be shipped each day that aqueous VOC samples are collected. A trip blank shall accompany all coolers containing aqueous VOC samples. It is recommended that all VOC samples collected each day be shipped in one cooler to minimize the number of trip blanks.

MS/MSD samples will be collected at a rate of five percent (one in twenty) for all analytes.

Laboratory QA/QC shall include at a minimum: documentation of ongoing instrument calibration, method blanks (one with every batch of 1-20 samples), control spikes, duplicate matrix spikes and percent recoveries for internal quantitation standards and surrogate standards.

2.4.3.3 Contract Laboratory

The contracted laboratory shall perform the required analyses. The analytical laboratory shall provide the following and meet the following criteria:

- The laboratory shall be certified by NELAC, comply with the Department of Defense (DOD) Quality Systems Manual (QSM) and be approved by the USACE Philadelphia District for the parameters to be analyzed;
- Laboratory shall participate in ISO Guide 25 requirements;
- The laboratory shall be certified by the State of New Jersey for the parameters to be analyzed;
- The laboratory shall be capable of producing an electronic data deliverable (EDD).
- Laboratory shall be required to produce a legally defensible data reporting package, suitable for external data validation by a third party, copied onto a CD-ROM. The package should include all text, tables and chromatograms and raw data, as they were prepared in their respective original format (pdf). The Contractor must retain all analytical data for a period of 5 years or ensure that the laboratory retains all analytical data for 5 years after the date of analysis. This is required in the event that external third party data validation is performed.
- The laboratory shall be capable of performing 90% of the analyses "in-house". A subcontract laboratory must be approved by USACE prior to initiation of any work and also be capable of meeting the requirements set forth in this SOW;
- The laboratory must provide reporting limits for all parameters listed in this scope. These reporting limits must be approved by USACE prior to initiation of work.
- The laboratory must be capable of providing same-day courier pick up service to and from the site or the contractor's facility.
- The laboratory must have web-based capability that will allow the user to track the status of samples, data results, billing invoices, and be able to post data on the laboratory secure internet website.

2.4.3.4 Laboratory Reporting Requirements

The reporting package will consist of a legally defensible CLP-type (Tier 1) data package which is fully data validatable by an external third party. Data shall be maintained in a format that can be imported to an Access database to permit rapid selection and mathematical manipulation of data. Hard copy data reporting packages shall include at a minimum, the following information: sample delivery group, sample identifier (field and laboratory), test method, dilution factor, client sample ID, lab sample ID, sample depth, date sampled, data received, data analyzed, CAS number, parameter, results, qualifier, units, matrix, level (low/high), detection/reporting limit, method, qualifier explanation, and moisture content.

Additionally, the package will have definitive data, produced using rigorous analytical methods, such as EPA reference methods. The definitive data package shall include a cover sheet; table of contents; case narrative; analytical results; sample documentation

information; and internal laboratory QA/QC information. The data package shall have sequentially numbered pages.

Additional information is provided below:

(1) Cover Sheet. The cover sheet shall specify the following information:
- Name, location and certification numbers of laboratory
- Name, location and certification numbers of any subcontractor laboratory used
- Contract number
- Client name and address
- Project name and site location
- Statement of data authenticity and official signature of person authorizing report release

- Amendments to previous reports will identify the serial number for the previous report and state the reason(s) for re-issuance of the report.

(2) Table of Contents. Laboratory data packages shall be organized in a format that allows for easy identification and retrieval of information. An index and/or table of contents shall be included for this purpose.

(3) Case Narrative. A case narrative shall be included in each report, outlining any problems with analysis. The case narrative shall also list all methods used. The case narrative shall contain a table correlating field sample numbers and laboratory sample numbers, and indicate which analytical test methods were performed and by which laboratories. Samples that were received but not analyzed shall also be identified. Extractions or analyses that are performed out of holding times shall be appropriately noted. The case narrative shall define all data qualifiers or flags. Deviations of QC sample results from laboratory acceptance limits shall be noted and associated corrective actions taken by the laboratory shall be addressed. Any other factors that could affect the sample results are to be discussed.

(4) Analytical Results. The results for each sample shall contain the following information at a minimum:

- Project name and unique ID number
- Field sample ID number as written on custody form
- Laboratory name and location (city and state)
- Laboratory sample ID number
- Preparation and analysis batch numbers
- Date sample collected
- Date sample received
- Date sample extracted or prepared
- Date sample analyzed
- Analysis time when holding time limit is less than forty-eight hours

- Method numbers for all preparation and cleanup procedures
- Analysis procedure including method numbers
- Analyte or parameter
- Detection limits (DL) - Estimated sample detection limits based on method detection limits adjusted for sample-specific factors (e.g., aliquot size, dilution or concentration factors, moisture content of a soil or sediment)
- Quantitation Limits (QL)
- Analytical results with correct number of significant figures (Results for solid matrices should be reported on a dry weight basis)
- Concentration units
- Dilution factor: All reported data shall reflect any dilutions and/or concentrations. The dilution factor, if applicable, should be noted on the analytical report. If dilution is required for organic analytes, data from both runs should be recorded and reported.
- Matrix (soil, water, oil, etc.)
- Percent moisture or percent solids
- Chromatograms and other raw data
- Sample aliquot analyzed
- Final extract volume
- Sample preservation

(5) Lower Limit Reporting. The laboratory may use a reporting limit (RL) expressed in terms of detection limit, quantitation limit, regulatory action level, or project-specific threshold limit, however the laboratory's use of these terms must be well defined. In addition, if the non-detect "ND", "U","<", or other lower limit reporting convention is used, then these terms must also be defined.

(6) Sample Documentation. Original Chain of Custody (COC) records, shipping documents, and Sample Cooler Receipt Forms shall be attached to each data package.

(7) QC/QA Information. The minimum data package must include internal laboratory QC/QA data with their respective acceptance criteria. The data package shall also include the laboratory's method detection limits for project-specific parameters. The data package shall correlate the method QC data with the corresponding environmental samples on a per batch basis. Method QC data include all spike recoveries, including surrogate spike recoveries; all measures of precision, including relative percent difference (RPD); and all control limits for accuracy and precision. This would include laboratory performance information such as results for method blanks (MBs), recoveries for Laboratory Control Standard (LCS) and Laboratory Control Standard Duplicate (LCSD), RPD for LCS/LCSD pairs, and recoveries for QC sample surrogates; and matrix-specific information such as sample duplicate RPDs, MS and MSD recoveries, MS/MSD RPDs, and field sample surrogate recoveries, serial dilutions, and post-digestion spikes. At a minimum, internal QC samples shall be analyzed and reported at rates specified in the specific methods or as specified in the contract, whichever is greater. Any deviations from the control limits shall be noted. For example, the data package should document

the matrix spike (MS) and duplicate spike level, the MS and duplicate spike sample result, the percent recovery of the MS and duplicate, the respective RPD, and the acceptance criteria for spike recovery and RPD. The data reporting package will contain sufficient information to allow complete reconstruction of the analyses that were performed.

2.4.3.5 Laboratory Electronic Data Deliverables and Contractor Data Review requirements

USACE will require the following electronic and hard copy products from the analytical laboratory:

- CD-ROM containing Adobe Portable Document Format (pdf file) of the complete data validatable reporting package including all raw data.
- Electronic Data Deliverable (EDD)

3.0 DELIVERABLES

The Contractor shall prepare a project summary report detailing all of the field operations and work completed as part of this task order. This project summary report will include all tasks within this task order. The laboratory analytical data and other field data shall be included in an appendix.

The report will be prepared in Microsoft Word. Figures shall be prepared in AutoCAD and tables shall be prepared in Microsoft Excel. The date of the report and contract and task order numbers shall also be included on the cover of the report. All CD-ROM's shall be professionally labeled on both the container and disk with the aforementioned information. All PDF reports shall have hot linked table of contents, tables and figures.

Figures of the site shall be submitted using AutoCAD with digital aerial photographs from a commercial source to indicated well locations. Maps and figures should be a maximum of 11"x17". The figures for the draft report may be reproduced in black and white, however the final reports shall be in color.

The A/E Firm shall submit to USACE a draft report. Three bound copies, one unbound copy, and a full PDF version of the draft report will be submitted.

The final report, containing the addressed comments, shall be submitted to the USACE in both hard and digital copy. The final deliverable provided by the A/E firm to USACE must consist of the following:

- CD-ROM containing PDF file (i.e., electronic hard copy) of the entire report including all tables, figures, and appendices.

- Hard copy (5 bound, 1 unbound) of the entire report.
- CD-ROM containing electronic files (Word, Excel, etc) containing all files of text, tables, figures, and other materials used to generate the report.
- CD-ROM containing complete analytical laboratory report in pdf format.

Complete analytical laboratory reports shall be submitted in pdf format.

Prior to submission of the draft report, the contractor shall submit a draft project report outline to USACE. This outline shall be submitted electronically via email in a Word document. The report outline shall follow the format shown below.

The recommended content and format of the summary report deliverable prepared by the A/E firm should follow be structured as follows:

(1) TITLE PAGE - bearing the appropriate title, date, author, and contract number.
(2) EXECUTIVE SUMMARY - a brief description of the study's purpose, findings, and conclusions.
(3) TABLE OF CONTENTS - including a list of all figures and tables presented in the report.
(4) INTRODUCTION - stating the purpose of the study with background information on the project and area.
(5) METHODOLOGY – describes all field work and procedures related to the performance of each task in this scope of work; describes the sampling and analysis equipment and methodologies used in the field and laboratory.
(6) RESULTS - presents the collected data in tabular form (hard and electronic copy). The resulting aqueous data shall be summarized in a table containing detected compounds. A map illustrating the project area, locations of any surveyed site features, and sample locations by identification number shall be included. In addition, the Contractor shall include a table and map identifying sampling locations, geographic coordinates of any surveyed locations, and corresponding data collection results.
(7) CONCLUSIONS – includes major conclusions resulting from the project findings.
(8) A LIST OF REFERENCES - includes literature cited and agencies or individuals consulted. The bibliography must be in a format used by professional scientific journals.
(9) APPENDICES – will contain a copy of this scope of work, raw data sheets, record logs, field notes, analytical laboratory results, and other pertinent information. Analytical results must also be included (see laboratory deliverable requirements in Section 2.3.8).

4.0 LIST OF ATTACHMENTS:

The following will be supplied to the contractor separately:

- Site Figure

APPENDIX B

NJDEP GUIDANCE FOR CHARACTERIZATION OF CONCRETE AND CLEAN MATERIAL CERTIFICATION FOR RECYCLING (COMPACT DISC)

The New Jersey Department of Environmental Protection
Environmental Regulation Program

Guidance for Characterization of Concrete and Clean Material Certification for Recycling

(Updated February 18, 2009)

I. Overview:

The New Jersey Department of Environmental Protection (Department or NJDEP) is requiring the characterization, preferably by in situ predemolition sampling, or post-demolition sampling, through the laboratory analysis of concrete, post-demolition concrete-processing fines and brick and block (referred to herein as concrete) at all New Jersey demolition and construction sites that have the Department's Site Remediation and Waste Management Program's (SRWMP) oversight when the concrete is designated for: 1) recycling pursuant to N.J.A.C. 7:26A *et seq*.; or, 2) beneficial use pursuant to N.J.A.C. 7:26-1.7(g), rather than disposal as solid waste. This characterization requirement applies to demolished buildings, concrete roadways and related structures such as, but not limited to, sidewalks and curbing. The Department is taking this step to ensure that the concrete entering the State's concrete recycling system is clean and will not contaminate otherwise clean sites. The Department is also outlining in the, "Guidance for Characterization of Concrete and Clean Material Certification for Recycling" (Guidance), how site owners can self-certify building materials as clean prior to demolition without sampling and analysis. See Section VI for information on clean building certification compliance procedures.

The Sampling and Analysis Protocol outlined below is for certain contaminants that the Department recognizes may be found in concrete from contaminated sites (see section V for additional information). Only uncontaminated concrete will normally qualify for unrestricted recycling, while some minimally contaminated concrete or concrete fines may qualify for beneficial uses but only with Department approval.

For example, asphalt-contaminated concrete or concrete mixed with soils may meet beneficial use requirements for certain conditional uses at roadways. No sampling of the asphalt-contaminated concrete from a site is required under this guidance if the property owner chooses to dispose of all of the material as solid waste. Note that Department approval pursuant to N.J.A.C. 7:26-1.7(g)8 is required for the beneficial use of materials out of state, which may require sampling and analysis of the material to meet the receiving State's requirements.

II. Concrete Materials Characterization:

Through either in situ, which is the preferred approach, or post demolition sampling, the site owner is responsible for characterizing the concrete in the structures the owner is demolishing. In situ sampling and analysis is defined as sampling prior to demolition at targeted areas of the structure, which are known and suspected areas of contamination, in order to determine contamination levels. More detailed information concerning in situ sampling requirements is described in Section V below.

Alternatively, the owner may elect to conduct post-demolition sampling and analysis of the concrete from a structure or consolidation of concrete from roadway and related structures. The concrete material must be stockpiled on the property where it is generated if it is to be considered for either recycling or beneficial use. The material should be staged in Sampling Areas of segregated material based on any knowledge of contamination and sampled according to the Sampling and Analysis Protocol below in Section V. Otherwise the concrete must be managed as solid waste per the solid waste regulatory requirements at N.J.A.C. 7:26 *et seq*. All sampling must take place where the material is generated in accordance with the Department's Technical Requirements for Site Remediation at N.J.A.C. 7:26E, including the Field Sampling Procedures Manual.

III. Criteria for Materials Disposition:

The disposition of all concrete material from contaminated sites with the Department's SRWMP's oversight at contaminated sites shall be determined by characterization of the material using the results of sampling and analysis conducted according to this guidance. The analytical results shall be compared to the Department's most recent Soil Cleanup Criteria (SCC), which are publicly available at the following website: http://www.state.nj.us/dep/srp/regs/scc/index.html . Data averaging is not permitted in order to achieve compliance with the criteria.

For material that is intended to be used on the site of generation sampling and management of material must be conducted in compliance with the requirements of the Department's case manager.

Concrete materials containing contamination entirely below the Department's Residential Direct Contact Soil Cleanup Criteria (RDCSCC) shall be considered eligible for transfer: 1) to a Class B Recycling Center holding a General or Limited Approval for recycling, 2) for recycling per the recycling site approval exemption requirements at N.J.A.C. 7:26A-1.4(a)2, 7, or 20, or 3) for direct unrestricted use on or off site without specific Department approval but in compliance with all other requirements that may apply such as local use codes and ordinances. Compliance with any Federal, State, and local requirements is still required for all uses of concrete materials.

Materials containing any contaminant above the Department's RDCSCC are considered solid wastes and must be managed in accordance with all statutory and Department regulatory requirements including, but not limited to, the full requirements for solid waste pursuant to the Solid Waste Regulations at N.J.A.C. 7:26 *et seq*. including classification as hazardous waste as necessary, or at specific Class B recycling centers authorized to accept the material, or beneficial use in accordance with Department requirements. Department guidance for conducting Beneficial Use Projects and a project application form are available at http://www.state.nj.us/dep/dshw/rrtp/bud.htm . Materials exceeding the Department's RDCSCC do not qualify for the following: 1) recycling at the State's Class B, or other, Recycling Centers holding a General Approval or at Class B Limited Recycling Centers approved in accordance with the requirements at N.J.A.C. 7:26A-3.7 unless the facilities are specifically authorized to accept the material; 2) recycling at sites operating per the recycling approval exemption requirements at N.J.A.C. 7:26A-1.4(a)2, 7, or 20;

and, 3) for direct reuse or recycling on or off of the site of generation without Department approval.

IV. Separation of Distinct Demolition Areas and Materials:

The sampling and analysis protocol specified in Section V is based on defining distinct areas of the structure for initial in situ sampling or demolition based on known and suspected areas of contamination within or on a structure, roadway or pad or any other "area of concern". Demolition shall be planned to prevent the mixing of contaminated with uncontaminated areas in the form of a demolition workplan. The site owner is obligated to develop and implement a plan to segregate contaminated materials from uncontaminated materials. Demolition practices should separate out materials that may be contaminated prior to and/or concurrent with demolition, for proper manifesting and/or disposal as solid waste.

V. Sampling and Analysis:

1. **What Demolition Materials to Sample:** Source Separated Concrete, Block, Brick and Concrete Fines (processed concrete fines or concrete mixed with soil, sand, stone, etc.) at all New Jersey demolition and construction sites that have the Department's SRWMP's oversight at a contaminated site.

2. **How to Sample**:
   a. **Biased Sampling**: All sampling, including in situ sampling, shall be biased toward visible staining or other indication of potential contamination: such as the source of the material, coloration or odor.

   b. **Sampling Methods:** the Department is specifying approved sampling methods as either chip or core samples. Core samples shall be no deeper than 1 inch unless staining or discoloration indicates that contamination is below that depth. Sampling logs shall record the depth of core samples. This would further support the Self Certification Process discussed in section VI below. Confirmatory sampling is required of material intended for recycling if suspected contaminated sections of material are removed.

   c. **Sampling Areas**: Sampling areas shall be determined based on each distinct area of demolition such as separate properties, separate structures on the same property, known or suspected areas of contamination within a structure or roadway, or designated Areas of Concern (AOC). The Department case manager may be consulted as an option for advice, or a determination, of which structures to sample.

      Sampling Frequency: In situ sampling frequency is dependent on the number of areas of biased sampling and whether contamination is found at sampling locations. Material used for samples shall not exceed 1 (one) inch maximum in depth. If additional material is needed for a sample additional sample(s) should

be colocated at the sampling point. In situ samples shall always be discrete samples and not composited.

Each post-demolition Sampling Area, such as accumulated concrete material in individual staged stockpiles, shall be sampled at the following rate. Material used for individual samples shall not exceed 1 (one) inch maximum in size, and depth. If additional material is needed for a sample additional sample(s) should be colocated at the sampling point.

(Each composite sample must include 1 sample for each 20 yds^3.)

Quantity		Number of Composite Samples
Less than 400 yds^3	-	1/100 total yds^3
400 yds^3 – 2000 yds^3	-	1/200 total yds^3 + 2
Over 2000 yds^3	-	1/500 total yds^3 + 8

(Ex. 1: 310 total yds^3 project requires: (310/100) = 4 samples.)
(Ex. 2: 735 total yds^3 project requires: (735/200) + 2 = 6 samples.)
(Ex. 3: 1,750 total yds^3 project requires: (1750/200) + 2 = 11 samples.)
(Ex. 4: 5,000 total yds^3 project requires: (5000/500) + 8 = 18 samples.)
(Note: for any amount over a volume increment round up to the next highest number of samples as in ex. 1 and 2.)

3. What Contaminants to Analyze: (Analysis Profile)

All sampling and sample analyses shall be conducted in accordance with the criteria and methods specified in the Technical Requirements for Site Remediation at N.J.A.C. 7:26E *et seq.* The Department sanctions composite sampling for the purposes of post-demolition materials characterized for management per this guidance. In situ samples shall always be discrete samples and not composited.

For all sites:

a. **PCBs & PAHs**: **:**

Sample and analyze in all concrete and concrete fine materials. If the recycled concrete is going to be used as road base, the requirement to analyze for PAHs may be eliminated by the site case manager.

Based on site-specific factors, or as directed by the Department Case Manager:

b. **TCLP, TAL/TCL+30, TPH:**

If known or suspected at industrial, mining or other sites, or as directed by the Department's Case Manager for the site, analyze for VOCs, SVOCs, TCLP Pesticides, Herbicides; TAL/TCL+30, TPH, and as required on a case-specific basis RCRA TCLP including TCLP metals.

c. **Dioxins/Furans**:

If known or suspected at industrial, mining or other sites, or as directed by the Department's Case Manager for the site, use USEPA Method 1613B, 1ppt detection limit, 17-congener profile, or the latest Department-approved method. Consult the Department for a case-specific determination for use of materials containing elevated levels of dioxins/furans above a screening level of 50 parts per trillion (ppt) total 17-congener Toxicity Equivalents (TEQ) off site.

d. **Radionuclides as** Naturally Occurring Radioactive Material (NORM):
If suspected at industrial, mining or other sites, analyze by gamma spectroscopy for the natural series of radionuclides. The representative samples should be dried, sealed and counted after 21 days. The minimum detectable concentration requirement for Ra-226 and Th-232 daughter nuclides should be 0.5 picoCuries per gram (pCi/g) on dried material. Provide laboratory documentation of analysis and methodology. The laboratories must be certified by the Department's Office of Quality Assurance (OQA) for radionuclides in soil analysis DOE 4.5.2.3. Contact Mr. Vas Komanduri of OQA at (609)984-0855 for a current list of certified laboratories.

The following industries are recognized by the Department's Bureau of Environmental Radiation as having the potential to have technologically enhanced Naturally Occurring Radioactive Material (NORM) contamination potential: Paper and pulp facilities; Ceramics manufacturing; Paint and pigment manufacturing; Metal foundry facilities; Optical glass; Fertilizer plants; Aircraft manufacture; Munitions and armament manufacture; Scrap metal recycling; Zirconium manufacturing; Oil and gas production, refining, and storage; Electricity generation; Cement and concrete product manufacture; Radiopharmaceutical manufacturing; Geothermal energy production.

If material is from a radioactive materials licensee or former licensee, or is a radioactively contaminated site, contact the Bureau of Environmental Radiation of the Site Remediation case manager for guidance.

VI. <u>Clean Building Self Certification Compliance:</u>

This section discusses the procedures for the owner of a structure self certifying that the structure is clean. The Department will allow the owner of a site that is a demolition and construction site with the Department's SRWMP's oversight that is required to comply with this Guidance, to self certify the site, or a portion or portions of the site's structures, as clean either based on the results of in situ or post-demolition sampling and analysis prior to concrete material disposition per this guidance document or by reviewing the historical uses and construction features of the site. Note that each individual building or structure at the site from which concrete will be generated for recycling or use as outlined above must undergo either sampling and analysis per the guidance in sections I through V of the "Guidance for Characterization of Concrete and Clean Material Certification for Recycling," or one of the two self-certification procedures described in this section.

The person completing the certification must be a principal executive officer, general partner or proprietor of the company or a high level official of a government-owned site. The site owner has the option of providing a delegation of authority, which assigns responsibility for signing the Certification Statement from the officer or high ranking official to the local site manager, to the Department with the Certification Statement.

1. **Self Certification with Sampling/Analysis**:

The self Certification process with sampling specifies that all of the concrete and concrete materials contain contamination of PCBs and PAHs, and other contaminants based on site-specific factors or as directed by the Department's Case Manager, below the Department's Soil Cleanup Criteria. The site owner shall base the self Certification on analytical data from the testing of the concrete in accordance with this guidance and certify that the concrete was fully characterized and also managed according to the requirements of this guidance. The owner of the site is responsible for compliance with this guidance, maintaining all documentation related to the demolition and material characterization process including demolition and sampling plans, analytical testing documentation and material disposition after self Certification and filing self Certification documents with the Department.

The owner of the property where the concrete sampling was conducted shall complete the Certification in Addendum 2 of this Guidance, which the owner shall have notarized. The current owner and any future owner of the site shall retain the Certification with the characterization documentation on site for a minimum of five years. The owner of the property is responsible for submitting a copy of the executed Certification to the Department's SRWMP Case Manager for the site.

2. **Self Certification without Sampling/Analysis using the "Clean Building Checklist":**

   The self Certification process without sampling specifies that all of the concrete and concrete materials contain contamination of PCBs and PAHs, and other contaminants based on site specific factors or as directed by the Department's Case Manager, below the Department's Soil Cleanup Criteria based on an assessment of the historical uses of the site and building construction materials. The site owner shall base the self Certification on the results of the "Clean Building Checklist" in accordance with this guidance and certify that the concrete is clean based on the assessment of the building and also managed according to the requirements of this guidance. The owner of the site is responsible for compliance with this guidance, maintaining all documentation related to the demolition and assessment process including demolition and sampling plans, analytical testing documentation and material disposition after self Certification and filing self Certification documents with the Department.

   The owner of the property for which the, "Clean Building Checklist for Recycling" was used to assess the status of material contamination in the building shall complete the Certification in Addendum 2 of this Guidance, noting that the "Clean Building Checklist" was used to determine the building's concrete and related materials are clean. The owner shall have the Certification notarized and retain with the other related facility documentation. The owner of the property is responsible for submitting a copy of the executed Certification to the Department's SRWMP Case Manager for the site.

Note: this is the recommended Guidance at this time only for determining that concrete and related materials are suitable for recycling in the State's recycling system.

ADDENDUM 1

The New Jersey Department of Environmental Protection
Environmental Regulation Program

CLEAN BUILDING CHECKLIST for RECYCLING

Activity	Yes	No	* If "Yes", Include Detailed Comments
1. Was the building constructed or concrete poured in the year 2000 or later?			
2. Was the building constructed or the concrete poured between 1990 and 1999?			
3. The following questions apply to the current and historic use of the building (including prior owners and operators):			
a. Did the building contain liquid filled transformers?			
b. Did the building contain liquid filled PCB equipment?			
c. Did the building contain oil filled equipment?			
d. Did the building contain chemicals?			
e. Did the building contain heat transfer equipment?			
f. Was the building utilized for an industrial process where chemicals may have been manufactured or used?			
4. Does the building have doorways that are caulked?			
5. Does the building have windows that are caulked?			
6. Does the building have exterior panels with joints that are caulked?			
7. Does the building have floor concrete expansion joints that are caulked?			
8. Are there any sumps, floor drains or pits in a chemical room or process area (include current and historic operations)?			
9. Did the building have chemical waste collection areas (current and historic operations)?			
10. Did the building have storage areas for raw materials or finished products that contained liquids (include current and historic operations)?			

(March 2007)

Sampling and Analysis Summary: (Detailed direction for sampling and analysis of is described in the Guidance.)

- No sampling or analysis is required by the Guidance for any buildings or concrete poured 2000 or later
- Buildings constructed between 1990 and 1999; sampling is only required in areas with an affirmative response as required in the, "Clean Building Checklist for Recycling"
- Buildings containing caulking, expansion joints and constructed between 1990 and 1999, sampling for PCBs is required
- Nonbuilding structures (i.e., sidewalks, curbs, driveways, etc.) constructed between 1990 and 1999, analysis of PCBs & PAHs is required

* Include or attach appropriate documentation to support claims.

ADDENDUM 1 (cont.)

CLEAN BUILDING CHECKLIST for RECYCLING - INSTRUCTIONS

Clean Building Checklist Determination:
To certify that a nonindustrial-use building (i.e., cafeterias, offices hotels, etc.) or structure (i.e., sidewalks, etc.) are free of contamination (a.k.a., clean) because of the building's historical uses and operations, the owner of the facility should, at a minimum, conduct the following:

For nonindustrial-use buildings or structures constructed in the year 1990 or later, complete the Department's "Clean Building Checklist", a series of questions related to the historical use(s) of such structures and buildings, the age, etc. If, after completing the checklist, the owner determines that no evidence of industrial use has occurred, the building or structure is considered clean and no sampling will be required. If the building or structure can not be documented as clean, then targeted sampling is required using the protocol below. Follow the Certification process in the Guidance.

Building Self Certification Process Summary:
For nonindustrial-use buildings and structures constructed prior to 1990 or if the completion of the "Clean Building Checklist" revealed possible industrial uses, targeted sampling shall be performed of the caulking from windows, doorways, expansion joints in floors and external panels, spacers from other structures, transformers and electrical supply areas and other known or suspected contaminated building components;

Targeted sampling shall be completed as follows: the caulking from one outer doorway will be sampled for PCBs and PAHs. If it can be documented that all the doorways were installed at the same time and no physical alterations were made since installation, then the one sample shall be representative. Otherwise, samples will be taken from multiple outer doorways and composited into one sample. At a minimum, at least one 5-sample composite from different doorways shall be analyzed from each building's doorway caulking for PCBs. The same sampling protocol shall be followed for windows, expansion joints in floors and external panels, spacers from other structures, transformers and electrical supply areas or other known or suspected contaminated building components;

A copy of the results shall be retained for five years and shall be certified by the site operations manager or the ranking corporate officer at the site according to the procedure in the Department's "Guidance for Characterization of Concrete and Clean Material Certification for Recycling" available at:
http://www.state.nj.us/dep/dshw/resource/techman.htm#concrete .

Note: this is the recommended Guidance at this time only for determining that concrete and related materials are suitable for recycling in the State's recycling system.

ADDENDUM 2:
The New Jersey Department of Environmental Protection
Environmental Regulation Program

CERTIFICATION STATEMENT FOR CONCRETE DESIGNATED FOR RECYCLING

"I certify under penalty of law that I have personally examined and am familiar with the information related to this material characterization documentation concerning the self Certification of the site named herein and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, complete and meets the requirements of the latest, **"Guidance for Characterization of Concrete and Clean Material Certification for Recycling"** issued by the New Jersey Department of Environmental Protection that all of the concrete and concrete materials contain contamination of PCBs and PAHs, and other contaminants as directed by the Department's Case Manager, below the Department's current Soil Cleanup Criteria. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I understand that, in addition to criminal penalties, I may be liable for a civil administrative penalty pursuant to N.J.A.C. 7:26-5 and that submitting false information may be grounds for denial, revocation or termination of any solid waste facility permit, vehicle registration or other Department authorization for which I may be seeking approval or now hold."

Note below whether Sampling was conducted and/or the "Clean Building Checklist" was completed:

Sampling Conducted: _____ Complete "Clean Building Checklist: _____

NAME OF SITE

_____

ADDRESS

_____

CITY, STATE & ZIP CODE

_____

NAME OF CERTIFYING PERSON (must be a corporate officer) **TITLE**

_____

SIGNATURE OF CERTIFYING PERSON (must be a corporate officer) **DATE**

_____

TELEPHONE **FAX**

_____

INTERNET WEBSITE ADDRESS **EMAIL**

_____

IMPORTANT

Pursuant to N.J.S.A. 47:lA-1 et seq. the information provided in this form and its attachments shall be available to the public for review unless a specific claim of confidentiality is submitted pursuant to the procedures set forth in N.J.A.C. 7:26-17 et seq. and is approved by the Department. For assistance regarding confidentiality claims, please contact the Solid and Hazardous Waste Program at (609) 984-6985.

SIGNATURES. IN WITNESS WHEREOF, Owner has executed this Certification of Concrete Sampling as of the date first written above.

[If Owner is an individual]

WITNESS:

_____	_____
[Signature]	[Print name below signature]

[If Owner is a corporation]

ATTEST:	[Name of corporation]
_____	By_____
_____	_____
[Print name and title]	[Signature]

[If Owner is a general or limited partnership]

WITNESS:	[Name of partnership]
_____	
_____	By_____, General
[Signature]	[Print name] Partner

[If Owner is an individual]

STATE OF [State where document is executed] SS.:
COUNTY OF [County where document is executed]

I certify that on _____, 20__, [Name of Owner] personally came before me, and this person acknowledged under oath, to my satisfaction, that this person [or if more than one person, each person]

(a) is named in and personally signed this document; and

(b) signed, sealed and delivered this document as his or her act and deed.

_____

_____, Notary Public
[Print Name and Title]

[If Owner is a corporation]

STATE OF [State where document is executed] SS.:
COUNTY OF [County where document is executed]

I certify that on _____, 20__, [Name of person executing document on behalf of Owner] personally came before me, and this person acknowledged under oath, to my satisfaction, that:

(a) this person is the [secretary/assistant secretary] of [Owner], the corporation named in this document;

(b) this person is the attesting witness to the signing of this document by the proper corporate officer who is the [president/vice president] of the corporation;

(c) this document was signed and delivered by the corporation as its voluntary act and was duly authorized;

(d) this person knows the proper seal of the corporation which was affixed to this document; and

(e) this person signed this proof to attest to the truth of these facts.

_____
[Signature]

_____
[Print name and title of attesting witness]

Signed and sworn before me on _____, 20__

_____, Notary Public

_____
[Print name and title]

[If Owner is a partnership]

STATE OF [State where document is executed] SS.:
COUNTY OF [County where document is executed]

I certify that on _____, 20__, [Name of person executing document on behalf of Owner] personally came before me, and this person acknowledged under oath, to my satisfaction, that this person:

(a) is a general partner of [Owner], the partnership named in this document;

(b) signed, sealed and delivered this document as his or her act and deed in his capacity as a general partner of [owner]; and

(c) this document was signed and delivered by such partnership as its voluntary act, duly authorized.

_____
[Signature]

_____, General Partner
[Print Name]

_____, Notary Public

_____
[Print name and title]

APPENDIX C

SITE PHOTOGRAPHS

Photograph 1 – General view of Broad Street Culvert looking southwest.

Photograph 2 - View of ground penetrating radar used by ERT to clear underground utilities.

Photograph 3 - View excavations AC1 and AC2 showing located and marked underground utilities.

Photograph 4 - View of AC1 excavation. View is to the northeast

Photograph 5 – View of AC1 and AC2 excavations. View is to the northeast.

Photograph 6 – View of coring machine bolted to culvert wall at AC1.

Photograph 7 - View of AC2 excavation. View is to the west.

Photograph 8 – view of coring operations at AC2.

Photograph 9 – view of coring operations at AC3.

Photograph 10 – overhead view of coring operations at AC3.

Photograph 11 – view of AC4 excavation. View is to the southwest.

Photograph 12 – view of AC4 excavation at completion of coring.

Photograph 13 – view of AC4 core showing seams and potential deterioration.

Photograph 14 – view of interior end of AC4 core showing seams in concrete.

Photograph 15 – view of AC5 excavation. View is to the southwest

Photograph 16 – view of core machine bolted to culvert wall at AC5.

Photograph 17 – view of AC6 excavation. View is to the southwest.

Photograph 18 – view of AC1 excavation backfilled.

Photograph 19 – view of AC2 excavation backfilled.

Photograph 20 – view of AC5 and AC6 excavations backfilled completion.

APPENDIX D

STRUCTURAL TESTING LABORATORY REPORT (COMPACT DISC)

GeoStructures

Bashar S. Qubain, Ph.D., P.E.
Eric J. Seksinsky, P.G., P.E.
Jianchao Li, P.E.

GEOTECHNICAL ENGINEERING CONSULTANTS

Project No. G13-192
March 27, 2014

Mr. Guy Sheets
AMO Environmental Decisions
4327 Point Pleasant Pike
Danboro, PA 18916

Re: Concrete Laboratory Testing Results
Contract No. W912BU-13-D-0007, Task Order 3
Assunpink Creek Culvert, Trenton, NJ

Dear Guy:

Under the Subcontractor Services Agreement for the referenced Contract Task Order, GeoStructures, Inc. has prepared and tested six (6) drilled concrete core samples for compressive strength in accordance with ASTM standards C42 and C39. The cores were delivered to our lab by AMO on March 14, 2014. The results are attached and the appropriate correction factors were applied per Section 7.9.1 of ASTM C42.

We appreciate your request for services and look forward to assisting you again. Please feel free to call me if you have any questions.

Sincerely,

Eric J. Seksinsky, PG, PE
Associate

Attachments

Concrete Core Strength Test (ASTM C42, ASTM C39)

Sample	Depth (in)	Sample Weight (g)	Diameter (in)	Height (in.)	Unit weight (pcf)	Maximum Load (lb)	Corrected Compressive Strength (psi)
AC-1	N/A	2827.63	3.70	6.9	145.2	32,990	3,070

Photos of specimen:

GeoStructures

Assunpink Creek, Trenton, NJ

GeoStructures Project No.: G13-192

3/20/2014

Ph. 610.265.1818
Fx. 610.265.1833

GeoStructures, Inc.
1000 W 9th Ave., King of Prussia, PA 19406

www.geostructures.net

Concrete Core Strength Test (ASTM C42, ASTM C39)

Sample	Depth (in)	Sample Weight (g)	Diameter (in)	Height (in.)	Unit weight (pcf)	Maximum Load (lb)	Corrected Compressive Strength (psi)
AC-2	N/A	3069.15	3.69	7.5	145.5	34,183	3,200

Photos of specimen:

GeoStructures

Assunpink Creek, Trenton, NJ

GeoStructures Project No.: G13-192 | 3/20/2014

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Fx. 610.265.1833

GeoStructures, Inc.
1000 W 9th Ave., King of Prussia, PA 19406

www.geostructures.net

Concrete Core Strength Test (ASTM C42, ASTM C39)

Sample	Depth (in)	Sample Weight (g)	Diameter (in)	Height (in.)	Unit weight (pcf)	Maximum Load (lb)	Corrected Compressive Strength (psi)
AC-3	N/A	2434.60	3.63	6.6	137.1	37,670	3,650

Photos of specimen:

GeoStructures

Assunpink Creek, Trenton, NJ

GeoStructures Project No.: G13-192 | 3/20/2014

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GeoStructures, Inc.
1000 W 9th Ave., King of Prussia, PA 19406

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Concrete Core Strength Test (ASTM C42, ASTM C39)

Sample	Depth (in)	Sample Weight (g)	Diameter (in)	Height (in.)	Unit weight (pcf)*	Maximum Load (lb)	Corrected Compressive Strength (psi)
AC-4	N/A	2590.20	3.68	7.2	128.4	19,540	1,840

Remarks: Concrete core was taken at the boundary of several materials: two types of concrete of different nominal aggregate size and possible grout/patching infill. Primary failure of the specimen was along the material boundaries.

* Combined unit weight of the composite specimen.

Photos of specimen:

GeoStructures

Assunpink Creek, Trenton, NJ

GeoStructures Project No.: G13-192 | 3/21/2014

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Fx. 610.265.1833

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1000 W 9th Ave., King of Prussia, PA 19406

www.geostructures.net

Concrete Core Strength Test (ASTM C42, ASTM C39)

Sample	Depth (in)	Sample Weight (g)	Diameter (in)	Height (in.)	Unit weight (pcf)	Maximum Load (lb)	Corrected Compressive Strength (psi)
AC-5	N/A	2691.87	3.62	6.6	150.2	33,990	3,300

Photos of specimen:

GeoStructures

Assunpink Creek, Trenton, NJ

GeoStructures Project No.: G13-192

3/20/2014

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Fx. 610.265.1833

GeoStructures, Inc.
1000 W 9th Ave., King of Prussia, PA 19406

www.geostructures.net

Concrete Core Strength Test (ASTM C42, ASTM C39)

Sample	Depth (in)	Sample Weight (g)	Diameter (in)	Height (in.)	Unit weight (pcf)	Maximum Load (lb)	Corrected Compressive Strength (psi)
AC-6	N/A	2279.82	3.64	5.7	147.8	45,140	4,180

Photos of specimen:

GeoStructures

Assunpink Creek, Trenton, NJ

GeoStructures Project No.: G13-192 | 3/20/2014

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Fx. 610.265.1833

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GeoStructures

CHAIN OF CUSTODY & LABORATORY TESTING REQUISITION FORM

Boring No.	Sample No.	Type	Depth	Sample Description	Water Content	Sieve Analysis	Hydrometer Analysis	Atterberg Limits	Soil Classification (USCS)	Organic Content	Fraction Organic Carbon	Bulk Density, Total Porosity	Specific Gravity	Standard Proctor	Modified Proctor	CBR	Effective Porosity	Concrete Core Unconf. Compressive S	Concrete Core Unit Wt. + Photo	CU Triaxial	CU Triaxial (Pore P.)	Consolidation	Consolidation (CRS)	Soil pH ASTM G51	Chloride CALDOT 422	Solube Sulfate CALDOT 417	Resisitivity AASHTO T288	Total Sulfide EPA 376.1	Redox Potential EPA 2580B
done	AC-1	Core		4" Dia. Concrete Core														✓	✓										
done	AC-2	"		"														✓	✓										
done	AC-3	"		"														✓	✓										
	AC-4	"		"														✓	✓										
done	AC-5	"		"														✓	✓										
done	AC-6	"		"														✓	✓										

Project Name & Location: Assunpink Culvert, Trenton NJ

Client Project No: A57003

P.O. No:

Lab Project No: G13-192

Proposal No:

Client Name & Address:

Testing Requested By:

Phone: **Fax:** **Date:**

Remarks & Special Instructions:

Relinquished By: Steve Pagge **Date:** 3/14/14

Relinquished By: **Date:**

Received By: Ernest Sekowsky **Date:** 3/14/14

Received By: **Date:**

Sample Legend: J - jar B - bag R - Rock core ST - Shelby tube

APPENDIX E

CHEMICAL TESTING LABORATORY REPORT (COMPACT DISC)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-53170-1
Client Project/Site: Assunpink Creek Broad Street Culvert

For:
AMO Environmental Decisions, Inc.
4327 Point Pleasant Pike
PO BOX 410
Danboro, Pennsylvania 18916

Attn: Mr. Vince Piazza

M. Elaine Walker

Authorized for release by:
4/9/2014 4:02:50 PM

Elaine Walker, Project Manager II
(303)736-0156
elaine.walker@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

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

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Job ID: 280-53170-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE
Client: AMO Environmental Decisions, Inc.
Project: Assunpink Creek Broad Street Culvert
Report Number: 280-53170-1

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

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

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

RECEIPT

Five samples were received on 03/15/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.1ºC.

The samples requesting NJEPH analyses were subcontracted to TestAmerica Edison, NJ. Their results have been reported separately under job 280-53170-2 because TestAmerica Edison does not hold DoD ELAP Certification. This report contains results of the remaining analyses received with this delivery group.

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 03/20/2014 and analyzed on 03/28/2014.

The following samples were received with headspace in the sample containers: AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4).

No difficulties were encountered during the TCLP volatiles analysis.

All quality control parameters were within the acceptance limits.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - SOLID

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/19/2014.

Acetone was detected in method blank MB 280-217472/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged “J. If the associated sample reported a result above the MDL and/or RL, the result has been flagged “B”.

The 4-Bromofluorobenzene, Dibromofluoromethane, and Toluene-d8 surrogates failed the recovery criteria low for samples AC1 CONCRETE (280-53170-1), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4). These samples had very high pHs; approximately 13, and it is suspected to have interfered with the surrogate recoveries. The analytes associated to these surrogates have been flagged “Q”.

The 4-Bromofluorobenzene and Dibromofluoromethane surrogates failed the recovery criteria low for sample AC3 CONCRETE (280-53170-2). This sample had a very high pH; approximately 13, and it is suspected to have interfered with the surrogate recoveries. The analytes associated to these surrogates have been flagged “Q”.

Job ID: 280-53170-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

No other difficulties were encountered during the VOC analysis.

All other quality control parameters were within the acceptance limits.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - WATER

Sample TRIP BLANK (280-53170-5) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The sample was analyzed on 03/21/2014.

Acetone was detected in method blank MB 280-217893/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J. However, because the result concentration was less than ½ the reporting limit, no corrective action was necessary.

The 4-Bromofluorobenzene surrogate failed the recovery criteria high for sample TRIP BLANK (280-53170-5). This sample did not contain any target analytes; therefore, re-extraction and/or reanalysis were not performed. The analytes associated to this surrogate have been flagged "Q".

No other difficulties were encountered during the VOC analysis.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 03/19/2014 and analyzed on 03/21/2014.

The 2,4,6-Tribromophenol, 2-Fluorophenol, and Phenol-d5 surrogates failed the recovery criteria low for samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4). Evidence of matrix interference was present; therefore, re-extraction and/or reanalyses were not performed. The analytes associated to these surrogates have been flagged "Q".

No other difficulties were encountered during the SVOC analysis.

All other quality control parameters were within the acceptance limits.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 1311/8270D. The samples were leached on 03/20/2014, prepared on 03/24/2014 and analyzed on 03/26/2014.

Pyridine exceeded the RPD limit for the matrix spike duplicate (MSD) of sample AC1 CONCRETE (280-53170-1) in batch 280-218401. The matrix spike/matrix spike duplicate (MS/MSD) and associated laboratory control sample (LCS) recoveries met acceptance criteria, and the sample results have been flagged accordingly.

Pyridine exceeded the RPD limit for the matrix spike duplicate (MSD) of sample AC5 CONCRETE (280-53170-3) in batch 280-218401. The matrix spike/matrix spike duplicate (MS/MSD) and associated laboratory control sample (LCS) recoveries met acceptance criteria, and the sample results have been flagged accordingly.

No other difficulties were encountered during the TCLP semivolatiles analysis.

All other quality control parameters were within the acceptance limits.

TCLP PESTICIDES

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for TCLP pesticides in accordance with EPA SW-846 Method 8081B. The samples were leached on 03/20/2014, prepared on 03/24/2014 and analyzed on 03/27/2014.

Job ID: 280-53170-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

TestAmerica Denver's practice for the reporting of dual column data in packages requiring forms and/or raw data is to report the surrogates from both columns, and the preferred result for any given target analyte from the analyst selected column. The preferred results for target analytes and surrogates are reported as PRIMARY on the Sample Datasheets. Analytes 2,4-DB/dinoseb co-elute on one of the columns used for this analysis. As a result, there are no results reported for the %Difference in the concentration on the Form X.

The continuing calibration verification (CCV) for Methoxychlor associated with analytical batch 280-218601 recovered below the lower control limit on the back column. The samples associated with this CCV were non-detect for the affected analyte on both columns; therefore, the data have been reported from the front column, which was in control.

No other difficulties were encountered during the TCLP pesticides analysis.

All other quality control parameters were within the acceptance limits.

CHLORINATED PESTICIDES

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081B. The samples were prepared on 03/21/2014 and analyzed on 03/28/2014.

TestAmerica Denver's practice for the reporting of dual column data in packages requiring forms and/or raw data is to report the surrogates from both columns, and the preferred result for any given target analyte from the analyst selected column. The preferred results for target analytes and surrogates are reported as PRIMARY on the Sample Datasheets. Analytes 2,4-DB/dinoseb co-elute on one of the columns used for this analysis. As a result, there are no results reported for the %Difference in the concentration on the Form X.

No difficulties were encountered during the pesticides analysis.

All quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 03/21/2014 and analyzed on 03/26/2014.

TestAmerica Denver's practice for the reporting of dual column data in packages requiring forms and/or raw data is to report the surrogates from both columns, and the preferred result for any given target analyte from the analyst selected column. The preferred results for target analytes and surrogates are reported as PRIMARY on the Sample Datasheets. Analytes 2,4-DB/dinoseb co-elute on one of the columns used for this analysis. As a result, there are no results reported for the %Difference in the concentration on the Form X.

The following samples underwent a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4).

No difficulties were encountered during the PCBs analysis.

All quality control parameters were within the acceptance limits.

CHLORINATED HERBICIDES

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for chlorinated herbicides in accordance with EPA SW-846 Method 8151A. The samples were prepared on 03/20/2014 and 03/24/2014 and analyzed on 03/24/2014 and 03/26/2014.

TestAmerica Denver's practice for the reporting of dual column data in packages requiring forms and/or raw data is to report the surrogates from both columns, and the preferred result for any given target analyte from the analyst selected column. The preferred results for target analytes and surrogates are reported as PRIMARY on the Sample Datasheets. Analytes 2,4-DB/dinoseb co-elute on one of the columns used for this analysis. As a result, there are no results reported for the %Difference in the concentration on the Form X.

Job ID: 280-53170-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

Dicamba failed the recovery criteria high for LCS 280-218046/2-A. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported and flagged “Q”.

The closing continuing calibration verification (CCV) associated with batch 280-218018 recovered above the upper control limit for 2,4,5-T at +17%. The samples associated with this CCV were non-detect for the affected analytes, and the LCS was well within control limits; therefore, the data have been reported.

No other difficulties were encountered during the herbicides analysis.

All other quality control parameters were within the acceptance limits.

TCLP CHLORINATED HERBICIDES

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/ 8151A. The samples were leached on 03/20/2014, prepared on 03/25/2014 and analyzed on 03/26/2014.

TestAmerica Denver’s practice for the reporting of dual column data in packages requiring forms and/or raw data is to report the surrogates from both columns, and the preferred result for any given target analyte from the analyst selected column. The preferred results for target analytes and surrogates are reported as PRIMARY on the Sample Datasheets. Analytes 2,4-DB/dinoseb co-elute on one of the columns used for this analysis. As a result, there are no results reported for the %Difference in the concentration on the Form X.

No difficulties were encountered during the TCLP herbicides analysis.

All quality control parameters were within the acceptance limits.

TCLP METALS

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for TCLP Metals in accordance with EPA SW-846 Method 1311/6010C. The samples were leached on 03/20/2014, and prepared and analyzed on 03/24/2014.

Barium, Cadmium, and Chromium were detected in method blank LB 280-217689/1-B at levels that were above the method detection limits but below the reporting limits. The values should be considered estimates, and have been flagged “J”. ”. However, because the result concentrations were less than ½ the respective reporting limits, no corrective action was necessary.

Barium and Selenium were detected in method blank LB2 280-217690/1-B at levels that were above the method detection limits but below the reporting limits. The values should be considered estimates, and have been flagged “J”. However, because the result concentrations were less than ½ the respective reporting limits, no corrective action was necessary.

No other difficulties were encountered during the TCLP metals analysis.

All other quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 03/19/2014 and analyzed on 03/20/2014.

Zinc was detected in method blank MB 280-217344/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged “J”. However, because the result concentration was less than ½ the reporting limit, no corrective action was necessary.

Antimony, Barium, Calcium, and Manganese failed the recovery criteria low for the matrix spike (MS) and matrix spike duplicate (MSD) of sample AC6 CONCRETE (280-53170-4) in batch 280-217614. Aluminum and Iron failed the recovery criteria high for the MS, and Aluminum, Copper, and Iron failed the recovery criteria high for the MSD. The presence of the '4' qualifier in the data indicates where the analyte concentration in the unspiked sample exceeded four times the spiking amount. The associated laboratory control sample (LCS)

Job ID: 280-53170-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

recoveries met acceptance criteria, and the sample results have been flagged accordingly.

The analysis of the ICSA solution, which is used as the interference check standard, shows results for Cadmium and Chromium at levels greater than the respective LOD for analytical batch 280-217614. We believe that the solution contains trace impurities of these elements and that the results are not due to matrix interference. These results are consistent with those found by the manufacturer of the ICSA solution. The associated sample results have been flagged “Q” for these elements.

No other difficulties were encountered during the metals analysis.

All other quality control parameters were within the acceptance limits.

TCLP MERCURY
Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 03/20/2014, prepared on 03/25/2014 and analyzed on 03/26/2014.

No difficulties were encountered during the TCLP mercury analysis.

All quality control parameters were within the acceptance limits.

TOTAL MERCURY (CVAA)
Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 03/19/2014.

A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: The laboratory control sample (LCS), matrix spike (MS), and matrix spike duplicate (MSD) samples were spiked after the samples had been acidified.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

IGNITABILITY
Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3)j and AC6 CONCRETE (280-53170-4) were analyzed for Ignitability in accordance with EPA SW-846 Method 7.1.2. The samples were analyzed on 03/18/2014.

No difficulties were encountered during the ignitability analysis.

All quality control parameters were within the acceptance limits.

TOTAL CYANIDE
Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012B. The samples were prepared and analyzed on 03/21/2014.

No difficulties were encountered during the cyanide analysis.

All quality control parameters were within the acceptance limits.

TOTAL SULFIDE
Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for total sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 03/20/2014.

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE

Job ID: 280-53170-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

(280-53170-4) were analyzed outside the recommended hold time of 7-days from sample collection. The samples were analyzed on the last day of hold, but the analysis times were after the collection times on that date. There will be no charge for this analysis.

No other difficulties were encountered during the sulfide analysis.

All other quality control parameters were within the acceptance limits.

PH (CORROSIVITY)

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for pH (corrosivity) in accordance with EPA SW-846 Method 9045D. The samples were leached on 03/18/2014 and analyzed on 03/18/2014.

No difficulties were encountered during the pH analysis.

All quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for percent solids in accordance with EPA SW846 3550C. The samples were analyzed on 03/18/2014.

No difficulties were encountered during the % solids analysis.

All quality control parameters were within the acceptance limits.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.
B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
Q	One or more quality control criteria failed.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.

GC Semi VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

Client Sample ID: AC1 CONCRETE — Lab Sample ID: 280-53170-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	16	J Q B	21	5.8	ug/Kg	1	☼	8260B/DoD	Total/NA
Isophorone	95	J	350	18	ug/Kg	1	☼	8270C/DoD	Total/NA
2,4,5-Trichlorophenol	0.0062	J	0.050	0.0022	mg/L	1		8270D	TCLP
4,4'-DDE	0.97	J	1.8	0.25	ug/Kg	1	☼	8081B	Total/NA
2,4-DB	33	J	86	8.0	ug/Kg	1	☼	8151A	Total/NA
Dicamba	21	J	43	1.5	ug/Kg	1	☼	8151A	Total/NA
Aluminum	10000		52	1.6	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.7		2.6	0.69	mg/Kg	1	☼	6010C	Total/NA
Barium	60		2.1	0.080	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.42	J	0.52	0.035	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.21	J Q	0.52	0.043	mg/Kg	1	☼	6010C	Total/NA
Calcium	80000		100	15	mg/Kg	1	☼	6010C	Total/NA
Chromium	19	Q	3.7	0.061	mg/Kg	1	☼	6010C	Total/NA
Cobalt	8.1		1.0	0.10	mg/Kg	1	☼	6010C	Total/NA
Copper	12		5.2	0.23	mg/Kg	1	☼	6010C	Total/NA
Iron	13000		84	4.0	mg/Kg	1	☼	6010C	Total/NA
Lead	23		0.94	0.28	mg/Kg	1	☼	6010C	Total/NA
Magnesium	5000		31	3.9	mg/Kg	1	☼	6010C	Total/NA
Manganese	310		4.7	0.10	mg/Kg	1	☼	6010C	Total/NA
Molybdenum	0.74	J	2.6	0.27	mg/Kg	1	☼	6010C	Total/NA
Nickel	10		4.2	0.13	mg/Kg	1	☼	6010C	Total/NA
Phosphorus	450		310	1.7	mg/Kg	1	☼	6010C	Total/NA
Potassium	880		310	43	mg/Kg	1	☼	6010C	Total/NA
Sodium	150	J	520	62	mg/Kg	1	☼	6010C	Total/NA
Vanadium	17		2.1	0.099	mg/Kg	1	☼	6010C	Total/NA
Zinc	44		8.4	0.42	mg/Kg	1	☼	6010C	Total/NA
Barium	0.45	J	1.0	0.0020	mg/L	1		6010C	TCLP
Cadmium	0.0021	J	0.10	0.0020	mg/L	1		6010C	TCLP
Selenium	0.040	J	0.10	0.024	mg/L	1		6010C	TCLP
Mercury	27		22	7.1	ug/Kg	1	☼	7471B	Total/NA
Ignitability	NO				No Unit	1		7.1.2	Total/NA
pH	12.2		0.100	0.100	SU	1		9045D	Soluble

Client Sample ID: AC3 CONCRETE — Lab Sample ID: 280-53170-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	2.4	J	22	2.0	ug/Kg	1	☼	8260B/DoD	Total/NA
Acetone	30	Q B	22	5.9	ug/Kg	1	☼	8260B/DoD	Total/NA
2,4,5-Trichlorophenol	0.0077	J	0.050	0.0022	mg/L	1		8270D	TCLP
Aluminum	9100		52	1.6	mg/Kg	1	☼	6010C	Total/NA
Arsenic	4.0		2.6	0.69	mg/Kg	1	☼	6010C	Total/NA
Barium	60		2.1	0.079	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.37	J	0.52	0.034	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.15	J Q	0.52	0.043	mg/Kg	1	☼	6010C	Total/NA
Calcium	76000		100	15	mg/Kg	1	☼	6010C	Total/NA
Chromium	18	Q	3.6	0.060	mg/Kg	1	☼	6010C	Total/NA
Cobalt	16		1.0	0.10	mg/Kg	1	☼	6010C	Total/NA
Copper	14		5.2	0.23	mg/Kg	1	☼	6010C	Total/NA
Iron	19000		83	4.0	mg/Kg	1	☼	6010C	Total/NA
Lead	7.6		0.94	0.28	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: AC3 CONCRETE (Continued) — Lab Sample ID: 280-53170-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	4400		31	3.8	mg/Kg	1	☼	6010C	Total/NA
Manganese	270		4.7	0.10	mg/Kg	1	☼	6010C	Total/NA
Molybdenum	0.61	J	2.6	0.27	mg/Kg	1	☼	6010C	Total/NA
Nickel	10		4.2	0.13	mg/Kg	1	☼	6010C	Total/NA
Phosphorus	300	J	310	1.7	mg/Kg	1	☼	6010C	Total/NA
Potassium	610		310	43	mg/Kg	1	☼	6010C	Total/NA
Sodium	99	J	520	61	mg/Kg	1	☼	6010C	Total/NA
Vanadium	15		2.1	0.098	mg/Kg	1	☼	6010C	Total/NA
Zinc	27		8.3	0.41	mg/Kg	1	☼	6010C	Total/NA
Barium	0.51	J	1.0	0.0020	mg/L	1		6010C	TCLP
Selenium	0.025	J	0.10	0.024	mg/L	1		6010C	TCLP
Mercury	13	J	20	6.4	ug/Kg	1	☼	7471B	Total/NA
Ignitability	NO				No Unit	1		7.1.2	Total/NA
pH	12.4		0.100	0.100	SU	1		9045D	Soluble

Client Sample ID: AC5 CONCRETE — Lab Sample ID: 280-53170-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	26	Q B	21	5.7	ug/Kg	1	☼	8260B/DoD	Total/NA
Dimethyl phthalate	25	J	320	23	ug/Kg	1	☼	8270C/DoD	Total/NA
Isophorone	600		320	17	ug/Kg	1	☼	8270C/DoD	Total/NA
Aluminum	10000		52	1.6	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.1		2.6	0.69	mg/Kg	1	☼	6010C	Total/NA
Barium	49		2.1	0.079	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.31	J	0.52	0.034	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.16	J Q	0.52	0.043	mg/Kg	1	☼	6010C	Total/NA
Calcium	65000		100	15	mg/Kg	1	☼	6010C	Total/NA
Chromium	12	Q	3.7	0.061	mg/Kg	1	☼	6010C	Total/NA
Cobalt	27		1.0	0.10	mg/Kg	1	☼	6010C	Total/NA
Copper	31		5.2	0.23	mg/Kg	1	☼	6010C	Total/NA
Iron	13000		83	4.0	mg/Kg	1	☼	6010C	Total/NA
Lead	9.6		0.94	0.28	mg/Kg	1	☼	6010C	Total/NA
Magnesium	5000		31	3.9	mg/Kg	1	☼	6010C	Total/NA
Manganese	330		4.7	0.10	mg/Kg	1	☼	6010C	Total/NA
Molybdenum	0.46	J	2.6	0.27	mg/Kg	1	☼	6010C	Total/NA
Nickel	9.4		4.2	0.13	mg/Kg	1	☼	6010C	Total/NA
Phosphorus	370		310	1.7	mg/Kg	1	☼	6010C	Total/NA
Potassium	1000		310	43	mg/Kg	1	☼	6010C	Total/NA
Sodium	480	J	520	62	mg/Kg	1	☼	6010C	Total/NA
Vanadium	23		2.1	0.098	mg/Kg	1	☼	6010C	Total/NA
Zinc	29		8.3	0.42	mg/Kg	1	☼	6010C	Total/NA
Barium	0.11	J	1.0	0.0020	mg/L	1		6010C	TCLP
Chromium	0.019	J	0.50	0.0030	mg/L	1		6010C	TCLP
Mercury	21		21	6.8	ug/Kg	1	☼	7471B	Total/NA
Ignitability	NO				No Unit	1		7.1.2	Total/NA
Cyanide, Total	0.13	J	0.54	0.11	mg/Kg	1	☼	9012B	Total/NA
Sulfide	5.4	H	5.3	2.5	mg/Kg	1	☼	9034	Total/NA
pH	12.3		0.100	0.100	SU	1		9045D	Soluble

Client Sample ID: AC6 CONCRETE — Lab Sample ID: 280-53170-4

This Detection Summary does not include radiochemical test results.

Client Sample ID: AC6 CONCRETE (Continued) — Lab Sample ID: 280-53170-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	9.5	J Q B	22	5.9	ug/Kg	1	☼	8260B/DoD	Total/NA
Isophorone	200	J	360	18	ug/Kg	1	☼	8270C/DoD	Total/NA
Aluminum	8200	J	50	1.6	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.1	J	2.5	0.66	mg/Kg	1	☼	6010C	Total/NA
Barium	91	J	2.0	0.076	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.20	J	0.50	0.033	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.16	J Q	0.50	0.041	mg/Kg	1	☼	6010C	Total/NA
Calcium	80000	J	100	14	mg/Kg	1	☼	6010C	Total/NA
Chromium	9.5	Q	3.5	0.058	mg/Kg	1	☼	6010C	Total/NA
Cobalt	13		1.0	0.10	mg/Kg	1	☼	6010C	Total/NA
Copper	22	J	5.0	0.22	mg/Kg	1	☼	6010C	Total/NA
Iron	8800	J	80	3.8	mg/Kg	1	☼	6010C	Total/NA
Lead	8.7		0.91	0.27	mg/Kg	1	☼	6010C	Total/NA
Magnesium	5300		30	3.7	mg/Kg	1	☼	6010C	Total/NA
Manganese	260	J	4.5	0.10	mg/Kg	1	☼	6010C	Total/NA
Molybdenum	0.48	J	2.5	0.26	mg/Kg	1	☼	6010C	Total/NA
Nickel	6.1		4.0	0.12	mg/Kg	1	☼	6010C	Total/NA
Phosphorus	320		300	1.6	mg/Kg	1	☼	6010C	Total/NA
Potassium	460		300	41	mg/Kg	1	☼	6010C	Total/NA
Sodium	340	J	500	59	mg/Kg	1	☼	6010C	Total/NA
Vanadium	22		2.0	0.095	mg/Kg	1	☼	6010C	Total/NA
Zinc	22		8.0	0.40	mg/Kg	1	☼	6010C	Total/NA
Barium	0.56	J	1.0	0.0020	mg/L	1		6010C	TCLP
Selenium	0.028	J	0.10	0.024	mg/L	1		6010C	TCLP
Mercury	33		20	6.5	ug/Kg	1	☼	7471B	Total/NA
Ignitability	NO				No Unit	1		7.1.2	Total/NA
Cyanide, Total	0.18	J	0.55	0.11	mg/Kg	1	☼	9012B	Total/NA
pH	12.3		0.100	0.100	SU	1		9045D	Soluble

Client Sample ID: TRIP BLANK — Lab Sample ID: 280-53170-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.2	J	10	1.9	ug/L	1		8260B/DoD	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8260B/DoD	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270C/DoD	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8081B	Organochlorine Pesticides (GC)	SW846	TAL DEN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
7471B	Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	SW846	TAL DEN
7.1.2	Ignitablity,Solids	SW846	TAL DEN
9012B	Cyanide, Total andor Amenable	SW846	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL DEN
9045D	pH	SW846	TAL DEN
D 2216	Percent Moisture	ASTM	TAL DEN

Protocol References:

ASTM = ASTM International

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-53170-1	AC1 CONCRETE	Solid	03/13/14 09:15	03/15/14 09:45
280-53170-2	AC3 CONCRETE	Solid	03/13/14 11:40	03/15/14 09:45
280-53170-3	AC5 CONCRETE	Solid	03/13/14 13:20	03/15/14 09:45
280-53170-4	AC6 CONCRETE	Solid	03/13/14 15:15	03/15/14 09:45
280-53170-5	TRIP BLANK	Water	03/13/14 09:15	03/15/14 09:45

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

Client Sample ID: AC1 CONCRETE
Date Collected: 03/13/14 09:15
Date Received: 03/15/14 09:45

Lab Sample ID: 280-53170-1
Matrix: Solid
Percent Solids: 93.5

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.1	U Q	5.4	0.60	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,1,1-Trichloroethane	1.1	U Q	5.4	0.56	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,2,3-Trichloropropane	1.1	U Q	5.4	0.87	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,2,3-Trichlorobenzene	1.1	U Q	5.4	0.81	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,1-Dichloroethane	0.86	U	5.4	0.23	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,2,4-Trichlorobenzene	1.1	U Q	5.4	0.78	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,2-Dibromo-3-Chloropropane	1.1	U Q	11	0.64	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,1-Dichloropropene	1.1	U	5.4	0.58	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,1-Dichloroethene	1.1	U Q	5.4	0.63	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,1,2-Trichloroethane	1.1	U	5.4	0.95	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,1,2,2-Tetrachloroethane	1.1	U Q	5.4	0.66	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,2,4-Trimethylbenzene	1.1	U Q	5.4	0.62	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,2-Dichlorobenzene	1.1	U Q	5.4	0.48	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,2-Dichloroethane	1.1	U	5.4	0.75	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,3-Dichlorobenzene	1.1	U Q	5.4	0.52	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,3-Dichloropropane	1.1	U Q	5.4	0.55	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,3,5-Trimethylbenzene	1.1	U Q	5.4	0.61	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
2-Butanone (MEK)	6.9	U	21	2.0	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,4-Dichlorobenzene	1.1	U Q	5.4	0.84	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,2-Dichloropropane	1.1	U	5.4	0.59	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
2,2-Dichloropropane	1.1	U Q	5.4	0.47	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
2-Hexanone	11	U	21	5.3	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
4-Methyl-2-pentanone (MIBK)	11	U	21	4.7	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
4-Isopropyltoluene	1.1	U Q	5.4	0.53	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Benzene	1.1	U	5.4	0.50	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Acetone	**16**	**J Q B**	21	5.8	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Bromobenzene	1.1	U Q	5.4	0.53	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Bromoform	0.86	U Q	5.4	0.25	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Bromomethane	1.1	U	11	0.54	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Carbon tetrachloride	1.1	U	5.4	0.68	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Carbon disulfide	1.1	U	5.4	0.45	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
2-Chlorotoluene	1.1	U Q	5.4	0.55	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
4-Chlorotoluene	1.1	U Q	5.4	0.84	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Chlorobenzene	1.1	U Q	5.4	0.58	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Chlorobromomethane	1.1	U Q	5.4	0.32	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Chlorodibromomethane	1.1	U Q	5.4	0.61	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Chloroform	1.1	U Q	11	0.31	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Chloroethane	1.1	U Q	11	0.96	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Chloromethane	1.1	U Q	11	0.83	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
cis-1,2-Dichloroethene	1.1	U Q	5.4	0.60	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
cis-1,3-Dichloropropene	2.1	U	5.4	1.4	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Dibromomethane	1.1	U	5.4	0.90	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Dichlorobromomethane	0.86	U	5.4	0.24	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Dichlorodifluoromethane	1.1	U Q	11	0.56	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Ethylbenzene	1.1	U Q	5.4	0.72	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Hexachlorobutadiene	1.1	U Q	5.4	0.59	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Isopropylbenzene	1.1	U Q	5.4	0.63	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Ethylene Dibromide	1.1	U Q	5.4	0.56	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Methylene Chloride	3.4	U Q	5.4	1.7	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1

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

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 93.5**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	1.1	U	21	0.37	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
m-Xylene & p-Xylene	2.1	U Q	3.4	1.1	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Naphthalene	1.1	U Q	5.4	0.68	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
n-Butylbenzene	1.1	U Q	5.4	0.60	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
N-Propylbenzene	1.1	U Q	5.4	0.62	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
o-Xylene	1.1	U Q	5.4	0.66	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Styrene	1.1	U Q	5.4	0.68	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
sec-Butylbenzene	1.1	U Q	5.4	0.83	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
tert-Butylbenzene	1.1	U Q	5.4	0.54	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
trans-1,2-Dichloroethene	1.1	U	5.4	0.42	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
trans-1,3-Dichloropropene	1.1	U	5.4	0.72	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Tetrachloroethene	1.1	U Q	5.4	0.63	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Toluene	1.1	U	5.4	0.74	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Trichloroethene	0.86	U	5.4	0.25	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Trichlorofluoromethane	2.1	U	11	1.1	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
Vinyl chloride	2.1	U Q	5.4	1.4	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1
1,2-Dichloroethene, Total	1.1	U	5.4	0.42	ug/Kg	☼	03/19/14 14:17	03/19/14 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*75*	*Q*	*85 - 115*	*03/19/14 14:17*	*03/19/14 19:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*79*		*61 - 129*	*03/19/14 14:17*	*03/19/14 19:22*	*1*
4-Bromofluorobenzene (Surr)	*72*	*Q*	*85 - 120*	*03/19/14 14:17*	*03/19/14 19:22*	*1*
Dibromofluoromethane (Surr)	*0*	*Q*	*71 - 126*	*03/19/14 14:17*	*03/19/14 19:22*	*1*

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.1	U	5.5	0.61	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,1,1-Trichloroethane	1.1	U Q	5.5	0.57	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,2,3-Trichloropropane	1.1	U Q	5.5	0.89	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,2,3-Trichlorobenzene	1.1	U Q	5.5	0.82	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,1-Dichloroethane	0.88	U	5.5	0.23	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,2,4-Trichlorobenzene	1.1	U Q	5.5	0.80	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,2-Dibromo-3-Chloropropane	1.1	U Q	11	0.66	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,1-Dichloropropene	1.1	U	5.5	0.59	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,1-Dichloroethene	1.1	U Q	5.5	0.65	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,1,2-Trichloroethane	1.1	U	5.5	0.96	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,1,2,2-Tetrachloroethane	1.1	U Q	5.5	0.67	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,2,4-Trimethylbenzene	1.1	U Q	5.5	0.64	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,2-Dichlorobenzene	1.1	U Q	5.5	0.49	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,2-Dichloroethane	1.1	U	5.5	0.77	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,3-Dichlorobenzene	1.1	U Q	5.5	0.53	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,3-Dichloropropane	1.1	U	5.5	0.56	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,3,5-Trimethylbenzene	1.1	U Q	5.5	0.62	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
2-Butanone (MEK)	**2.4**	**J**	22	2.0	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,4-Dichlorobenzene	1.1	U Q	5.5	0.85	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,2-Dichloropropane	1.1	U	5.5	0.60	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
2,2-Dichloropropane	1.1	U Q	5.5	0.48	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
2-Hexanone	11	U	22	5.4	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1

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

Client Sample ID: AC3 CONCRETE
Date Collected: 03/13/14 11:40
Date Received: 03/15/14 09:45

Lab Sample ID: 280-53170-2
Matrix: Solid
Percent Solids: 90.7

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	11	U	22	4.8	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
4-Isopropyltoluene	1.1	U Q	5.5	0.54	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Benzene	1.1	U	5.5	0.52	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Acetone	**30**	**Q B**	22	5.9	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Bromobenzene	1.1	U Q	5.5	0.54	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Bromoform	0.88	U	5.5	0.25	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Bromomethane	1.1	U	11	0.55	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Carbon tetrachloride	1.1	U	5.5	0.69	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Carbon disulfide	1.1	U	5.5	0.46	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
2-Chlorotoluene	1.1	U Q	5.5	0.56	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
4-Chlorotoluene	1.1	U Q	5.5	0.85	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Chlorobenzene	1.1	U	5.5	0.59	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Chlorobromomethane	1.1	U Q	5.5	0.33	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Chlorodibromomethane	1.1	U	5.5	0.62	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Chloroform	1.1	U Q	11	0.32	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Chloroethane	1.1	U Q	11	0.98	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Chloromethane	1.1	U Q	11	0.84	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
cis-1,2-Dichloroethene	1.1	U Q	5.5	0.61	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
cis-1,3-Dichloropropene	2.2	U	5.5	1.4	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Dibromomethane	1.1	U	5.5	0.92	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Dichlorobromomethane	0.88	U	5.5	0.24	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Dichlorodifluoromethane	1.1	U Q	11	0.57	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Ethylbenzene	1.1	U	5.5	0.73	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Hexachlorobutadiene	1.1	U Q	5.5	0.60	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Isopropylbenzene	1.1	U Q	5.5	0.65	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Ethylene Dibromide	1.1	U	5.5	0.57	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Methylene Chloride	3.5	U Q	5.5	1.8	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Methyl tert-butyl ether	1.1	U	22	0.37	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
m-Xylene & p-Xylene	2.2	U	3.5	1.1	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Naphthalene	1.1	U Q	5.5	0.69	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
n-Butylbenzene	1.1	U Q	5.5	0.61	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
N-Propylbenzene	1.1	U Q	5.5	0.64	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
o-Xylene	1.1	U	5.5	0.67	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Styrene	1.1	U	5.5	0.69	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
sec-Butylbenzene	1.1	U Q	5.5	0.84	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
tert-Butylbenzene	1.1	U Q	5.5	0.55	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
trans-1,2-Dichloroethene	1.1	U	5.5	0.43	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
trans-1,3-Dichloropropene	1.1	U	5.5	0.73	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Tetrachloroethene	1.1	U	5.5	0.65	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Toluene	1.1	U	5.5	0.76	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Trichloroethene	0.88	U	5.5	0.25	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Trichlorofluoromethane	2.2	U	11	1.1	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
Vinyl chloride	2.2	U Q	5.5	1.5	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1
1,2-Dichloroethene, Total	1.1	U	5.5	0.43	ug/Kg	☼	03/19/14 14:17	03/19/14 19:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*86*		*85 - 115*	*03/19/14 14:17*	*03/19/14 19:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*61 - 129*	*03/19/14 14:17*	*03/19/14 19:43*	*1*
4-Bromofluorobenzene (Surr)	*83*	*Q*	*85 - 120*	*03/19/14 14:17*	*03/19/14 19:43*	*1*
Dibromofluoromethane (Surr)	*0*	*Q*	*71 - 126*	*03/19/14 14:17*	*03/19/14 19:43*	*1*

Client Sample Results

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

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

Client Sample ID: AC5 CONCRETE
Date Collected: 03/13/14 13:20
Date Received: 03/15/14 09:45

Lab Sample ID: 280-53170-3
Matrix: Solid
Percent Solids: 94.0

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.1	U Q	5.3	0.60	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,1,1-Trichloroethane	1.1	U Q	5.3	0.55	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,2,3-Trichloropropane	1.1	U Q	5.3	0.86	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,2,3-Trichlorobenzene	1.1	U Q	5.3	0.80	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,1-Dichloroethane	0.85	U	5.3	0.22	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,2,4-Trichlorobenzene	1.1	U Q	5.3	0.78	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,2-Dibromo-3-Chloropropane	1.1	U Q	11	0.64	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,1-Dichloropropene	1.1	U	5.3	0.58	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,1-Dichloroethene	1.1	U Q	5.3	0.63	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,1,2-Trichloroethane	1.1	U	5.3	0.94	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,1,2,2-Tetrachloroethane	1.1	U Q	5.3	0.65	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,2,4-Trimethylbenzene	1.1	U Q	5.3	0.62	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,2-Dichlorobenzene	1.1	U Q	5.3	0.48	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,2-Dichloroethane	1.1	U	5.3	0.75	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,3-Dichlorobenzene	1.1	U Q	5.3	0.51	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,3-Dichloropropane	1.1	U Q	5.3	0.54	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,3,5-Trimethylbenzene	1.1	U Q	5.3	0.61	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
2-Butanone (MEK)	6.8	U	21	1.9	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,4-Dichlorobenzene	1.1	U Q	5.3	0.83	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,2-Dichloropropane	1.1	U	5.3	0.59	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
2,2-Dichloropropane	1.1	U Q	5.3	0.47	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
2-Hexanone	11	U	21	5.2	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
4-Methyl-2-pentanone (MIBK)	11	U	21	4.6	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
4-Isopropyltoluene	1.1	U Q	5.3	0.52	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Benzene	1.1	U	5.3	0.50	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Acetone	**26**	**Q B**	21	5.7	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Bromobenzene	1.1	U Q	5.3	0.52	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Bromoform	0.85	U Q	5.3	0.25	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Bromomethane	1.1	U	11	0.53	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Carbon tetrachloride	1.1	U	5.3	0.67	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Carbon disulfide	1.1	U	5.3	0.45	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
2-Chlorotoluene	1.1	U Q	5.3	0.54	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
4-Chlorotoluene	1.1	U Q	5.3	0.83	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Chlorobenzene	1.1	U Q	5.3	0.58	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Chlorobromomethane	1.1	U Q	5.3	0.32	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Chlorodibromomethane	1.1	U Q	5.3	0.61	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Chloroform	1.1	U Q	11	0.31	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Chloroethane	1.1	U Q	11	0.95	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Chloromethane	1.1	U Q	11	0.82	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
cis-1,2-Dichloroethene	1.1	U Q	5.3	0.60	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
cis-1,3-Dichloropropene	2.1	U	5.3	1.4	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Dibromomethane	1.1	U	5.3	0.89	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Dichlorobromomethane	0.85	U	5.3	0.23	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Dichlorodifluoromethane	1.1	U Q	11	0.55	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Ethylbenzene	1.1	U Q	5.3	0.71	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Hexachlorobutadiene	1.1	U Q	5.3	0.59	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Isopropylbenzene	1.1	U Q	5.3	0.63	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Ethylene Dibromide	1.1	U Q	5.3	0.55	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Methylene Chloride	3.4	U Q	5.3	1.7	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1

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

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 94.0**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	1.1	U	21	0.36	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
m-Xylene & p-Xylene	2.1	U Q	3.4	1.1	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Naphthalene	1.1	U Q	5.3	0.67	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
n-Butylbenzene	1.1	U Q	5.3	0.60	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
N-Propylbenzene	1.1	U Q	5.3	0.62	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
o-Xylene	1.1	U Q	5.3	0.65	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Styrene	1.1	U Q	5.3	0.67	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
sec-Butylbenzene	1.1	U Q	5.3	0.82	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
tert-Butylbenzene	1.1	U Q	5.3	0.53	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
trans-1,2-Dichloroethene	1.1	U	5.3	0.42	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
trans-1,3-Dichloropropene	1.1	U	5.3	0.71	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Tetrachloroethene	1.1	U Q	5.3	0.63	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Toluene	1.1	U	5.3	0.74	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Trichloroethene	0.85	U	5.3	0.25	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Trichlorofluoromethane	2.1	U	11	1.1	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
Vinyl chloride	2.1	U Q	5.3	1.4	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1
1,2-Dichloroethene, Total	1.1	U	5.3	0.42	ug/Kg	☼	03/19/14 14:17	03/19/14 20:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*74*	*Q*	*85 - 115*	*03/19/14 14:17*	*03/19/14 20:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*79*		*61 - 129*	*03/19/14 14:17*	*03/19/14 20:03*	*1*
4-Bromofluorobenzene (Surr)	*74*	*Q*	*85 - 120*	*03/19/14 14:17*	*03/19/14 20:03*	*1*
Dibromofluoromethane (Surr)	*0*	*Q*	*71 - 126*	*03/19/14 14:17*	*03/19/14 20:03*	*1*

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.1	U Q	5.5	0.61	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,1,1-Trichloroethane	1.1	U Q	5.5	0.57	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,2,3-Trichloropropane	1.1	U Q	5.5	0.89	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,2,3-Trichlorobenzene	1.1	U Q	5.5	0.82	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,1-Dichloroethane	0.88	U	5.5	0.23	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,2,4-Trichlorobenzene	1.1	U Q	5.5	0.80	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,2-Dibromo-3-Chloropropane	1.1	U Q	11	0.66	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,1-Dichloropropene	1.1	U	5.5	0.59	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,1-Dichloroethene	1.1	U Q	5.5	0.65	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,1,2-Trichloroethane	1.1	U	5.5	0.96	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,1,2,2-Tetrachloroethane	1.1	U Q	5.5	0.67	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,2,4-Trimethylbenzene	1.1	U Q	5.5	0.64	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,2-Dichlorobenzene	1.1	U Q	5.5	0.49	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,2-Dichloroethane	1.1	U	5.5	0.77	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,3-Dichlorobenzene	1.1	U Q	5.5	0.53	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,3-Dichloropropane	1.1	U Q	5.5	0.56	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,3,5-Trimethylbenzene	1.1	U Q	5.5	0.62	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
2-Butanone (MEK)	7.0	U	22	2.0	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,4-Dichlorobenzene	1.1	U Q	5.5	0.85	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,2-Dichloropropane	1.1	U	5.5	0.60	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
2,2-Dichloropropane	1.1	U Q	5.5	0.48	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
2-Hexanone	11	U	22	5.4	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1

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

Client Sample ID: AC6 CONCRETE
Date Collected: 03/13/14 15:15
Date Received: 03/15/14 09:45

Lab Sample ID: 280-53170-4
Matrix: Solid
Percent Solids: 91.2

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	11	U	22	4.8	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
4-Isopropyltoluene	1.1	U Q	5.5	0.54	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Benzene	1.1	U	5.5	0.51	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Acetone	**9.5**	**J Q B**	22	5.9	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Bromobenzene	1.1	U Q	5.5	0.54	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Bromoform	0.88	U Q	5.5	0.25	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Bromomethane	1.1	U	11	0.55	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Carbon tetrachloride	1.1	U	5.5	0.69	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Carbon disulfide	1.1	U	5.5	0.46	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
2-Chlorotoluene	1.1	U Q	5.5	0.56	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
4-Chlorotoluene	1.1	U Q	5.5	0.85	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Chlorobenzene	1.1	U Q	5.5	0.59	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Chlorobromomethane	1.1	U Q	5.5	0.33	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Chlorodibromomethane	1.1	U Q	5.5	0.62	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Chloroform	1.1	U Q	11	0.32	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Chloroethane	1.1	U Q	11	0.97	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Chloromethane	1.1	U Q	11	0.84	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
cis-1,2-Dichloroethene	1.1	U Q	5.5	0.61	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
cis-1,3-Dichloropropene	2.2	U	5.5	1.4	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Dibromomethane	1.1	U	5.5	0.92	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Dichlorobromomethane	0.88	U	5.5	0.24	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Dichlorodifluoromethane	1.1	U Q	11	0.57	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Ethylbenzene	1.1	U Q	5.5	0.73	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Hexachlorobutadiene	1.1	U Q	5.5	0.60	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Isopropylbenzene	1.1	U Q	5.5	0.65	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Ethylene Dibromide	1.1	U Q	5.5	0.57	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Methylene Chloride	3.5	U Q	5.5	1.8	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Methyl tert-butyl ether	1.1	U	22	0.37	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
m-Xylene & p-Xylene	2.2	U Q	3.5	1.1	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Naphthalene	1.1	U Q	5.5	0.69	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
n-Butylbenzene	1.1	U Q	5.5	0.61	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
N-Propylbenzene	1.1	U Q	5.5	0.64	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
o-Xylene	1.1	U Q	5.5	0.67	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Styrene	1.1	U Q	5.5	0.69	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
sec-Butylbenzene	1.1	U Q	5.5	0.84	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
tert-Butylbenzene	1.1	U Q	5.5	0.55	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
trans-1,2-Dichloroethene	1.1	U	5.5	0.43	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
trans-1,3-Dichloropropene	1.1	U	5.5	0.73	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Tetrachloroethene	1.1	U Q	5.5	0.65	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Toluene	1.1	U	5.5	0.76	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Trichloroethene	0.88	U	5.5	0.25	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Trichlorofluoromethane	2.2	U	11	1.1	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
Vinyl chloride	2.2	U Q	5.5	1.5	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1
1,2-Dichloroethene, Total	1.1	U	5.5	0.43	ug/Kg	☼	03/19/14 14:17	03/19/14 20:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*74*	*Q*	*85 - 115*	*03/19/14 14:17*	*03/19/14 20:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*61 - 129*	*03/19/14 14:17*	*03/19/14 20:24*	*1*
4-Bromofluorobenzene (Surr)	*68*	*Q*	*85 - 120*	*03/19/14 14:17*	*03/19/14 20:24*	*1*
Dibromofluoromethane (Surr)	*0*	*Q*	*71 - 126*	*03/19/14 14:17*	*03/19/14 20:24*	*1*

Client Sample Results

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

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

Client Sample ID: TRIP BLANK
Date Collected: 03/13/14 09:15
Date Received: 03/15/14 09:45

Lab Sample ID: 280-53170-5
Matrix: Water

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.40	U	1.0	0.17	ug/L			03/21/14 20:38	1
1,1,1-Trichloroethane	0.20	U	1.0	0.16	ug/L			03/21/14 20:38	1
1,2,3-Trichloropropane	0.80	U Q	3.0	0.77	ug/L			03/21/14 20:38	1
1,2,3-Trichlorobenzene	0.40	U Q	1.0	0.18	ug/L			03/21/14 20:38	1
1,1-Dichloroethane	0.40	U	1.0	0.16	ug/L			03/21/14 20:38	1
1,2,4-Trichlorobenzene	0.80	U Q	1.0	0.32	ug/L			03/21/14 20:38	1
1,2-Dibromo-3-Chloropropane	1.6	U Q	5.0	0.81	ug/L			03/21/14 20:38	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			03/21/14 20:38	1
1,1-Dichloroethene	0.40	U	1.0	0.14	ug/L			03/21/14 20:38	1
1,1,2-Trichloroethane	0.40	U	1.0	0.32	ug/L			03/21/14 20:38	1
1,1,2,2-Tetrachloroethane	0.40	U Q	1.0	0.20	ug/L			03/21/14 20:38	1
1,2,4-Trimethylbenzene	0.20	U Q	1.0	0.14	ug/L			03/21/14 20:38	1
1,2-Dichlorobenzene	0.20	U Q	1.0	0.13	ug/L			03/21/14 20:38	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			03/21/14 20:38	1
1,3-Dichlorobenzene	0.20	U Q	1.0	0.16	ug/L			03/21/14 20:38	1
1,3-Dichloropropane	0.40	U	1.0	0.15	ug/L			03/21/14 20:38	1
1,3,5-Trimethylbenzene	0.40	U Q	1.0	0.14	ug/L			03/21/14 20:38	1
2-Butanone (MEK)	3.2	U	6.0	1.8	ug/L			03/21/14 20:38	1
1,4-Dichlorobenzene	0.40	U Q	1.0	0.16	ug/L			03/21/14 20:38	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			03/21/14 20:38	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			03/21/14 20:38	1
2-Hexanone	3.2	U	5.0	1.4	ug/L			03/21/14 20:38	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			03/21/14 20:38	1
4-Isopropyltoluene	0.40	U Q	1.0	0.17	ug/L			03/21/14 20:38	1
Benzene	0.20	U	1.0	0.16	ug/L			03/21/14 20:38	1
Acetone	**3.2**	**J**	10	1.9	ug/L			03/21/14 20:38	1
Bromobenzene	0.20	U Q	1.0	0.17	ug/L			03/21/14 20:38	1
Bromoform	0.40	U	1.0	0.19	ug/L			03/21/14 20:38	1
Bromomethane	0.40	U	2.0	0.21	ug/L			03/21/14 20:38	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			03/21/14 20:38	1
Carbon disulfide	0.80	U	2.0	0.45	ug/L			03/21/14 20:38	1
2-Chlorotoluene	0.40	U Q	1.0	0.17	ug/L			03/21/14 20:38	1
4-Chlorotoluene	0.40	U Q	1.0	0.17	ug/L			03/21/14 20:38	1
Chlorobenzene	0.20	U	1.0	0.17	ug/L			03/21/14 20:38	1
Chlorobromomethane	0.40	U	1.0	0.10	ug/L			03/21/14 20:38	1
Chlorodibromomethane	0.40	U	1.0	0.17	ug/L			03/21/14 20:38	1
Chloroform	0.20	U	1.0	0.16	ug/L			03/21/14 20:38	1
Chloroethane	1.6	U	2.0	0.41	ug/L			03/21/14 20:38	1
Chloromethane	0.80	U	2.0	0.30	ug/L			03/21/14 20:38	1
cis-1,2-Dichloroethene	0.20	U	1.0	0.15	ug/L			03/21/14 20:38	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.16	ug/L			03/21/14 20:38	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			03/21/14 20:38	1
Dichlorobromomethane	0.20	U	1.0	0.17	ug/L			03/21/14 20:38	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			03/21/14 20:38	1
Ethylbenzene	0.20	U	1.0	0.16	ug/L			03/21/14 20:38	1
Hexachlorobutadiene	0.40	U Q	1.0	0.36	ug/L			03/21/14 20:38	1
Isopropylbenzene	0.40	U Q	1.0	0.19	ug/L			03/21/14 20:38	1
Ethylene Dibromide	0.40	U	1.0	0.18	ug/L			03/21/14 20:38	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			03/21/14 20:38	1

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

Client Sample ID: TRIP BLANK — **Lab Sample ID: 280-53170-5**
Date Collected: 03/13/14 09:15 — **Matrix: Water**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.40	U	5.0	0.25	ug/L			03/21/14 20:38	1
m-Xylene & p-Xylene	0.80	U	2.0	0.34	ug/L			03/21/14 20:38	1
Naphthalene	0.80	U Q	1.0	0.22	ug/L			03/21/14 20:38	1
n-Butylbenzene	0.40	U Q	1.0	0.32	ug/L			03/21/14 20:38	1
N-Propylbenzene	0.20	U Q	1.0	0.16	ug/L			03/21/14 20:38	1
o-Xylene	0.40	U	1.0	0.19	ug/L			03/21/14 20:38	1
Styrene	0.40	U	1.0	0.17	ug/L			03/21/14 20:38	1
sec-Butylbenzene	0.40	U Q	1.0	0.17	ug/L			03/21/14 20:38	1
tert-Butylbenzene	0.40	U Q	1.0	0.16	ug/L			03/21/14 20:38	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.15	ug/L			03/21/14 20:38	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			03/21/14 20:38	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			03/21/14 20:38	1
Toluene	0.40	U	1.0	0.17	ug/L			03/21/14 20:38	1
Trichloroethene	0.20	U	1.0	0.16	ug/L			03/21/14 20:38	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			03/21/14 20:38	1
Vinyl chloride	0.40	U	1.5	0.10	ug/L			03/21/14 20:38	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			03/21/14 20:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*112*		*85 - 120*		*03/21/14 20:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 120*		*03/21/14 20:38*	*1*
4-Bromofluorobenzene (Surr)	*127*	*Q*	*75 - 120*		*03/21/14 20:38*	*1*
Dibromofluoromethane (Surr)	*113*		*85 - 115*		*03/21/14 20:38*	*1*

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

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0020	U	0.010	0.0016	mg/L			03/28/14 05:36	1
2-Butanone (MEK)	0.032	U	0.10	0.018	mg/L			03/28/14 05:36	1
Carbon tetrachloride	0.0040	U	0.010	0.0019	mg/L			03/28/14 05:36	1
Chlorobenzene	0.0020	U	0.010	0.0017	mg/L			03/28/14 05:36	1
Chloroform	0.0020	U	0.010	0.0016	mg/L			03/28/14 05:36	1
1,2-Dichloroethane	0.0040	U	0.010	0.0013	mg/L			03/28/14 05:36	1
1,1-Dichloroethene	0.0040	U	0.010	0.0023	mg/L			03/28/14 05:36	1
Tetrachloroethene	0.0040	U	0.010	0.0020	mg/L			03/28/14 05:36	1
Trichloroethene	0.0020	U	0.010	0.0016	mg/L			03/28/14 05:36	1
Vinyl chloride	0.0080	U	0.010	0.0010	mg/L			03/28/14 05:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 129*		*03/28/14 05:36*	*1*
Toluene-d8 (Surr)	*90*		*78 - 120*		*03/28/14 05:36*	*1*
4-Bromofluorobenzene (Surr)	*83*		*78 - 121*		*03/28/14 05:36*	*1*
Dibromofluoromethane (Surr)	*107*		*79 - 119*		*03/28/14 05:36*	*1*

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

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0020	U	0.010	0.0016	mg/L			03/28/14 05:58	1
2-Butanone (MEK)	0.032	U	0.10	0.018	mg/L			03/28/14 05:58	1
Carbon tetrachloride	0.0040	U	0.010	0.0019	mg/L			03/28/14 05:58	1
Chlorobenzene	0.0020	U	0.010	0.0017	mg/L			03/28/14 05:58	1
Chloroform	0.0020	U	0.010	0.0016	mg/L			03/28/14 05:58	1
1,2-Dichloroethane	0.0040	U	0.010	0.0013	mg/L			03/28/14 05:58	1
1,1-Dichloroethene	0.0040	U	0.010	0.0023	mg/L			03/28/14 05:58	1
Tetrachloroethene	0.0040	U	0.010	0.0020	mg/L			03/28/14 05:58	1
Trichloroethene	0.0020	U	0.010	0.0016	mg/L			03/28/14 05:58	1
Vinyl chloride	0.0080	U	0.010	0.0010	mg/L			03/28/14 05:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 129*		*03/28/14 05:58*	*1*
Toluene-d8 (Surr)	*92*		*78 - 120*		*03/28/14 05:58*	*1*
4-Bromofluorobenzene (Surr)	*82*		*78 - 121*		*03/28/14 05:58*	*1*
Dibromofluoromethane (Surr)	*106*		*79 - 119*		*03/28/14 05:58*	*1*

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0020	U	0.010	0.0016	mg/L			03/28/14 06:20	1
2-Butanone (MEK)	0.032	U	0.10	0.018	mg/L			03/28/14 06:20	1
Carbon tetrachloride	0.0040	U	0.010	0.0019	mg/L			03/28/14 06:20	1
Chlorobenzene	0.0020	U	0.010	0.0017	mg/L			03/28/14 06:20	1
Chloroform	0.0020	U	0.010	0.0016	mg/L			03/28/14 06:20	1
1,2-Dichloroethane	0.0040	U	0.010	0.0013	mg/L			03/28/14 06:20	1
1,1-Dichloroethene	0.0040	U	0.010	0.0023	mg/L			03/28/14 06:20	1
Tetrachloroethene	0.0040	U	0.010	0.0020	mg/L			03/28/14 06:20	1
Trichloroethene	0.0020	U	0.010	0.0016	mg/L			03/28/14 06:20	1
Vinyl chloride	0.0080	U	0.010	0.0010	mg/L			03/28/14 06:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 129*		*03/28/14 06:20*	*1*
Toluene-d8 (Surr)	*89*		*78 - 120*		*03/28/14 06:20*	*1*
4-Bromofluorobenzene (Surr)	*82*		*78 - 121*		*03/28/14 06:20*	*1*
Dibromofluoromethane (Surr)	*106*		*79 - 119*		*03/28/14 06:20*	*1*

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0020	U	0.010	0.0016	mg/L			03/28/14 06:42	1
2-Butanone (MEK)	0.032	U	0.10	0.018	mg/L			03/28/14 06:42	1
Carbon tetrachloride	0.0040	U	0.010	0.0019	mg/L			03/28/14 06:42	1
Chlorobenzene	0.0020	U	0.010	0.0017	mg/L			03/28/14 06:42	1
Chloroform	0.0020	U	0.010	0.0016	mg/L			03/28/14 06:42	1
1,2-Dichloroethane	0.0040	U	0.010	0.0013	mg/L			03/28/14 06:42	1
1,1-Dichloroethene	0.0040	U	0.010	0.0023	mg/L			03/28/14 06:42	1
Tetrachloroethene	0.0040	U	0.010	0.0020	mg/L			03/28/14 06:42	1

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

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.0020	U	0.010	0.0016	mg/L			03/28/14 06:42	1
Vinyl chloride	0.0080	U	0.010	0.0010	mg/L			03/28/14 06:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 129*		*03/28/14 06:42*	*1*
Toluene-d8 (Surr)	*87*		*78 - 120*		*03/28/14 06:42*	*1*
4-Bromofluorobenzene (Surr)	*81*		*78 - 121*		*03/28/14 06:42*	*1*
Dibromofluoromethane (Surr)	*104*		*79 - 119*		*03/28/14 06:42*	*1*

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

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 93.5**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	70	U	350	52	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
1,2,4-Trichlorobenzene	35	U	350	29	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
1,2-Dichlorobenzene	35	U	350	23	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
1,2-Diphenylhydrazine	35	U Q	350	23	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
1,3-Dichlorobenzene	35	U	350	13	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
1,4-Dichlorobenzene	35	U	350	14	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2,2'-oxybis[1-chloropropane]	35	U	350	24	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2,4,5-Trichlorophenol	140	U Q	350	11	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2,4,6-Trichlorophenol	69	U Q	350	11	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2,4-Dichlorophenol	69	U Q	350	11	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2,4-Dimethylphenol	140	U Q	350	69	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2,4-Dinitrophenol	700	U Q	1700	350	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2,4-Dinitrotoluene	140	U	350	69	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2,6-Dichlorophenol	140	U	350	73	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2,6-Dinitrotoluene	69	U	350	29	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2-Chloronaphthalene	35	U	350	11	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2-Chlorophenol	35	U Q	350	22	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2-Methylnaphthalene	35	U	350	20	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2-Methylphenol	35	U Q	350	14	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2-Nitroaniline	69	U	1700	53	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
2-Nitrophenol	69	U Q	350	11	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
3 & 4 Methylphenol	69	U Q	350	35	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
3,3'-Dichlorobenzidine	350	U	1700	95	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
3-Nitroaniline	140	U	1700	77	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
4,6-Dinitro-2-methylphenol	690	U Q	1700	350	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
4-Bromophenyl phenyl ether	35	U	350	20	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
4-Chloro-3-methylphenol	140	U Q	350	69	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
4-Chloroaniline	140	U	350	86	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
4-Chlorophenyl phenyl ether	69	U	350	22	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
4-Nitroaniline	140	U	1700	76	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
4-Nitrophenol	350	U Q	1700	100	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Acenaphthene	18	U	350	11	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Acenaphthylene	35	U	350	18	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Anthracene	35	U	350	18	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Benzidine	4200	U	4200	1000	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1

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

Client Sample ID: AC1 CONCRETE
Date Collected: 03/13/14 09:15
Date Received: 03/15/14 09:45

Lab Sample ID: 280-53170-1
Matrix: Solid
Percent Solids: 93.5

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	35	U	350	21	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Benzo[a]pyrene	35	U	350	21	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Benzo[b]fluoranthene	35	U	350	28	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Benzo[g,h,i]perylene	35	U	350	17	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Benzo[k]fluoranthene	69	U	350	42	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Benzoic acid	690	U Q	1700	350	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Benzyl alcohol	35	U	350	11	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Bis(2-chloroethoxy)methane	69	U	350	24	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Bis(2-chloroethyl)ether	35	U	350	17	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Bis(2-ethylhexyl) phthalate	69	U	350	48	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Butyl benzyl phthalate	69	U	350	45	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Carbazole	70	U	350	38	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Chrysene	35	U	350	28	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Dibenz(a,h)anthracene	35	U	350	20	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Dibenzofuran	35	U	350	21	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Diethyl phthalate	35	U	690	27	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Dimethyl phthalate	35	U	350	24	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Di-n-butyl phthalate	35	U	350	31	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Di-n-octyl phthalate	69	U	350	15	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Fluoranthene	69	U	350	38	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Fluorene	35	U	350	19	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Hexachlorobenzene	69	U	350	31	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Hexachlorobutadiene	69	U	350	11	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Hexachlorocyclopentadiene	69	U Q	1800	53	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Hexachloroethane	35	U	350	22	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Indeno[1,2,3-cd]pyrene	35	U	350	23	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Isophorone	**95**	**J**	350	18	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Naphthalene	69	U	350	33	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Nitrobenzene	35	U	350	23	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
N-Nitrosodimethylamine	69	U Q	550	39	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
N-Nitrosodi-n-propylamine	69	U	350	33	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
N-Nitrosodiphenylamine	35	U	350	22	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
N-Nitrosopyrrolidine	140	U Q	350	67	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Pentachlorophenol	700	U Q	1700	350	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Phenanthrene	35	U	350	18	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Phenol	35	U Q	350	19	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1
Pyrene	35	U	420	13	ug/Kg	☼	03/19/14 17:10	03/21/14 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*4*	*Q*	*35 - 125*	*03/19/14 17:10*	*03/21/14 00:54*	*1*
2-Fluorobiphenyl	*72*		*45 - 105*	*03/19/14 17:10*	*03/21/14 00:54*	*1*
2-Fluorophenol (Surr)	*0*	*Q*	*35 - 105*	*03/19/14 17:10*	*03/21/14 00:54*	*1*
Nitrobenzene-d5 (Surr)	*72*		*35 - 100*	*03/19/14 17:10*	*03/21/14 00:54*	*1*
Phenol-d5 (Surr)	*29*	*Q*	*40 - 100*	*03/19/14 17:10*	*03/21/14 00:54*	*1*
Terphenyl-d14 (Surr)	*73*		*30 - 125*	*03/19/14 17:10*	*03/21/14 00:54*	*1*

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

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	72	U	360	53	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
1,2,4-Trichlorobenzene	36	U	360	30	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
1,2-Dichlorobenzene	36	U	360	24	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
1,2-Diphenylhydrazine	36	U Q	360	24	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
1,3-Dichlorobenzene	36	U	360	13	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
1,4-Dichlorobenzene	36	U	360	15	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2,2'-oxybis[1-chloropropane]	36	U	360	25	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2,4,5-Trichlorophenol	140	U Q	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2,4,6-Trichlorophenol	71	U Q	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2,4-Dichlorophenol	71	U Q	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2,4-Dimethylphenol	140	U Q	360	71	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2,4-Dinitrophenol	720	U Q	1700	360	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2,4-Dinitrotoluene	140	U	360	71	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2,6-Dichlorophenol	140	U	360	74	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2,6-Dinitrotoluene	71	U	360	30	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2-Chloronaphthalene	36	U	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2-Chlorophenol	36	U Q	360	23	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2-Methylnaphthalene	36	U	360	20	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2-Methylphenol	36	U Q	360	14	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2-Nitroaniline	71	U	1700	54	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
2-Nitrophenol	71	U Q	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
3 & 4 Methylphenol	71	U Q	360	36	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
3,3'-Dichlorobenzidine	360	U	1700	97	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
3-Nitroaniline	140	U	1700	79	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
4,6-Dinitro-2-methylphenol	710	U Q	1700	360	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
4-Bromophenyl phenyl ether	36	U	360	20	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
4-Chloro-3-methylphenol	140	U Q	360	71	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
4-Chloroaniline	140	U	360	88	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
4-Chlorophenyl phenyl ether	71	U	360	23	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
4-Nitroaniline	140	U	1700	78	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
4-Nitrophenol	360	U Q	1700	100	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Acenaphthene	18	U	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Acenaphthylene	36	U	360	18	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Anthracene	36	U	360	18	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Benzidine	4300	U	4300	1100	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Benzo[a]anthracene	36	U	360	22	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Benzo[a]pyrene	36	U	360	22	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Benzo[b]fluoranthene	36	U	360	28	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Benzo[g,h,i]perylene	36	U	360	17	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Benzo[k]fluoranthene	71	U	360	43	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Benzoic acid	710	U Q	1700	360	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Benzyl alcohol	36	U	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Bis(2-chloroethoxy)methane	71	U	360	25	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Bis(2-chloroethyl)ether	36	U	360	18	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Bis(2-ethylhexyl) phthalate	71	U	360	50	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Butyl benzyl phthalate	71	U	360	46	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Carbazole	72	U	360	39	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Chrysene	36	U	360	29	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Dibenz(a,h)anthracene	36	U	360	20	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1

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

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	36	U	360	22	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Diethyl phthalate	36	U	710	28	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Dimethyl phthalate	36	U	360	25	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Di-n-butyl phthalate	36	U	360	31	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Di-n-octyl phthalate	71	U	360	16	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Fluoranthene	71	U	360	39	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Fluorene	36	U	360	19	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Hexachlorobenzene	71	U	360	31	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Hexachlorobutadiene	71	U	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Hexachlorocyclopentadiene	71	U Q	1800	54	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Hexachloroethane	36	U	360	23	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Indeno[1,2,3-cd]pyrene	36	U	360	24	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Isophorone	36	U	360	18	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Naphthalene	71	U	360	33	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Nitrobenzene	36	U	360	24	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
N-Nitrosodimethylamine	71	U Q	560	40	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
N-Nitrosodi-n-propylamine	71	U	360	33	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
N-Nitrosodiphenylamine	36	U	360	23	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
N-Nitrosopyrrolidine	140	U Q	360	69	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Pentachlorophenol	720	U Q	1700	360	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Phenanthrene	36	U	360	18	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Phenol	36	U Q	360	19	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1
Pyrene	36	U	430	13	ug/Kg	☼	03/19/14 17:10	03/21/14 01:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*6*	*Q*	*35 - 125*	*03/19/14 17:10*	*03/21/14 01:20*	*1*
2-Fluorobiphenyl	*73*		*45 - 105*	*03/19/14 17:10*	*03/21/14 01:20*	*1*
2-Fluorophenol (Surr)	*3*	*Q*	*35 - 105*	*03/19/14 17:10*	*03/21/14 01:20*	*1*
Nitrobenzene-d5 (Surr)	*72*		*35 - 100*	*03/19/14 17:10*	*03/21/14 01:20*	*1*
Phenol-d5 (Surr)	*30*	*Q*	*40 - 100*	*03/19/14 17:10*	*03/21/14 01:20*	*1*
Terphenyl-d14 (Surr)	*75*		*30 - 125*	*03/19/14 17:10*	*03/21/14 01:20*	*1*

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 94.0**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	66	U	320	48	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
1,2,4-Trichlorobenzene	32	U	320	28	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
1,2-Dichlorobenzene	32	U	320	22	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
1,2-Diphenylhydrazine	32	U Q	320	22	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
1,3-Dichlorobenzene	32	U	320	12	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
1,4-Dichlorobenzene	32	U	320	13	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2,2'-oxybis[1-chloropropane]	32	U	320	23	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2,4,5-Trichlorophenol	130	U Q	320	9.8	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2,4,6-Trichlorophenol	65	U Q	320	9.8	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2,4-Dichlorophenol	65	U Q	320	9.8	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2,4-Dimethylphenol	130	U Q	320	65	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2,4-Dinitrophenol	660	U Q	1600	330	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2,4-Dinitrotoluene	130	U	320	65	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2,6-Dichlorophenol	130	U	320	68	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1

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

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 94.0**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	65	U	320	28	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2-Chloronaphthalene	32	U	320	9.8	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2-Chlorophenol	32	U Q	320	21	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2-Methylnaphthalene	32	U	320	19	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2-Methylphenol	32	U Q	320	13	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2-Nitroaniline	65	U	1600	49	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
2-Nitrophenol	65	U Q	320	9.8	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
3 & 4 Methylphenol	65	U Q	320	32	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
3,3'-Dichlorobenzidine	320	U	1600	88	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
3-Nitroaniline	130	U	1600	72	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
4,6-Dinitro-2-methylphenol	650	U Q	1600	320	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
4-Bromophenyl phenyl ether	32	U	320	19	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
4-Chloro-3-methylphenol	130	U Q	320	65	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
4-Chloroaniline	130	U	320	80	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
4-Chlorophenyl phenyl ether	65	U	320	21	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
4-Nitroaniline	130	U	1600	71	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
4-Nitrophenol	320	U Q	1600	95	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Acenaphthene	17	U	320	10	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Acenaphthylene	32	U	320	17	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Anthracene	32	U	320	17	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Benzidine	3900	U	3900	970	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Benzo[a]anthracene	32	U	320	20	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Benzo[a]pyrene	32	U	320	20	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Benzo[b]fluoranthene	32	U	320	26	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Benzo[g,h,i]perylene	32	U	320	16	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Benzo[k]fluoranthene	65	U	320	39	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Benzoic acid	650	U Q	1600	320	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Benzyl alcohol	32	U	320	9.8	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Bis(2-chloroethoxy)methane	65	U	320	23	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Bis(2-chloroethyl)ether	32	U	320	16	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Bis(2-ethylhexyl) phthalate	65	U	320	45	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Butyl benzyl phthalate	65	U	320	42	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Carbazole	66	U	320	35	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Chrysene	32	U	320	27	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Dibenz(a,h)anthracene	32	U	320	19	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Dibenzofuran	32	U	320	20	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Diethyl phthalate	32	U	650	26	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Dimethyl phthalate	**25**	**J**	320	23	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Di-n-butyl phthalate	32	U	320	28	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Di-n-octyl phthalate	65	U	320	14	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Fluoranthene	65	U	320	35	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Fluorene	32	U	320	18	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Hexachlorobenzene	65	U	320	28	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Hexachlorobutadiene	65	U	320	9.8	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Hexachlorocyclopentadiene	65	U Q	1700	49	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Hexachloroethane	32	U	320	21	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Indeno[1,2,3-cd]pyrene	32	U	320	22	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Isophorone	**600**		320	17	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Naphthalene	65	U	320	30	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1

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

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 94.0**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	32	U	320	22	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
N-Nitrosodimethylamine	65	U Q	510	36	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
N-Nitrosodi-n-propylamine	65	U	320	30	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
N-Nitrosodiphenylamine	32	U	320	21	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
N-Nitrosopyrrolidine	130	U Q	320	63	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Pentachlorophenol	660	U Q	1600	320	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Phenanthrene	32	U	320	17	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Phenol	32	U Q	320	18	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1
Pyrene	32	U	390	12	ug/Kg	☼	03/19/14 17:10	03/21/14 01:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*2*	*Q*	*35 - 125*	*03/19/14 17:10*	*03/21/14 01:46*	*1*
2-Fluorobiphenyl	*78*		*45 - 105*	*03/19/14 17:10*	*03/21/14 01:46*	*1*
2-Fluorophenol (Surr)	*0*	*Q*	*35 - 105*	*03/19/14 17:10*	*03/21/14 01:46*	*1*
Nitrobenzene-d5 (Surr)	*79*		*35 - 100*	*03/19/14 17:10*	*03/21/14 01:46*	*1*
Phenol-d5 (Surr)	*17*	*Q*	*40 - 100*	*03/19/14 17:10*	*03/21/14 01:46*	*1*
Terphenyl-d14 (Surr)	*77*		*30 - 125*	*03/19/14 17:10*	*03/21/14 01:46*	*1*

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	72	U	360	53	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
1,2,4-Trichlorobenzene	36	U	360	30	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
1,2-Dichlorobenzene	36	U	360	24	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
1,2-Diphenylhydrazine	36	U Q	360	24	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
1,3-Dichlorobenzene	36	U	360	13	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
1,4-Dichlorobenzene	36	U	360	15	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2,2'-oxybis[1-chloropropane]	36	U	360	25	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2,4,5-Trichlorophenol	140	U Q	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2,4,6-Trichlorophenol	71	U Q	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2,4-Dichlorophenol	71	U Q	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2,4-Dimethylphenol	140	U Q	360	71	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2,4-Dinitrophenol	720	U Q	1700	360	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2,4-Dinitrotoluene	140	U	360	71	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2,6-Dichlorophenol	140	U	360	74	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2,6-Dinitrotoluene	71	U	360	30	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2-Chloronaphthalene	36	U	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2-Chlorophenol	36	U Q	360	23	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2-Methylnaphthalene	36	U	360	20	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2-Methylphenol	36	U Q	360	14	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2-Nitroaniline	71	U	1700	54	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
2-Nitrophenol	71	U Q	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
3 & 4 Methylphenol	71	U Q	360	36	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
3,3'-Dichlorobenzidine	360	U	1700	97	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
3-Nitroaniline	140	U	1700	79	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
4,6-Dinitro-2-methylphenol	710	U Q	1700	360	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
4-Bromophenyl phenyl ether	36	U	360	20	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
4-Chloro-3-methylphenol	140	U Q	360	71	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
4-Chloroaniline	140	U	360	88	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1

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

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	71	U	360	23	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
4-Nitroaniline	140	U	1700	78	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
4-Nitrophenol	360	U Q	1700	100	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Acenaphthene	18	U	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Acenaphthylene	36	U	360	18	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Anthracene	36	U	360	18	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Benzidine	4300	U	4300	1100	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Benzo[a]anthracene	36	U	360	22	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Benzo[a]pyrene	36	U	360	22	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Benzo[b]fluoranthene	36	U	360	28	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Benzo[g,h,i]perylene	36	U	360	17	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Benzo[k]fluoranthene	71	U	360	43	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Benzoic acid	710	U Q	1700	360	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Benzyl alcohol	36	U	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Bis(2-chloroethoxy)methane	71	U	360	25	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Bis(2-chloroethyl)ether	36	U	360	18	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Bis(2-ethylhexyl) phthalate	71	U	360	50	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Butyl benzyl phthalate	71	U	360	46	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Carbazole	72	U	360	39	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Chrysene	36	U	360	29	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Dibenz(a,h)anthracene	36	U	360	20	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Dibenzofuran	36	U	360	22	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Diethyl phthalate	36	U	710	28	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Dimethyl phthalate	36	U	360	25	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Di-n-butyl phthalate	36	U	360	31	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Di-n-octyl phthalate	71	U	360	16	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Fluoranthene	71	U	360	39	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Fluorene	36	U	360	19	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Hexachlorobenzene	71	U	360	31	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Hexachlorobutadiene	71	U	360	11	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Hexachlorocyclopentadiene	71	U Q	1800	54	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Hexachloroethane	36	U	360	23	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Indeno[1,2,3-cd]pyrene	36	U	360	24	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Isophorone	**200**	**J**	360	18	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Naphthalene	71	U	360	33	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Nitrobenzene	36	U	360	24	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
N-Nitrosodimethylamine	71	U Q	560	40	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
N-Nitrosodi-n-propylamine	71	U	360	33	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
N-Nitrosodiphenylamine	36	U	360	23	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
N-Nitrosopyrrolidine	140	U Q	360	69	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Pentachlorophenol	720	U Q	1700	360	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Phenanthrene	36	U	360	18	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Phenol	36	U Q	360	19	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1
Pyrene	36	U	430	13	ug/Kg	☼	03/19/14 17:10	03/21/14 02:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*0*	*Q*	*35 - 125*	*03/19/14 17:10*	*03/21/14 02:13*	*1*
2-Fluorobiphenyl	*75*		*45 - 105*	*03/19/14 17:10*	*03/21/14 02:13*	*1*
2-Fluorophenol (Surr)	*0*	*Q*	*35 - 105*	*03/19/14 17:10*	*03/21/14 02:13*	*1*
Nitrobenzene-d5 (Surr)	*83*		*35 - 100*	*03/19/14 17:10*	*03/21/14 02:13*	*1*

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

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5 (Surr)	*10*	*Q*	*40 - 100*	*03/19/14 17:10*	*03/21/14 02:13*	*1*
Terphenyl-d14 (Surr)	*76*		*30 - 125*	*03/19/14 17:10*	*03/21/14 02:13*	*1*

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

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0050	U	0.020	0.0016	mg/L		03/24/14 10:13	03/26/14 15:23	1
2,4,5-Trichlorophenol	**0.0062**	**J**	0.050	0.0022	mg/L		03/24/14 10:13	03/26/14 15:23	1
2,4,6-Trichlorophenol	0.0050	U	0.025	0.0014	mg/L		03/24/14 10:13	03/26/14 15:23	1
2,4-Dinitrotoluene	0.020	U	0.050	0.0083	mg/L		03/24/14 10:13	03/26/14 15:23	1
2-Methylphenol	0.020	U	0.050	0.0049	mg/L		03/24/14 10:13	03/26/14 15:23	1
3 & 4 Methylphenol	0.0050	U	0.050	0.0012	mg/L		03/24/14 10:13	03/26/14 15:23	1
Hexachlorobenzene	0.0050	U	0.050	0.0033	mg/L		03/24/14 10:13	03/26/14 15:23	1
Hexachlorobutadiene	0.050	U	0.050	0.016	mg/L		03/24/14 10:13	03/26/14 15:23	1
Hexachloroethane	0.020	U	0.050	0.010	mg/L		03/24/14 10:13	03/26/14 15:23	1
Nitrobenzene	0.010	U	0.050	0.0040	mg/L		03/24/14 10:13	03/26/14 15:23	1
Pentachlorophenol	0.20	U	0.25	0.0050	mg/L		03/24/14 10:13	03/26/14 15:23	1
Pyridine	0.010	U J	0.10	0.0056	mg/L		03/24/14 10:13	03/26/14 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*83*		*51 - 120*	*03/24/14 10:13*	*03/26/14 15:23*	*1*
2-Fluorobiphenyl	*85*		*49 - 120*	*03/24/14 10:13*	*03/26/14 15:23*	*1*
2-Fluorophenol (Surr)	*80*		*50 - 120*	*03/24/14 10:13*	*03/26/14 15:23*	*1*
Nitrobenzene-d5 (Surr)	*87*		*51 - 120*	*03/24/14 10:13*	*03/26/14 15:23*	*1*
Phenol-d5 (Surr)	*73*		*47 - 120*	*03/24/14 10:13*	*03/26/14 15:23*	*1*
Terphenyl-d14 (Surr)	*96*		*56 - 120*	*03/24/14 10:13*	*03/26/14 15:23*	*1*

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0050	U	0.020	0.0016	mg/L		03/24/14 10:13	03/26/14 16:31	1
2,4,5-Trichlorophenol	**0.0077**	**J**	0.050	0.0022	mg/L		03/24/14 10:13	03/26/14 16:31	1
2,4,6-Trichlorophenol	0.0050	U	0.025	0.0014	mg/L		03/24/14 10:13	03/26/14 16:31	1
2,4-Dinitrotoluene	0.020	U	0.050	0.0082	mg/L		03/24/14 10:13	03/26/14 16:31	1
2-Methylphenol	0.020	U	0.050	0.0049	mg/L		03/24/14 10:13	03/26/14 16:31	1
3 & 4 Methylphenol	0.0050	U	0.050	0.0012	mg/L		03/24/14 10:13	03/26/14 16:31	1
Hexachlorobenzene	0.0050	U	0.050	0.0033	mg/L		03/24/14 10:13	03/26/14 16:31	1
Hexachlorobutadiene	0.050	U	0.050	0.016	mg/L		03/24/14 10:13	03/26/14 16:31	1
Hexachloroethane	0.020	U	0.050	0.010	mg/L		03/24/14 10:13	03/26/14 16:31	1
Nitrobenzene	0.0099	U	0.050	0.0040	mg/L		03/24/14 10:13	03/26/14 16:31	1
Pentachlorophenol	0.20	U	0.25	0.0050	mg/L		03/24/14 10:13	03/26/14 16:31	1
Pyridine	0.0099	U	0.099	0.0056	mg/L		03/24/14 10:13	03/26/14 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*84*		*51 - 120*	*03/24/14 10:13*	*03/26/14 16:31*	*1*
2-Fluorobiphenyl	*89*		*49 - 120*	*03/24/14 10:13*	*03/26/14 16:31*	*1*

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

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*82*		*50 - 120*	*03/24/14 10:13*	*03/26/14 16:31*	*1*
Nitrobenzene-d5 (Surr)	*90*		*51 - 120*	*03/24/14 10:13*	*03/26/14 16:31*	*1*
Phenol-d5 (Surr)	*76*		*47 - 120*	*03/24/14 10:13*	*03/26/14 16:31*	*1*
Terphenyl-d14 (Surr)	*95*		*56 - 120*	*03/24/14 10:13*	*03/26/14 16:31*	*1*

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0050	U	0.020	0.0016	mg/L		03/24/14 10:13	03/26/14 12:20	1
2,4,5-Trichlorophenol	0.0050	U	0.050	0.0022	mg/L		03/24/14 10:13	03/26/14 12:20	1
2,4,6-Trichlorophenol	0.0050	U	0.025	0.0014	mg/L		03/24/14 10:13	03/26/14 12:20	1
2,4-Dinitrotoluene	0.020	U	0.050	0.0083	mg/L		03/24/14 10:13	03/26/14 12:20	1
2-Methylphenol	0.020	U	0.050	0.0049	mg/L		03/24/14 10:13	03/26/14 12:20	1
3 & 4 Methylphenol	0.0050	U	0.050	0.0013	mg/L		03/24/14 10:13	03/26/14 12:20	1
Hexachlorobenzene	0.0050	U	0.050	0.0033	mg/L		03/24/14 10:13	03/26/14 12:20	1
Hexachlorobutadiene	0.050	U	0.050	0.017	mg/L		03/24/14 10:13	03/26/14 12:20	1
Hexachloroethane	0.020	U	0.050	0.011	mg/L		03/24/14 10:13	03/26/14 12:20	1
Nitrobenzene	0.010	U	0.050	0.0041	mg/L		03/24/14 10:13	03/26/14 12:20	1
Pentachlorophenol	0.20	U	0.25	0.0050	mg/L		03/24/14 10:13	03/26/14 12:20	1
Pyridine	0.010	U J	0.10	0.0057	mg/L		03/24/14 10:13	03/26/14 12:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*83*		*51 - 120*	*03/24/14 10:13*	*03/26/14 12:20*	*1*
2-Fluorobiphenyl	*85*		*49 - 120*	*03/24/14 10:13*	*03/26/14 12:20*	*1*
2-Fluorophenol (Surr)	*85*		*50 - 120*	*03/24/14 10:13*	*03/26/14 12:20*	*1*
Nitrobenzene-d5 (Surr)	*87*		*51 - 120*	*03/24/14 10:13*	*03/26/14 12:20*	*1*
Phenol-d5 (Surr)	*79*		*47 - 120*	*03/24/14 10:13*	*03/26/14 12:20*	*1*
Terphenyl-d14 (Surr)	*95*		*56 - 120*	*03/24/14 10:13*	*03/26/14 12:20*	*1*

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0050	U	0.020	0.0016	mg/L		03/24/14 10:13	03/26/14 16:54	1
2,4,5-Trichlorophenol	0.0050	U	0.050	0.0022	mg/L		03/24/14 10:13	03/26/14 16:54	1
2,4,6-Trichlorophenol	0.0050	U	0.025	0.0014	mg/L		03/24/14 10:13	03/26/14 16:54	1
2,4-Dinitrotoluene	0.020	U	0.050	0.0083	mg/L		03/24/14 10:13	03/26/14 16:54	1
2-Methylphenol	0.020	U	0.050	0.0049	mg/L		03/24/14 10:13	03/26/14 16:54	1
3 & 4 Methylphenol	0.0050	U	0.050	0.0013	mg/L		03/24/14 10:13	03/26/14 16:54	1
Hexachlorobenzene	0.0050	U	0.050	0.0033	mg/L		03/24/14 10:13	03/26/14 16:54	1
Hexachlorobutadiene	0.050	U	0.050	0.017	mg/L		03/24/14 10:13	03/26/14 16:54	1
Hexachloroethane	0.020	U	0.050	0.011	mg/L		03/24/14 10:13	03/26/14 16:54	1
Nitrobenzene	0.010	U	0.050	0.0041	mg/L		03/24/14 10:13	03/26/14 16:54	1
Pentachlorophenol	0.20	U	0.25	0.0050	mg/L		03/24/14 10:13	03/26/14 16:54	1
Pyridine	0.010	U	0.10	0.0057	mg/L		03/24/14 10:13	03/26/14 16:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*90*		*51 - 120*	*03/24/14 10:13*	*03/26/14 16:54*	*1*
2-Fluorobiphenyl	*92*		*49 - 120*	*03/24/14 10:13*	*03/26/14 16:54*	*1*

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

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*87*		*50 - 120*	*03/24/14 10:13*	*03/26/14 16:54*	*1*
Nitrobenzene-d5 (Surr)	*93*		*51 - 120*	*03/24/14 10:13*	*03/26/14 16:54*	*1*
Phenol-d5 (Surr)	*80*		*47 - 120*	*03/24/14 10:13*	*03/26/14 16:54*	*1*
Terphenyl-d14 (Surr)	*99*		*56 - 120*	*03/24/14 10:13*	*03/26/14 16:54*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 93.5**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	0.49	U	1.8	0.19	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
Endosulfan II	0.49	U	1.8	0.30	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
Endosulfan sulfate	0.49	U	1.8	0.29	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
Endrin	0.49	U	1.8	0.33	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
Endrin aldehyde	0.49	U	1.8	0.18	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
Endrin ketone	0.73	U	1.8	0.52	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
beta-BHC	0.73	U	1.8	0.71	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
alpha-BHC	0.49	U	1.8	0.23	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
delta-BHC	0.73	U	1.8	0.43	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
gamma-BHC (Lindane)	0.73	U	1.8	0.49	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
gamma-Chlordane	0.73	U	1.8	0.28	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
4,4'-DDD	0.73	U	1.8	0.58	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
4,4'-DDE	**0.97**	**J**	1.8	0.25	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
4,4'-DDT	0.73	U	2.1	0.63	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
Heptachlor	0.49	U	1.8	0.23	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
Heptachlor epoxide	0.73	U	1.8	0.45	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
Dieldrin	0.49	U	1.8	0.22	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
Aldrin	0.49	U	1.8	0.27	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
Methoxychlor	0.73	U	3.5	0.48	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
Toxaphene	29	U	180	17	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1
alpha-Chlordane	0.49	U	1.8	0.34	ug/Kg	☼	03/21/14 13:30	03/28/14 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*99*		*55 - 130*	*03/21/14 13:30*	*03/28/14 15:14*	*1*
Tetrachloro-m-xylene	*80*		*70 - 125*	*03/21/14 13:30*	*03/28/14 15:14*	*1*

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	0.50	U	1.8	0.19	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
Endosulfan II	0.50	U	1.8	0.31	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
Endosulfan sulfate	0.50	U	1.8	0.30	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
Endrin	0.50	U	1.8	0.33	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
Endrin aldehyde	0.50	U	1.8	0.19	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
Endrin ketone	0.75	U	1.8	0.53	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
beta-BHC	0.75	U	1.8	0.72	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
alpha-BHC	0.50	U	1.8	0.23	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
delta-BHC	0.75	U	1.8	0.44	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-BHC (Lindane)	0.75	U	1.8	0.50	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
gamma-Chlordane	0.75	U	1.8	0.29	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
4,4'-DDD	0.75	U	1.8	0.59	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
4,4'-DDE	0.50	U	1.8	0.26	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
4,4'-DDT	0.75	U	2.2	0.64	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
Heptachlor	0.50	U	1.8	0.23	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
Heptachlor epoxide	0.75	U	1.8	0.46	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
Dieldrin	0.50	U	1.8	0.23	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
Aldrin	0.50	U	1.8	0.27	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
Methoxychlor	0.75	U	3.6	0.49	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
Toxaphene	29	U	180	17	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1
alpha-Chlordane	0.50	U	1.8	0.35	ug/Kg	☼	03/21/14 13:30	03/28/14 15:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*91*		*55 - 130*	*03/21/14 13:30*	*03/28/14 15:31*	*1*
Tetrachloro-m-xylene	*74*		*70 - 125*	*03/21/14 13:30*	*03/28/14 15:31*	*1*

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 94.0**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	0.48	U	1.8	0.18	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
Endosulfan II	0.48	U	1.8	0.30	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
Endosulfan sulfate	0.48	U	1.8	0.29	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
Endrin	0.48	U	1.8	0.32	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
Endrin aldehyde	0.48	U	1.8	0.18	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
Endrin ketone	0.72	U	1.8	0.51	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
beta-BHC	0.72	U	1.8	0.69	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
alpha-BHC	0.48	U	1.8	0.22	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
delta-BHC	0.72	U	1.8	0.42	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
gamma-BHC (Lindane)	0.72	U	1.8	0.48	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
gamma-Chlordane	0.72	U	1.8	0.28	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
4,4'-DDD	0.72	U	1.8	0.57	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
4,4'-DDE	0.48	U	1.8	0.25	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
4,4'-DDT	0.72	U	2.1	0.61	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
Heptachlor	0.48	U	1.8	0.22	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
Heptachlor epoxide	0.72	U	1.8	0.44	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
Dieldrin	0.48	U	1.8	0.22	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
Aldrin	0.48	U	1.8	0.26	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
Methoxychlor	0.72	U	3.4	0.47	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
Toxaphene	28	U	180	16	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1
alpha-Chlordane	0.48	U	1.8	0.33	ug/Kg	☼	03/21/14 13:30	03/28/14 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*89*		*55 - 130*	*03/21/14 13:30*	*03/28/14 15:49*	*1*
Tetrachloro-m-xylene	*77*		*70 - 125*	*03/21/14 13:30*	*03/28/14 15:49*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	0.49	U	1.8	0.19	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
Endosulfan II	0.49	U	1.8	0.31	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
Endosulfan sulfate	0.49	U	1.8	0.30	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
Endrin	0.49	U	1.8	0.33	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
Endrin aldehyde	0.49	U	1.8	0.18	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
Endrin ketone	0.74	U	1.8	0.52	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
beta-BHC	0.74	U	1.8	0.71	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
alpha-BHC	0.49	U	1.8	0.23	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
delta-BHC	0.74	U	1.8	0.43	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
gamma-BHC (Lindane)	0.74	U	1.8	0.50	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
gamma-Chlordane	0.74	U	1.8	0.28	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
4,4'-DDD	0.74	U	1.8	0.58	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
4,4'-DDE	0.49	U	1.8	0.25	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
4,4'-DDT	0.74	U	2.1	0.63	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
Heptachlor	0.49	U	1.8	0.23	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
Heptachlor epoxide	0.74	U	1.8	0.46	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
Dieldrin	0.49	U	1.8	0.22	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
Aldrin	0.49	U	1.8	0.27	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
Methoxychlor	0.74	U	3.5	0.48	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
Toxaphene	29	U	180	17	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1
alpha-Chlordane	0.49	U	1.8	0.35	ug/Kg	☼	03/21/14 13:30	03/28/14 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*103*		*55 - 130*	*03/21/14 13:30*	*03/28/14 16:06*	*1*
Tetrachloro-m-xylene	*97*		*70 - 125*	*03/21/14 13:30*	*03/28/14 16:06*	*1*

Method: 8081B - Organochlorine Pesticides (GC) - TCLP

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	0.000099	U	0.00050	0.000078	mg/L		03/24/14 14:33	03/27/14 18:08	1
Heptachlor	0.000099	U	0.00050	0.000076	mg/L		03/24/14 14:33	03/27/14 18:08	1
Heptachlor epoxide	0.000099	U	0.00050	0.000074	mg/L		03/24/14 14:33	03/27/14 18:08	1
gamma-BHC (Lindane)	0.000099	U	0.00050	0.000068	mg/L		03/24/14 14:33	03/27/14 18:08	1
Methoxychlor	0.00020	U	0.00099	0.00013	mg/L		03/24/14 14:33	03/27/14 18:08	1
Toxaphene	0.0079	U	0.020	0.0036	mg/L		03/24/14 14:33	03/27/14 18:08	1
Technical Chlordane	0.0048	U	0.0050	0.0014	mg/L		03/24/14 14:33	03/27/14 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*94*		*28 - 115*	*03/24/14 14:33*	*03/27/14 18:08*	*1*
DCB Decachlorobiphenyl	*108*		*34 - 122*	*03/24/14 14:33*	*03/27/14 18:08*	*1*

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	0.000099	U	0.00050	0.000078	mg/L		03/24/14 14:33	03/27/14 18:25	1
Heptachlor	0.000099	U	0.00050	0.000076	mg/L		03/24/14 14:33	03/27/14 18:25	1

Method: 8081B - Organochlorine Pesticides (GC) - TCLP (Continued)

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	0.000099	U	0.00050	0.000074	mg/L		03/24/14 14:33	03/27/14 18:25	1
gamma-BHC (Lindane)	0.000099	U	0.00050	0.000068	mg/L		03/24/14 14:33	03/27/14 18:25	1
Methoxychlor	0.00020	U	0.00099	0.00013	mg/L		03/24/14 14:33	03/27/14 18:25	1
Toxaphene	0.0079	U	0.020	0.0036	mg/L		03/24/14 14:33	03/27/14 18:25	1
Technical Chlordane	0.0048	U	0.0050	0.0014	mg/L		03/24/14 14:33	03/27/14 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*99*		*28 - 115*	*03/24/14 14:33*	*03/27/14 18:25*	*1*
DCB Decachlorobiphenyl	*100*		*34 - 122*	*03/24/14 14:33*	*03/27/14 18:25*	*1*

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	0.00010	U	0.00050	0.000079	mg/L		03/24/14 14:33	03/27/14 20:59	1
Heptachlor	0.00010	U	0.00050	0.000077	mg/L		03/24/14 14:33	03/27/14 20:59	1
Heptachlor epoxide	0.00010	U	0.00050	0.000075	mg/L		03/24/14 14:33	03/27/14 20:59	1
gamma-BHC (Lindane)	0.00010	U	0.00050	0.000069	mg/L		03/24/14 14:33	03/27/14 20:59	1
Methoxychlor	0.00020	U	0.0010	0.00013	mg/L		03/24/14 14:33	03/27/14 20:59	1
Toxaphene	0.0080	U	0.020	0.0037	mg/L		03/24/14 14:33	03/27/14 20:59	1
Technical Chlordane	0.0048	U	0.0050	0.0014	mg/L		03/24/14 14:33	03/27/14 20:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*98*		*28 - 115*	*03/24/14 14:33*	*03/27/14 20:59*	*1*
DCB Decachlorobiphenyl	*116*		*34 - 122*	*03/24/14 14:33*	*03/27/14 20:59*	*1*

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	0.000098	U	0.00049	0.000077	mg/L		03/24/14 14:33	03/27/14 19:16	1
Heptachlor	0.000098	U	0.00049	0.000075	mg/L		03/24/14 14:33	03/27/14 19:16	1
Heptachlor epoxide	0.000098	U	0.00049	0.000074	mg/L		03/24/14 14:33	03/27/14 19:16	1
gamma-BHC (Lindane)	0.000098	U	0.00049	0.000068	mg/L		03/24/14 14:33	03/27/14 19:16	1
Methoxychlor	0.00020	U	0.00098	0.00013	mg/L		03/24/14 14:33	03/27/14 19:16	1
Toxaphene	0.0078	U	0.020	0.0036	mg/L		03/24/14 14:33	03/27/14 19:16	1
Technical Chlordane	0.0047	U	0.0049	0.0014	mg/L		03/24/14 14:33	03/27/14 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*90*		*28 - 115*	*03/24/14 14:33*	*03/27/14 19:16*	*1*
DCB Decachlorobiphenyl	*112*		*34 - 122*	*03/24/14 14:33*	*03/27/14 19:16*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 93.5**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	21	U	35	17	ug/Kg	☼	03/21/14 13:30	03/26/14 15:56	1
PCB-1016	11	U	35	5.4	ug/Kg	☼	03/21/14 13:30	03/26/14 15:56	1
PCB-1232	16	U	35	5.4	ug/Kg	☼	03/21/14 13:30	03/26/14 15:56	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 93.5**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1242	11	U	35	9.7	ug/Kg	☼	03/21/14 13:30	03/26/14 15:56	1
PCB-1248	11	U	35	6.0	ug/Kg	☼	03/21/14 13:30	03/26/14 15:56	1
PCB-1254	11	U	35	5.9	ug/Kg	☼	03/21/14 13:30	03/26/14 15:56	1
PCB-1260	11	U	35	2.8	ug/Kg	☼	03/21/14 13:30	03/26/14 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*93*		*60 - 125*	*03/21/14 13:30*	*03/26/14 15:56*	*1*

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	22	U	36	17	ug/Kg	☼	03/21/14 13:30	03/26/14 16:20	1
PCB-1016	11	U	36	5.5	ug/Kg	☼	03/21/14 13:30	03/26/14 16:20	1
PCB-1232	16	U	36	5.6	ug/Kg	☼	03/21/14 13:30	03/26/14 16:20	1
PCB-1242	11	U	36	9.9	ug/Kg	☼	03/21/14 13:30	03/26/14 16:20	1
PCB-1248	11	U	36	6.1	ug/Kg	☼	03/21/14 13:30	03/26/14 16:20	1
PCB-1254	11	U	36	6.0	ug/Kg	☼	03/21/14 13:30	03/26/14 16:20	1
PCB-1260	11	U	36	2.9	ug/Kg	☼	03/21/14 13:30	03/26/14 16:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*85*		*60 - 125*	*03/21/14 13:30*	*03/26/14 16:20*	*1*

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 94.0**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	21	U	34	16	ug/Kg	☼	03/21/14 13:30	03/26/14 16:44	1
PCB-1016	10	U	34	5.3	ug/Kg	☼	03/21/14 13:30	03/26/14 16:44	1
PCB-1232	16	U	34	5.3	ug/Kg	☼	03/21/14 13:30	03/26/14 16:44	1
PCB-1242	10	U	34	9.5	ug/Kg	☼	03/21/14 13:30	03/26/14 16:44	1
PCB-1248	10	U	34	5.8	ug/Kg	☼	03/21/14 13:30	03/26/14 16:44	1
PCB-1254	10	U	34	5.7	ug/Kg	☼	03/21/14 13:30	03/26/14 16:44	1
PCB-1260	10	U	34	2.7	ug/Kg	☼	03/21/14 13:30	03/26/14 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*88*		*60 - 125*	*03/21/14 13:30*	*03/26/14 16:44*	*1*

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	21	U	35	17	ug/Kg	☼	03/21/14 13:30	03/26/14 17:08	1
PCB-1016	11	U	35	5.5	ug/Kg	☼	03/21/14 13:30	03/26/14 17:08	1
PCB-1232	16	U	35	5.5	ug/Kg	☼	03/21/14 13:30	03/26/14 17:08	1
PCB-1242	11	U	35	9.8	ug/Kg	☼	03/21/14 13:30	03/26/14 17:08	1
PCB-1248	11	U	35	6.0	ug/Kg	☼	03/21/14 13:30	03/26/14 17:08	1
PCB-1254	11	U	35	5.9	ug/Kg	☼	03/21/14 13:30	03/26/14 17:08	1
PCB-1260	11	U	35	2.8	ug/Kg	☼	03/21/14 13:30	03/26/14 17:08	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	105		60 - 125	03/21/14 13:30	03/26/14 17:08	1

Method: 8151A - Herbicides (GC)

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 93.5**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	5.9	U	21	2.5	ug/Kg	☼	03/20/14 21:30	03/24/14 17:46	1
2,4-D	20	U	86	15	ug/Kg	☼	03/20/14 21:30	03/24/14 17:46	1
2,4-DB	**33**	**J**	86	8.0	ug/Kg	☼	03/20/14 21:30	03/24/14 17:46	1
Dalapon	5.9	U	43	1.5	ug/Kg	☼	03/20/14 21:30	03/24/14 17:46	1
Dicamba	**21**	**J**	43	1.5	ug/Kg	☼	03/20/14 21:30	03/24/14 17:46	1
Dichlorprop	5.9	U	86	3.4	ug/Kg	☼	03/20/14 21:30	03/24/14 17:46	1
MCPA	5000	U	8600	2100	ug/Kg	☼	03/20/14 21:30	03/24/14 17:46	1
Silvex (2,4,5-TP)	5.9	U	21	1.5	ug/Kg	☼	03/20/14 21:30	03/24/14 17:46	1
MCPP	5000	U	8600	2100	ug/Kg	☼	03/20/14 21:30	03/24/14 17:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	68		31 - 105	03/20/14 21:30	03/24/14 17:46	1

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	5.9	U	22	2.5	ug/Kg	☼	03/24/14 13:36	03/26/14 10:53	1
2,4-D	20	U	86	15	ug/Kg	☼	03/24/14 13:36	03/26/14 10:53	1
2,4-DB	22	U	86	8.0	ug/Kg	☼	03/24/14 13:36	03/26/14 10:53	1
Dalapon	5.9	U	43	1.5	ug/Kg	☼	03/24/14 13:36	03/26/14 10:53	1
Dicamba	5.9	U Q	43	1.5	ug/Kg	☼	03/24/14 13:36	03/26/14 10:53	1
Dichlorprop	5.9	U	86	3.4	ug/Kg	☼	03/24/14 13:36	03/26/14 10:53	1
MCPA	5000	U	8600	2200	ug/Kg	☼	03/24/14 13:36	03/26/14 10:53	1
Silvex (2,4,5-TP)	5.9	U	22	1.5	ug/Kg	☼	03/24/14 13:36	03/26/14 10:53	1
MCPP	5000	U	8600	2200	ug/Kg	☼	03/24/14 13:36	03/26/14 10:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	94	M	31 - 105	03/24/14 13:36	03/26/14 10:53	1

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 94.0**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	5.7	U	21	2.4	ug/Kg	☼	03/20/14 21:30	03/24/14 18:34	1
2,4-D	19	U	83	15	ug/Kg	☼	03/20/14 21:30	03/24/14 18:34	1
2,4-DB	21	U	83	7.8	ug/Kg	☼	03/20/14 21:30	03/24/14 18:34	1
Dalapon	5.7	U	42	1.5	ug/Kg	☼	03/20/14 21:30	03/24/14 18:34	1
Dicamba	5.7	U	42	1.5	ug/Kg	☼	03/20/14 21:30	03/24/14 18:34	1
Dichlorprop	5.7	U	83	3.3	ug/Kg	☼	03/20/14 21:30	03/24/14 18:34	1
MCPA	4800	U	8300	2100	ug/Kg	☼	03/20/14 21:30	03/24/14 18:34	1
Silvex (2,4,5-TP)	5.7	U	21	1.5	ug/Kg	☼	03/20/14 21:30	03/24/14 18:34	1
MCPP	4900	U	8300	2100	ug/Kg	☼	03/20/14 21:30	03/24/14 18:34	1

Method: 8151A - Herbicides (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	63		31 - 105	03/20/14 21:30	03/24/14 18:34	1

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	6.0	U	22	2.5	ug/Kg	☼	03/20/14 21:30	03/24/14 18:59	1
2,4-D	20	U	87	15	ug/Kg	☼	03/20/14 21:30	03/24/14 18:59	1
2,4-DB	22	U	87	8.1	ug/Kg	☼	03/20/14 21:30	03/24/14 18:59	1
Dalapon	6.0	U	43	1.5	ug/Kg	☼	03/20/14 21:30	03/24/14 18:59	1
Dicamba	6.0	U	43	1.5	ug/Kg	☼	03/20/14 21:30	03/24/14 18:59	1
Dichlorprop	6.0	U	87	3.5	ug/Kg	☼	03/20/14 21:30	03/24/14 18:59	1
MCPA	5100	U	8700	2200	ug/Kg	☼	03/20/14 21:30	03/24/14 18:59	1
Silvex (2,4,5-TP)	6.0	U	22	1.5	ug/Kg	☼	03/20/14 21:30	03/24/14 18:59	1
MCPP	5100	U	8700	2200	ug/Kg	☼	03/20/14 21:30	03/24/14 18:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	71		31 - 105	03/20/14 21:30	03/24/14 18:59	1

Method: 8151A - Herbicides (GC) - TCLP

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0092	U	0.040	0.0021	mg/L		03/25/14 07:08	03/26/14 13:48	1
Silvex (2,4,5-TP)	0.0028	U	0.010	0.0017	mg/L		03/25/14 07:08	03/26/14 13:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	35		10 - 131	03/25/14 07:08	03/26/14 13:48	1

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0090	U	0.039	0.0021	mg/L		03/25/14 07:08	03/26/14 14:10	1
Silvex (2,4,5-TP)	0.0027	U	0.0098	0.0017	mg/L		03/25/14 07:08	03/26/14 14:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	37		10 - 131	03/25/14 07:08	03/26/14 14:10	1

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0094	U	0.041	0.0021	mg/L		03/25/14 07:08	03/26/14 16:27	1
Silvex (2,4,5-TP)	0.0029	U	0.010	0.0017	mg/L		03/25/14 07:08	03/26/14 16:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	35		10 - 131	03/25/14 07:08	03/26/14 16:27	1

Method: 8151A - Herbicides (GC) - TCLP

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0092	U	0.040	0.0021	mg/L		03/25/14 07:08	03/26/14 14:33	1
Silvex (2,4,5-TP)	0.0028	U	0.010	0.0017	mg/L		03/25/14 07:08	03/26/14 14:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*57*		*10 - 131*	*03/25/14 07:08*	*03/26/14 14:33*	*1*

Method: 6010C - Metals (ICP)

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 93.5**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**10000**		52	1.6	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Antimony	0.63	U	2.1	0.40	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Arsenic	**3.7**		2.6	0.69	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Barium	**60**		2.1	0.080	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Beryllium	**0.42**	**J**	0.52	0.035	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Cadmium	**0.21**	**J Q**	0.52	0.043	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Calcium	**80000**		100	15	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Chromium	**19**	**Q**	3.7	0.061	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Cobalt	**8.1**		1.0	0.10	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Copper	**12**		5.2	0.23	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Iron	**13000**		84	4.0	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Lead	**23**		0.94	0.28	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Magnesium	**5000**		31	3.9	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Manganese	**310**		4.7	0.10	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Molybdenum	**0.74**	**J**	2.6	0.27	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Nickel	**10**		4.2	0.13	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Phosphorus	**450**		310	1.7	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Potassium	**880**		310	43	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Selenium	1.3	U	3.1	0.90	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Silver	0.21	U	1.6	0.17	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Sodium	**150**	**J**	520	62	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Thallium	1.3	U	3.1	0.68	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Vanadium	**17**		2.1	0.099	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1
Zinc	**44**		8.4	0.42	mg/Kg	☼	03/19/14 12:45	03/20/14 10:18	1

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**9100**		52	1.6	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Antimony	0.62	U	2.1	0.40	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Arsenic	**4.0**		2.6	0.69	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Barium	**60**		2.1	0.079	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Beryllium	**0.37**	**J**	0.52	0.034	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Cadmium	**0.15**	**J Q**	0.52	0.043	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Calcium	**76000**		100	15	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Chromium	**18**	**Q**	3.6	0.060	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Cobalt	**16**		1.0	0.10	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	14		5.2	0.23	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Iron	19000		83	4.0	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Lead	7.6		0.94	0.28	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Magnesium	4400		31	3.8	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Manganese	270		4.7	0.10	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Molybdenum	0.61	J	2.6	0.27	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Nickel	10		4.2	0.13	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Phosphorus	300	J	310	1.7	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Potassium	610		310	43	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Selenium	1.2	U	3.1	0.89	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Silver	0.21	U	1.6	0.17	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Sodium	99	J	520	61	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Thallium	1.2	U	3.1	0.68	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Vanadium	15		2.1	0.098	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1
Zinc	27		8.3	0.41	mg/Kg	☼	03/19/14 12:45	03/20/14 10:20	1

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 94.0**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	10000		52	1.6	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Antimony	0.63	U	2.1	0.40	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Arsenic	3.1		2.6	0.69	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Barium	49		2.1	0.079	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Beryllium	0.31	J	0.52	0.034	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Cadmium	0.16	J Q	0.52	0.043	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Calcium	65000		100	15	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Chromium	12	Q	3.7	0.061	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Cobalt	27		1.0	0.10	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Copper	31		5.2	0.23	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Iron	13000		83	4.0	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Lead	9.6		0.94	0.28	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Magnesium	5000		31	3.9	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Manganese	330		4.7	0.10	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Molybdenum	0.46	J	2.6	0.27	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Nickel	9.4		4.2	0.13	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Phosphorus	370		310	1.7	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Potassium	1000		310	43	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Selenium	1.3	U	3.1	0.90	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Silver	0.21	U	1.6	0.17	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Sodium	480	J	520	62	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Thallium	1.3	U	3.1	0.68	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Vanadium	23		2.1	0.098	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1
Zinc	29		8.3	0.42	mg/Kg	☼	03/19/14 12:45	03/20/14 10:23	1

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8200	J	50	1.6	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.60	U J	2.0	0.38	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Arsenic	**2.1**	**J**	2.5	0.66	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Barium	**91**	**J**	2.0	0.076	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Beryllium	**0.20**	**J**	0.50	0.033	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Cadmium	**0.16**	**J Q**	0.50	0.041	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Calcium	**80000**	**J**	100	14	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Chromium	**9.5**	**Q**	3.5	0.058	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Cobalt	**13**		1.0	0.10	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Copper	**22**	**J**	5.0	0.22	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Iron	**8800**	**J**	80	3.8	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Lead	**8.7**		0.91	0.27	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Magnesium	**5300**		30	3.7	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Manganese	**260**	**J**	4.5	0.10	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Molybdenum	**0.48**	**J**	2.5	0.26	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Nickel	**6.1**		4.0	0.12	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Phosphorus	**320**		300	1.6	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Potassium	**460**		300	41	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Selenium	1.2	U	3.0	0.87	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Silver	0.20	U	1.5	0.16	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Sodium	**340**	**J**	500	59	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Thallium	1.2	U	3.0	0.65	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Vanadium	**22**		2.0	0.095	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1
Zinc	**22**		8.0	0.40	mg/Kg	☼	03/19/14 12:45	03/20/14 10:25	1

Method: 6010C - Metals (ICP) - TCLP

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.065	U	0.50	0.022	mg/L		03/24/14 07:30	03/24/14 20:34	1
Barium	**0.45**	**J**	1.0	0.0020	mg/L		03/24/14 07:30	03/24/14 20:34	1
Cadmium	**0.0021**	**J**	0.10	0.0020	mg/L		03/24/14 07:30	03/24/14 20:34	1
Chromium	0.0045	U	0.50	0.0030	mg/L		03/24/14 07:30	03/24/14 20:34	1
Lead	0.035	U	0.50	0.013	mg/L		03/24/14 07:30	03/24/14 20:34	1
Selenium	**0.040**	**J**	0.10	0.024	mg/L		03/24/14 07:30	03/24/14 20:34	1
Silver	0.015	U	0.50	0.0040	mg/L		03/24/14 07:30	03/24/14 20:34	1

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.065	U	0.50	0.022	mg/L		03/24/14 07:30	03/24/14 20:36	1
Barium	**0.51**	**J**	1.0	0.0020	mg/L		03/24/14 07:30	03/24/14 20:36	1
Cadmium	0.0070	U	0.10	0.0020	mg/L		03/24/14 07:30	03/24/14 20:36	1
Chromium	0.0045	U	0.50	0.0030	mg/L		03/24/14 07:30	03/24/14 20:36	1
Lead	0.035	U	0.50	0.013	mg/L		03/24/14 07:30	03/24/14 20:36	1
Selenium	**0.025**	**J**	0.10	0.024	mg/L		03/24/14 07:30	03/24/14 20:36	1
Silver	0.015	U	0.50	0.0040	mg/L		03/24/14 07:30	03/24/14 20:36	1

Client Sample Results

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

Method: 6010C - Metals (ICP) - TCLP

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.065	U	0.50	0.022	mg/L		03/24/14 07:30	03/24/14 23:14	1
Barium	**0.11**	**J**	1.0	0.0020	mg/L		03/24/14 07:30	03/24/14 23:14	1
Cadmium	0.0070	U	0.10	0.0020	mg/L		03/24/14 07:30	03/24/14 23:14	1
Chromium	**0.019**	**J**	0.50	0.0030	mg/L		03/24/14 07:30	03/24/14 23:14	1
Lead	0.035	U	0.50	0.013	mg/L		03/24/14 07:30	03/24/14 23:14	1
Selenium	0.075	U	0.10	0.024	mg/L		03/24/14 07:30	03/24/14 23:14	1
Silver	0.015	U	0.50	0.0040	mg/L		03/24/14 07:30	03/24/14 23:14	1

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.065	U	0.50	0.022	mg/L		03/24/14 07:30	03/24/14 20:39	1
Barium	**0.56**	**J**	1.0	0.0020	mg/L		03/24/14 07:30	03/24/14 20:39	1
Cadmium	0.0070	U	0.10	0.0020	mg/L		03/24/14 07:30	03/24/14 20:39	1
Chromium	0.0045	U	0.50	0.0030	mg/L		03/24/14 07:30	03/24/14 20:39	1
Lead	0.035	U	0.50	0.013	mg/L		03/24/14 07:30	03/24/14 20:39	1
Selenium	**0.028**	**J**	0.10	0.024	mg/L		03/24/14 07:30	03/24/14 20:39	1
Silver	0.015	U	0.50	0.0040	mg/L		03/24/14 07:30	03/24/14 20:39	1

Method: 7470A - Mercury (CVAA) - TCLP

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000080	U	0.0020	0.000030	mg/L		03/25/14 11:45	03/26/14 02:47	1

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000080	U	0.0020	0.000030	mg/L		03/25/14 11:45	03/26/14 02:49	1

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000080	U	0.0020	0.000030	mg/L		03/25/14 11:45	03/26/14 03:39	1

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000080	U	0.0020	0.000030	mg/L		03/25/14 11:45	03/26/14 02:52	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 93.5**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	27		22	7.1	ug/Kg	☼	03/19/14 13:00	03/19/14 17:08	1

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	13	J	20	6.4	ug/Kg	☼	03/19/14 13:00	03/19/14 17:15	1

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 94.0**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	21		21	6.8	ug/Kg	☼	03/19/14 13:00	03/19/14 17:18	1

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	33		20	6.5	ug/Kg	☼	03/19/14 13:00	03/19/14 17:20	1

General Chemistry

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability	NO				No Unit			03/18/14 22:37	1
Cyanide, Total	0.26	U	0.52	0.11	mg/Kg	☼	03/21/14 10:06	03/21/14 16:52	1
Sulfide	5.1	U H	5.3	2.6	mg/Kg	☼	03/20/14 11:06	03/20/14 16:00	1
Percent Moisture	6.5		0.10	0.10	%			03/18/14 19:17	1

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability	NO				No Unit			03/18/14 22:37	1
Cyanide, Total	0.28	U	0.56	0.12	mg/Kg	☼	03/21/14 10:06	03/21/14 16:53	1
Sulfide	5.2	U H	5.5	2.6	mg/Kg	☼	03/20/14 11:06	03/20/14 16:00	1
Percent Moisture	9.3		0.10	0.10	%			03/18/14 19:17	1

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability	NO				No Unit			03/18/14 22:37	1
Cyanide, Total	0.13	J	0.54	0.11	mg/Kg	☼	03/21/14 10:06	03/21/14 16:55	1
Sulfide	5.4	H	5.3	2.5	mg/Kg	☼	03/20/14 11:06	03/20/14 16:00	1
Percent Moisture	6.0		0.10	0.10	%			03/18/14 19:17	1

General Chemistry

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability	NO				No Unit			03/18/14 22:37	1
Cyanide, Total	0.18	J	0.55	0.11	mg/Kg	☼	03/21/14 10:06	03/21/14 16:56	1
Sulfide	5.2	U H	5.5	2.6	mg/Kg	☼	03/20/14 11:06	03/20/14 16:00	1
Percent Moisture	8.8		0.10	0.10	%			03/18/14 19:17	1

General Chemistry - Soluble

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.2		0.100	0.100	SU			03/18/14 19:42	1

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.4		0.100	0.100	SU			03/18/14 19:42	1

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.3		0.100	0.100	SU			03/18/14 19:42	1

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.3		0.100	0.100	SU			03/18/14 19:42	1

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

Lab Sample ID: LB 280-217688/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218760

Analyte	LB Result	LB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0020	U	0.010	0.0016	mg/L			03/28/14 00:03	1
2-Butanone (MEK)	0.032	U	0.10	0.018	mg/L			03/28/14 00:03	1
Carbon tetrachloride	0.0040	U	0.010	0.0019	mg/L			03/28/14 00:03	1
Chlorobenzene	0.0020	U	0.010	0.0017	mg/L			03/28/14 00:03	1
Chloroform	0.0020	U	0.010	0.0016	mg/L			03/28/14 00:03	1
1,2-Dichloroethane	0.0040	U	0.010	0.0013	mg/L			03/28/14 00:03	1
1,1-Dichloroethene	0.0040	U	0.010	0.0023	mg/L			03/28/14 00:03	1
Tetrachloroethene	0.0040	U	0.010	0.0020	mg/L			03/28/14 00:03	1
Trichloroethene	0.0020	U	0.010	0.0016	mg/L			03/28/14 00:03	1
Vinyl chloride	0.0080	U	0.010	0.0010	mg/L			03/28/14 00:03	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*64 - 129*		*03/28/14 00:03*	*1*
Toluene-d8 (Surr)	*88*		*78 - 120*		*03/28/14 00:03*	*1*
4-Bromofluorobenzene (Surr)	*80*		*78 - 121*		*03/28/14 00:03*	*1*
Dibromofluoromethane (Surr)	*101*		*79 - 119*		*03/28/14 00:03*	*1*

Lab Sample ID: LCS 280-217688/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218760

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0569		mg/L		114	74 - 135
2-Butanone (MEK)	0.200	0.176		mg/L		88	44 - 150
Carbon tetrachloride	0.0500	0.0638		mg/L		128	67 - 135
Chlorobenzene	0.0500	0.0483		mg/L		97	76 - 135
Chloroform	0.0500	0.0575		mg/L		115	76 - 120
1,2-Dichloroethane	0.0500	0.0526		mg/L		105	70 - 135
1,1-Dichloroethene	0.0500	0.0563		mg/L		113	71 - 136
Tetrachloroethene	0.0500	0.0513		mg/L		103	70 - 135
Trichloroethene	0.0500	0.0606		mg/L		121	73 - 135
Vinyl chloride	0.0500	0.0470		mg/L		94	40 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*64 - 129*
Toluene-d8 (Surr)	*91*		*78 - 120*
4-Bromofluorobenzene (Surr)	*81*		*78 - 121*
Dibromofluoromethane (Surr)	*101*		*79 - 119*

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

Lab Sample ID: MB 280-217472/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217548 — **Prep Batch: 217472**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	5.0	0.56	ug/Kg		03/19/14 14:17	03/19/14 13:57	1

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

Lab Sample ID: MB 280-217472/1-A
Matrix: Solid
Analysis Batch: 217548

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217472

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	5.0	0.52	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,2,3-Trichloropropane	1.0	U	5.0	0.81	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,2,3-Trichlorobenzene	1.0	U	5.0	0.75	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,1-Dichloroethane	0.80	U	5.0	0.21	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,2,4-Trichlorobenzene	1.0	U	5.0	0.73	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,2-Dibromo-3-Chloropropane	1.0	U	10	0.60	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,1-Dichloropropene	1.0	U	5.0	0.54	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,1-Dichloroethene	1.0	U	5.0	0.59	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,1,2-Trichloroethane	1.0	U	5.0	0.88	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,1,2,2-Tetrachloroethane	1.0	U	5.0	0.61	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,2,4-Trimethylbenzene	1.0	U	5.0	0.58	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,2-Dichlorobenzene	1.0	U	5.0	0.45	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,2-Dichloroethane	1.0	U	5.0	0.70	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,3-Dichlorobenzene	1.0	U	5.0	0.48	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,3-Dichloropropane	1.0	U	5.0	0.51	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,3,5-Trimethylbenzene	1.0	U	5.0	0.57	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
2-Butanone (MEK)	6.4	U	20	1.8	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,4-Dichlorobenzene	1.0	U	5.0	0.78	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,2-Dichloropropane	1.0	U	5.0	0.55	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
2,2-Dichloropropane	1.0	U	5.0	0.44	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
2-Hexanone	10	U	20	4.9	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
4-Methyl-2-pentanone (MIBK)	10	U	20	4.4	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
4-Isopropyltoluene	1.0	U	5.0	0.49	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Benzene	1.0	U	5.0	0.47	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Acetone	11.6	J	20	5.4	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Bromobenzene	1.0	U	5.0	0.49	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Bromoform	0.80	U	5.0	0.23	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Bromomethane	1.0	U	10	0.50	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Carbon tetrachloride	1.0	U	5.0	0.63	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Carbon disulfide	1.0	U	5.0	0.42	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
2-Chlorotoluene	1.0	U	5.0	0.51	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
4-Chlorotoluene	1.0	U	5.0	0.78	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Chlorobenzene	1.0	U	5.0	0.54	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Chlorobromomethane	1.0	U	5.0	0.30	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Chlorodibromomethane	1.0	U	5.0	0.57	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Chloroform	1.0	U	10	0.29	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Chloroethane	1.0	U	10	0.89	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Chloromethane	1.0	U	10	0.77	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
cis-1,2-Dichloroethene	1.0	U	5.0	0.56	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
cis-1,3-Dichloropropene	2.0	U	5.0	1.3	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Dibromomethane	1.0	U	5.0	0.84	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Dichlorobromomethane	0.80	U	5.0	0.22	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Dichlorodifluoromethane	1.0	U	10	0.52	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Ethylbenzene	1.0	U	5.0	0.67	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Hexachlorobutadiene	1.0	U	5.0	0.55	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Isopropylbenzene	1.0	U	5.0	0.59	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Ethylene Dibromide	1.0	U	5.0	0.52	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Methylene Chloride	3.2	U	5.0	1.6	ug/Kg		03/19/14 14:17	03/19/14 13:57	1

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

Lab Sample ID: MB 280-217472/1-A
Matrix: Solid
Analysis Batch: 217548

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217472

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	1.0	U	20	0.34	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
m-Xylene & p-Xylene	2.0	U	3.2	1.0	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Naphthalene	1.0	U	5.0	0.63	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
n-Butylbenzene	1.0	U	5.0	0.56	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
N-Propylbenzene	1.0	U	5.0	0.58	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
o-Xylene	1.0	U	5.0	0.61	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Styrene	1.0	U	5.0	0.63	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
sec-Butylbenzene	1.0	U	5.0	0.77	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
tert-Butylbenzene	1.0	U	5.0	0.50	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
trans-1,2-Dichloroethene	1.0	U	5.0	0.39	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
trans-1,3-Dichloropropene	1.0	U	5.0	0.67	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Tetrachloroethene	1.0	U	5.0	0.59	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Toluene	1.0	U	5.0	0.69	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Trichloroethene	0.80	U	5.0	0.23	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Trichlorofluoromethane	2.0	U	10	1.0	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
Vinyl chloride	2.0	U	5.0	1.3	ug/Kg		03/19/14 14:17	03/19/14 13:57	1
1,2-Dichloroethene, Total	1.0	U	5.0	0.39	ug/Kg		03/19/14 14:17	03/19/14 13:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*89*		*85 - 115*	*03/19/14 14:17*	*03/19/14 13:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*61 - 129*	*03/19/14 14:17*	*03/19/14 13:57*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 120*	*03/19/14 14:17*	*03/19/14 13:57*	*1*
Dibromofluoromethane (Surr)	*94*		*71 - 126*	*03/19/14 14:17*	*03/19/14 13:57*	*1*

Lab Sample ID: LCS 280-217472/2-A
Matrix: Solid
Analysis Batch: 217548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217472

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	50.0		ug/Kg		100	75 - 125
1,1,1-Trichloroethane	50.0	47.3		ug/Kg		95	70 - 135
1,2,3-Trichloropropane	50.0	48.4		ug/Kg		97	65 - 130
1,2,3-Trichlorobenzene	50.0	42.1		ug/Kg		84	60 - 135
1,1-Dichloroethane	50.0	45.0		ug/Kg		90	75 - 125
1,2,4-Trichlorobenzene	50.0	44.8		ug/Kg		90	65 - 130
1,2-Dibromo-3-Chloropropane	50.0	48.3		ug/Kg		97	40 - 135
1,1-Dichloropropene	50.0	47.3		ug/Kg		95	70 - 135
1,1-Dichloroethene	50.0	44.4		ug/Kg		89	65 - 135
1,1,2-Trichloroethane	50.0	47.0		ug/Kg		94	60 - 125
1,1,2,2-Tetrachloroethane	50.0	46.9		ug/Kg		94	55 - 130
1,2,4-Trimethylbenzene	50.0	47.7		ug/Kg		95	65 - 135
1,2-Dichlorobenzene	50.0	47.7		ug/Kg		95	75 - 120
1,2-Dichloroethane	50.0	46.1		ug/Kg		92	70 - 135
1,3-Dichlorobenzene	50.0	48.0		ug/Kg		96	70 - 125
1,3-Dichloropropane	50.0	43.2		ug/Kg		86	75 - 125
1,3,5-Trimethylbenzene	50.0	48.9		ug/Kg		98	65 - 135
2-Butanone (MEK)	200	155		ug/Kg		78	30 - 160
1,4-Dichlorobenzene	50.0	47.7		ug/Kg		95	70 - 125

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

Lab Sample ID: LCS 280-217472/2-A
Matrix: Solid
Analysis Batch: 217548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217472

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	50.0	43.1		ug/Kg		86	70 - 120
2,2-Dichloropropane	50.0	51.1		ug/Kg		102	65 - 135
2-Hexanone	200	162		ug/Kg		81	45 - 145
4-Methyl-2-pentanone (MIBK)	200	167		ug/Kg		83	45 - 145
4-Isopropyltoluene	50.0	47.4		ug/Kg		95	75 - 135
Benzene	50.0	44.7		ug/Kg		89	75 - 125
Acetone	200	153		ug/Kg		77	20 - 160
Bromobenzene	50.0	50.2		ug/Kg		100	65 - 120
Bromoform	50.0	48.8		ug/Kg		98	55 - 135
Bromomethane	50.0	45.8		ug/Kg		92	30 - 160
Carbon tetrachloride	50.0	50.1		ug/Kg		100	65 - 135
Carbon disulfide	50.0	43.7		ug/Kg		87	45 - 160
2-Chlorotoluene	50.0	48.6		ug/Kg		97	70 - 130
4-Chlorotoluene	50.0	49.0		ug/Kg		98	75 - 125
Chlorobenzene	50.0	45.9		ug/Kg		92	75 - 125
Chlorobromomethane	50.0	47.9		ug/Kg		96	70 - 125
Chlorodibromomethane	50.0	51.5		ug/Kg		103	65 - 130
Chloroform	50.0	46.0		ug/Kg		92	70 - 125
Chloroethane	50.0	46.5		ug/Kg		93	40 - 155
Chloromethane	50.0	43.5		ug/Kg		87	50 - 130
cis-1,2-Dichloroethene	50.0	46.0		ug/Kg		92	65 - 125
cis-1,3-Dichloropropene	50.0	49.8		ug/Kg		100	70 - 125
Dibromomethane	50.0	46.7		ug/Kg		93	75 - 130
Dichlorobromomethane	50.0	48.3		ug/Kg		97	70 - 130
Dichlorodifluoromethane	50.0	51.9		ug/Kg		104	35 - 135
Ethylbenzene	50.0	46.1		ug/Kg		92	75 - 125
Hexachlorobutadiene	50.0	42.7		ug/Kg		85	55 - 140
Isopropylbenzene	50.0	48.4		ug/Kg		97	75 - 130
Ethylene Dibromide	50.0	46.8		ug/Kg		94	70 - 125
Methylene Chloride	50.0	44.7		ug/Kg		89	55 - 140
Methyl tert-butyl ether	50.0	46.2		ug/Kg		92	67 - 119
m-Xylene & p-Xylene	50.0	45.8		ug/Kg		92	80 - 125
Naphthalene	50.0	42.3		ug/Kg		85	40 - 125
n-Butylbenzene	50.0	44.7		ug/Kg		89	65 - 140
N-Propylbenzene	50.0	48.8		ug/Kg		98	65 - 135
o-Xylene	50.0	46.5		ug/Kg		93	75 - 125
Styrene	50.0	50.1		ug/Kg		100	75 - 125
sec-Butylbenzene	50.0	48.7		ug/Kg		97	65 - 130
tert-Butylbenzene	50.0	48.4		ug/Kg		97	65 - 130
trans-1,2-Dichloroethene	50.0	46.4		ug/Kg		93	65 - 135
trans-1,3-Dichloropropene	50.0	49.2		ug/Kg		98	65 - 125
Tetrachloroethene	50.0	46.6		ug/Kg		93	65 - 140
Toluene	50.0	46.2		ug/Kg		92	70 - 125
Trichloroethene	50.0	45.9		ug/Kg		92	75 - 125
Trichlorofluoromethane	50.0	51.7	M	ug/Kg		103	25 - 185
Vinyl chloride	50.0	46.7		ug/Kg		93	60 - 125

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

Lab Sample ID: LCS 280-217472/2-A
Matrix: Solid
Analysis Batch: 217548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217472

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*87*		*85 - 115*
1,2-Dichloroethane-d4 (Surr)	*94*		*61 - 129*
4-Bromofluorobenzene (Surr)	*91*		*85 - 120*
Dibromofluoromethane (Surr)	*92*		*71 - 126*

Lab Sample ID: MB 280-217893/5
Matrix: Water
Analysis Batch: 217893

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.40	U	1.0	0.17	ug/L			03/21/14 19:12	1
1,1,1-Trichloroethane	0.20	U	1.0	0.16	ug/L			03/21/14 19:12	1
1,2,3-Trichloropropane	0.80	U	3.0	0.77	ug/L			03/21/14 19:12	1
1,2,3-Trichlorobenzene	0.40	U	1.0	0.18	ug/L			03/21/14 19:12	1
1,1-Dichloroethane	0.40	U	1.0	0.16	ug/L			03/21/14 19:12	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.32	ug/L			03/21/14 19:12	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	0.81	ug/L			03/21/14 19:12	1
1,1-Dichloropropene	0.40	U	1.0	0.15	ug/L			03/21/14 19:12	1
1,1-Dichloroethene	0.40	U	1.0	0.14	ug/L			03/21/14 19:12	1
1,1,2-Trichloroethane	0.40	U	1.0	0.32	ug/L			03/21/14 19:12	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.20	ug/L			03/21/14 19:12	1
1,2,4-Trimethylbenzene	0.20	U	1.0	0.14	ug/L			03/21/14 19:12	1
1,2-Dichlorobenzene	0.20	U	1.0	0.13	ug/L			03/21/14 19:12	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			03/21/14 19:12	1
1,3-Dichlorobenzene	0.20	U	1.0	0.16	ug/L			03/21/14 19:12	1
1,3-Dichloropropane	0.40	U	1.0	0.15	ug/L			03/21/14 19:12	1
1,3,5-Trimethylbenzene	0.40	U	1.0	0.14	ug/L			03/21/14 19:12	1
2-Butanone (MEK)	3.2	U	6.0	1.8	ug/L			03/21/14 19:12	1
1,4-Dichlorobenzene	0.40	U	1.0	0.16	ug/L			03/21/14 19:12	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			03/21/14 19:12	1
2,2-Dichloropropane	0.40	U	1.0	0.20	ug/L			03/21/14 19:12	1
2-Hexanone	3.2	U	5.0	1.4	ug/L			03/21/14 19:12	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			03/21/14 19:12	1
4-Isopropyltoluene	0.40	U	1.0	0.17	ug/L			03/21/14 19:12	1
Benzene	0.20	U	1.0	0.16	ug/L			03/21/14 19:12	1
Acetone	2.55	J	10	1.9	ug/L			03/21/14 19:12	1
Bromobenzene	0.20	U	1.0	0.17	ug/L			03/21/14 19:12	1
Bromoform	0.40	U	1.0	0.19	ug/L			03/21/14 19:12	1
Bromomethane	0.40	U	2.0	0.21	ug/L			03/21/14 19:12	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			03/21/14 19:12	1
Carbon disulfide	0.80	U	2.0	0.45	ug/L			03/21/14 19:12	1
2-Chlorotoluene	0.40	U	1.0	0.17	ug/L			03/21/14 19:12	1
4-Chlorotoluene	0.40	U	1.0	0.17	ug/L			03/21/14 19:12	1
Chlorobenzene	0.20	U	1.0	0.17	ug/L			03/21/14 19:12	1
Chlorobromomethane	0.40	U	1.0	0.10	ug/L			03/21/14 19:12	1
Chlorodibromomethane	0.40	U	1.0	0.17	ug/L			03/21/14 19:12	1
Chloroform	0.20	U	1.0	0.16	ug/L			03/21/14 19:12	1
Chloroethane	1.6	U	2.0	0.41	ug/L			03/21/14 19:12	1

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

Lab Sample ID: MB 280-217893/5
Matrix: Water
Analysis Batch: 217893

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.80	U	2.0	0.30	ug/L			03/21/14 19:12	1
cis-1,2-Dichloroethene	0.20	U	1.0	0.15	ug/L			03/21/14 19:12	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.16	ug/L			03/21/14 19:12	1
Dibromomethane	0.40	U	1.0	0.17	ug/L			03/21/14 19:12	1
Dichlorobromomethane	0.20	U	1.0	0.17	ug/L			03/21/14 19:12	1
Dichlorodifluoromethane	0.80	U	2.0	0.31	ug/L			03/21/14 19:12	1
Ethylbenzene	0.20	U	1.0	0.16	ug/L			03/21/14 19:12	1
Hexachlorobutadiene	0.40	U	1.0	0.36	ug/L			03/21/14 19:12	1
Isopropylbenzene	0.40	U	1.0	0.19	ug/L			03/21/14 19:12	1
Ethylene Dibromide	0.40	U	1.0	0.18	ug/L			03/21/14 19:12	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			03/21/14 19:12	1
Methyl tert-butyl ether	0.40	U	5.0	0.25	ug/L			03/21/14 19:12	1
m-Xylene & p-Xylene	0.80	U	2.0	0.34	ug/L			03/21/14 19:12	1
Naphthalene	0.80	U	1.0	0.22	ug/L			03/21/14 19:12	1
n-Butylbenzene	0.40	U	1.0	0.32	ug/L			03/21/14 19:12	1
N-Propylbenzene	0.20	U	1.0	0.16	ug/L			03/21/14 19:12	1
o-Xylene	0.40	U	1.0	0.19	ug/L			03/21/14 19:12	1
Styrene	0.40	U	1.0	0.17	ug/L			03/21/14 19:12	1
sec-Butylbenzene	0.40	U	1.0	0.17	ug/L			03/21/14 19:12	1
tert-Butylbenzene	0.40	U	1.0	0.16	ug/L			03/21/14 19:12	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.15	ug/L			03/21/14 19:12	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			03/21/14 19:12	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			03/21/14 19:12	1
Toluene	0.40	U	1.0	0.17	ug/L			03/21/14 19:12	1
Trichloroethene	0.20	U	1.0	0.16	ug/L			03/21/14 19:12	1
Trichlorofluoromethane	0.80	U	2.0	0.29	ug/L			03/21/14 19:12	1
Vinyl chloride	0.40	U	1.5	0.10	ug/L			03/21/14 19:12	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			03/21/14 19:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*85 - 120*		*03/21/14 19:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 120*		*03/21/14 19:12*	*1*
4-Bromofluorobenzene (Surr)	*105*		*75 - 120*		*03/21/14 19:12*	*1*
Dibromofluoromethane (Surr)	*97*		*85 - 115*		*03/21/14 19:12*	*1*

Lab Sample ID: LCS 280-217893/4
Matrix: Water
Analysis Batch: 217893

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	4.25		ug/L		85	80 - 130
1,1,1-Trichloroethane	5.00	4.01		ug/L		80	65 - 130
1,2,3-Trichloropropane	5.00	4.67		ug/L		93	75 - 125
1,2,3-Trichlorobenzene	5.00	4.93		ug/L		99	55 - 140
1,1-Dichloroethane	5.00	4.21		ug/L		84	70 - 135
1,2,4-Trichlorobenzene	5.00	4.89		ug/L		98	65 - 135
1,2-Dibromo-3-Chloropropane	5.00	5.18		ug/L		104	50 - 130
1,1-Dichloropropene	5.00	4.69		ug/L		94	75 - 130

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

Lab Sample ID: LCS 280-217893/4
Matrix: Water
Analysis Batch: 217893

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	5.00	4.72		ug/L		94	70 - 130
1,1,2-Trichloroethane	5.00	4.35		ug/L		87	75 - 125
1,1,2,2-Tetrachloroethane	5.00	4.56		ug/L		91	65 - 130
1,2,4-Trimethylbenzene	5.00	4.63		ug/L		93	75 - 130
1,2-Dichlorobenzene	5.00	4.66		ug/L		93	70 - 120
1,2-Dichloroethane	5.00	4.07		ug/L		81	70 - 130
1,3-Dichlorobenzene	5.00	4.48		ug/L		90	75 - 125
1,3-Dichloropropane	5.00	4.45		ug/L		89	75 - 125
1,3,5-Trimethylbenzene	5.00	4.88		ug/L		98	75 - 130
2-Butanone (MEK)	20.0	19.5		ug/L		98	30 - 150
1,4-Dichlorobenzene	5.00	4.39		ug/L		88	75 - 125
1,2-Dichloropropane	5.00	3.79		ug/L		76	75 - 125
2,2-Dichloropropane	5.00	4.34		ug/L		87	70 - 135
2-Hexanone	20.0	16.5		ug/L		82	55 - 130
4-Methyl-2-pentanone (MIBK)	20.0	17.4		ug/L		87	60 - 135
4-Isopropyltoluene	5.00	4.77		ug/L		95	75 - 130
Benzene	5.00	4.42		ug/L		88	80 - 120
Acetone	20.0	19.4		ug/L		97	40 - 140
Bromobenzene	5.00	4.62		ug/L		92	75 - 125
Bromoform	5.00	4.01		ug/L		80	70 - 130
Bromomethane	5.00	4.36		ug/L		87	30 - 145
Carbon tetrachloride	5.00	4.06		ug/L		81	65 - 140
Carbon disulfide	5.00	4.29		ug/L		86	35 - 160
2-Chlorotoluene	5.00	4.22		ug/L		84	75 - 125
4-Chlorotoluene	5.00	4.45		ug/L		89	75 - 130
Chlorobenzene	5.00	4.46		ug/L		89	80 - 120
Chlorobromomethane	5.00	4.52		ug/L		90	65 - 130
Chlorodibromomethane	5.00	4.10		ug/L		82	60 - 135
Chloroform	5.00	4.29		ug/L		86	65 - 135
Chloroethane	5.00	4.64		ug/L		93	60 - 135
Chloromethane	5.00	4.81		ug/L		96	40 - 125
cis-1,2-Dichloroethene	5.00	5.02		ug/L		100	70 - 125
cis-1,3-Dichloropropene	5.00	4.40		ug/L		88	70 - 130
Dibromomethane	5.00	3.86		ug/L		77	75 - 125
Dichlorobromomethane	5.00	3.86		ug/L		77	75 - 120
Dichlorodifluoromethane	5.00	5.33		ug/L		107	30 - 155
Ethylbenzene	5.00	4.45		ug/L		89	75 - 125
Hexachlorobutadiene	5.00	4.57		ug/L		91	50 - 140
Isopropylbenzene	5.00	4.89		ug/L		98	75 - 125
Ethylene Dibromide	5.00	4.49		ug/L		90	80 - 120
Methylene Chloride	5.00	5.00		ug/L		100	55 - 140
Methyl tert-butyl ether	5.00	5.01		ug/L		100	65 - 125
m-Xylene & p-Xylene	5.00	4.48		ug/L		90	75 - 130
Naphthalene	5.00	4.48		ug/L		90	55 - 140
n-Butylbenzene	5.00	4.71		ug/L		94	70 - 135
N-Propylbenzene	5.00	4.56		ug/L		91	70 - 130
o-Xylene	5.00	4.60		ug/L		92	80 - 120
Styrene	5.00	4.69		ug/L		94	65 - 135

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

Lab Sample ID: LCS 280-217893/4
Matrix: Water
Analysis Batch: 217893

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
sec-Butylbenzene	5.00	4.65		ug/L		93	70 - 125
tert-Butylbenzene	5.00	4.74		ug/L		95	70 - 130
trans-1,2-Dichloroethene	5.00	4.44		ug/L		89	60 - 140
trans-1,3-Dichloropropene	5.00	4.41		ug/L		88	55 - 140
Tetrachloroethene	5.00	4.08		ug/L		82	45 - 150
Toluene	5.00	4.92		ug/L		98	75 - 120
Trichloroethene	5.00	4.19		ug/L		84	70 - 125
Trichlorofluoromethane	5.00	4.92		ug/L		98	60 - 145
Vinyl chloride	5.00	4.79		ug/L		96	50 - 145

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*93*		*85 - 120*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 120*
4-Bromofluorobenzene (Surr)	*108*		*75 - 120*
Dibromofluoromethane (Surr)	*99*		*85 - 115*

Lab Sample ID: LCSD 280-217893/8
Matrix: Water
Analysis Batch: 217893

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	4.18		ug/L		84	80 - 130	2	30
1,1,1-Trichloroethane	5.00	4.08		ug/L		82	65 - 130	2	30
1,2,3-Trichloropropane	5.00	4.64		ug/L		93	75 - 125	1	30
1,2,3-Trichlorobenzene	5.00	5.21		ug/L		104	55 - 140	5	30
1,1-Dichloroethane	5.00	4.06		ug/L		81	70 - 135	4	30
1,2,4-Trichlorobenzene	5.00	5.16		ug/L		103	65 - 135	5	30
1,2-Dibromo-3-Chloropropane	5.00	4.58	J	ug/L		92	50 - 130	12	30
1,1-Dichloropropene	5.00	4.73		ug/L		95	75 - 130	1	30
1,1-Dichloroethene	5.00	4.66		ug/L		93	70 - 130	1	30
1,1,2-Trichloroethane	5.00	4.31		ug/L		86	75 - 125	1	30
1,1,2,2-Tetrachloroethane	5.00	4.97		ug/L		99	65 - 130	9	30
1,2,4-Trimethylbenzene	5.00	4.80		ug/L		96	75 - 130	4	30
1,2-Dichlorobenzene	5.00	4.96		ug/L		99	70 - 120	6	30
1,2-Dichloroethane	5.00	4.09		ug/L		82	70 - 130	1	30
1,3-Dichlorobenzene	5.00	4.60		ug/L		92	75 - 125	3	30
1,3-Dichloropropane	5.00	4.33		ug/L		87	75 - 125	3	30
1,3,5-Trimethylbenzene	5.00	5.07		ug/L		101	75 - 130	4	30
2-Butanone (MEK)	20.0	18.8		ug/L		94	30 - 150	4	30
1,4-Dichlorobenzene	5.00	4.61		ug/L		92	75 - 125	5	30
1,2-Dichloropropane	5.00	3.98		ug/L		80	75 - 125	5	30
2,2-Dichloropropane	5.00	4.24		ug/L		85	70 - 135	2	30
2-Hexanone	20.0	17.4		ug/L		87	55 - 130	5	30
4-Methyl-2-pentanone (MIBK)	20.0	18.8		ug/L		94	60 - 135	8	30
4-Isopropyltoluene	5.00	5.03		ug/L		101	75 - 130	5	30
Benzene	5.00	4.46		ug/L		89	80 - 120	1	30
Acetone	20.0	22.6		ug/L		113	40 - 140	15	30
Bromobenzene	5.00	4.69		ug/L		94	75 - 125	2	30

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

Lab Sample ID: LCSD 280-217893/8
Matrix: Water
Analysis Batch: 217893

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromoform	5.00	4.38		ug/L		88	70 - 130	9	30
Bromomethane	5.00	4.38		ug/L		88	30 - 145	0	30
Carbon tetrachloride	5.00	4.07		ug/L		81	65 - 140	0	30
Carbon disulfide	5.00	4.22		ug/L		84	35 - 160	2	30
2-Chlorotoluene	5.00	4.59		ug/L		92	75 - 125	8	30
4-Chlorotoluene	5.00	4.75		ug/L		95	75 - 130	7	30
Chlorobenzene	5.00	4.44		ug/L		89	80 - 120	0	30
Chlorobromomethane	5.00	4.34		ug/L		87	65 - 130	4	30
Chlorodibromomethane	5.00	4.08		ug/L		82	60 - 135	0	30
Chloroform	5.00	4.25		ug/L		85	65 - 135	1	30
Chloroethane	5.00	4.51		ug/L		90	60 - 135	3	30
Chloromethane	5.00	4.76		ug/L		95	40 - 125	1	30
cis-1,2-Dichloroethene	5.00	4.95		ug/L		99	70 - 125	1	30
cis-1,3-Dichloropropene	5.00	4.38		ug/L		88	70 - 130	1	30
Dibromomethane	5.00	3.91		ug/L		78	75 - 125	1	30
Dichlorobromomethane	5.00	4.02		ug/L		80	75 - 120	4	30
Dichlorodifluoromethane	5.00	5.16		ug/L		103	30 - 155	3	30
Ethylbenzene	5.00	4.42		ug/L		88	75 - 125	1	30
Hexachlorobutadiene	5.00	4.82		ug/L		96	50 - 140	5	30
Isopropylbenzene	5.00	5.23		ug/L		105	75 - 125	7	30
Ethylene Dibromide	5.00	4.39		ug/L		88	80 - 120	2	30
Methylene Chloride	5.00	4.92	J	ug/L		98	55 - 140	2	30
Methyl tert-butyl ether	5.00	5.01		ug/L		100	65 - 125	0	30
m-Xylene & p-Xylene	5.00	4.47		ug/L		89	75 - 130	0	30
Naphthalene	5.00	4.78		ug/L		96	55 - 140	6	30
n-Butylbenzene	5.00	4.96		ug/L		99	70 - 135	5	30
N-Propylbenzene	5.00	4.90		ug/L		98	70 - 130	7	30
o-Xylene	5.00	4.57		ug/L		91	80 - 120	1	30
Styrene	5.00	4.72		ug/L		94	65 - 135	1	30
sec-Butylbenzene	5.00	4.92		ug/L		98	70 - 125	5	30
tert-Butylbenzene	5.00	5.03		ug/L		101	70 - 130	6	30
trans-1,2-Dichloroethene	5.00	4.58		ug/L		92	60 - 140	3	30
trans-1,3-Dichloropropene	5.00	4.72		ug/L		94	55 - 140	7	30
Tetrachloroethene	5.00	4.15		ug/L		83	45 - 150	2	30
Toluene	5.00	5.01		ug/L		100	75 - 120	2	30
Trichloroethene	5.00	4.41		ug/L		88	70 - 125	5	30
Trichlorofluoromethane	5.00	4.78		ug/L		96	60 - 145	3	30
Vinyl chloride	5.00	4.83		ug/L		97	50 - 145	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*85 - 120*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 120*
4-Bromofluorobenzene (Surr)	*117*		*75 - 120*
Dibromofluoromethane (Surr)	*104*		*85 - 115*

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

Lab Sample ID: MB 280-217475/1-A
Matrix: Solid
Analysis Batch: 217695

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217475

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	67	U	330	49	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
1,2,4-Trichlorobenzene	33	U	330	28	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
1,2-Dichlorobenzene	33	U	330	22	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
1,2-Diphenylhydrazine	33	U	330	22	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
1,3-Dichlorobenzene	33	U	330	12	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
1,4-Dichlorobenzene	33	U	330	14	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2,2'-oxybis[1-chloropropane]	33	U	330	23	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2,4,5-Trichlorophenol	130	U	330	10	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2,4,6-Trichlorophenol	66	U	330	10	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2,4-Dichlorophenol	66	U	330	10	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2,4-Dimethylphenol	130	U	330	66	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2,4-Dinitrophenol	670	U	1600	330	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2,4-Dinitrotoluene	130	U	330	66	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2,6-Dichlorophenol	130	U	330	69	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2,6-Dinitrotoluene	66	U	330	28	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2-Chloronaphthalene	33	U	330	10	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2-Chlorophenol	33	U	330	21	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2-Methylnaphthalene	33	U	330	19	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2-Methylphenol	33	U	330	13	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2-Nitroaniline	66	U	1600	50	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
2-Nitrophenol	66	U	330	10	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
3 & 4 Methylphenol	66	U	330	33	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
3,3'-Dichlorobenzidine	330	U	1600	90	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
3-Nitroaniline	130	U	1600	73	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
4,6-Dinitro-2-methylphenol	660	U	1600	330	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
4-Bromophenyl phenyl ether	33	U	330	19	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
4-Chloro-3-methylphenol	130	U	330	66	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
4-Chloroaniline	130	U	330	82	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
4-Chlorophenyl phenyl ether	66	U	330	21	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
4-Nitroaniline	130	U	1600	73	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
4-Nitrophenol	330	U	1600	97	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Acenaphthene	17	U	330	10	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Acenaphthylene	33	U	330	17	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Anthracene	33	U	330	17	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Benzidine	4000	U	4000	990	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Benzo[a]anthracene	33	U	330	20	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Benzo[a]pyrene	33	U	330	20	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Benzo[b]fluoranthene	33	U	330	26	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Benzo[g,h,i]perylene	33	U	330	16	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Benzo[k]fluoranthene	66	U	330	40	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Benzoic acid	660	U	1600	330	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Benzyl alcohol	33	U	330	10	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Bis(2-chloroethoxy)methane	66	U	330	23	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Bis(2-chloroethyl)ether	33	U	330	17	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Bis(2-ethylhexyl) phthalate	66	U	330	46	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Butyl benzyl phthalate	66	U	330	43	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Carbazole	67	U	330	36	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Chrysene	33	U	330	27	ug/Kg		03/19/14 17:10	03/20/14 16:36	1

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

Lab Sample ID: MB 280-217475/1-A | **Client Sample ID: Method Blank**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 217695 | **Prep Batch: 217475**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	33	U	330	19	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Dibenzofuran	33	U	330	20	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Diethyl phthalate	33	U	660	26	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Dimethyl phthalate	33	U	330	23	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Di-n-butyl phthalate	33	U	330	29	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Di-n-octyl phthalate	66	U	330	14	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Fluoranthene	66	U	330	36	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Fluorene	33	U	330	18	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Hexachlorobenzene	66	U	330	29	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Hexachlorobutadiene	66	U	330	10	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Hexachlorocyclopentadiene	66	U	1700	50	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Hexachloroethane	33	U	330	21	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Indeno[1,2,3-cd]pyrene	33	U	330	22	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Isophorone	33	U	330	17	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Naphthalene	66	U	330	31	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Nitrobenzene	33	U	330	22	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
N-Nitrosodimethylamine	66	U	520	37	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
N-Nitrosodi-n-propylamine	66	U	330	31	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
N-Nitrosodiphenylamine	33	U	330	21	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
N-Nitrosopyrrolidine	130	U	330	64	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Pentachlorophenol	670	U	1600	330	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Phenanthrene	33	U	330	17	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Phenol	33	U	330	18	ug/Kg		03/19/14 17:10	03/20/14 16:36	1
Pyrene	33	U	400	12	ug/Kg		03/19/14 17:10	03/20/14 16:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*69*		*35 - 125*	*03/19/14 17:10*	*03/20/14 16:36*	*1*
2-Fluorobiphenyl	*78*		*45 - 105*	*03/19/14 17:10*	*03/20/14 16:36*	*1*
2-Fluorophenol (Surr)	*80*		*35 - 105*	*03/19/14 17:10*	*03/20/14 16:36*	*1*
Nitrobenzene-d5 (Surr)	*82*		*35 - 100*	*03/19/14 17:10*	*03/20/14 16:36*	*1*
Phenol-d5 (Surr)	*85*		*40 - 100*	*03/19/14 17:10*	*03/20/14 16:36*	*1*
Terphenyl-d14 (Surr)	*81*		*30 - 125*	*03/19/14 17:10*	*03/20/14 16:36*	*1*

Lab Sample ID: LCS 280-217475/2-A | **Client Sample ID: Lab Control Sample**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 217695 | **Prep Batch: 217475**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2670	2020		ug/Kg		76	45 - 110
1,2-Dichlorobenzene	2670	2120		ug/Kg		79	45 - 95
1,2-Diphenylhydrazine	2700	2400		ug/Kg		89	54 - 120
1,3-Dichlorobenzene	2670	2080		ug/Kg		78	40 - 100
1,4-Dichlorobenzene	2670	2080		ug/Kg		78	35 - 105
2,2'-oxybis[1-chloropropane]	2670	2250		ug/Kg		84	20 - 115
2,4,5-Trichlorophenol	2670	2230		ug/Kg		84	50 - 110
2,4,6-Trichlorophenol	2670	2190		ug/Kg		82	45 - 110
2,4-Dichlorophenol	2670	2190		ug/Kg		82	45 - 110
2,4-Dimethylphenol	2670	2140		ug/Kg		80	30 - 105

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

Lab Sample ID: LCS 280-217475/2-A
Matrix: Solid
Analysis Batch: 217695

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217475

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrophenol	5330	4170		ug/Kg		78	15 - 130
2,4-Dinitrotoluene	2670	2290		ug/Kg		86	50 - 115
2,6-Dinitrotoluene	2670	2240		ug/Kg		84	50 - 110
2-Chloronaphthalene	2670	2100		ug/Kg		79	45 - 105
2-Chlorophenol	2670	2240		ug/Kg		84	45 - 105
2-Methylnaphthalene	2670	2130		ug/Kg		80	45 - 105
2-Methylphenol	2670	2270		ug/Kg		85	40 - 105
2-Nitroaniline	2670	2420		ug/Kg		91	45 - 120
2-Nitrophenol	2670	2220		ug/Kg		83	40 - 110
3 & 4 Methylphenol	2670	2270		ug/Kg		85	40 - 105
3,3'-Dichlorobenzidine	2670	1460	J	ug/Kg		55	10 - 130
3-Nitroaniline	2670	1350	J	ug/Kg		50	25 - 110
4,6-Dinitro-2-methylphenol	5330	4360		ug/Kg		82	30 - 135
4-Bromophenyl phenyl ether	2670	2150		ug/Kg		81	45 - 115
4-Chloro-3-methylphenol	2670	2400		ug/Kg		90	45 - 115
4-Chloroaniline	2670	1160		ug/Kg		43	10 - 95
4-Chlorophenyl phenyl ether	2670	2110		ug/Kg		79	45 - 110
4-Nitroaniline	2670	2130		ug/Kg		80	35 - 115
4-Nitrophenol	5330	4930		ug/Kg		92	15 - 140
Acenaphthene	2670	2150		ug/Kg		81	45 - 110
Acenaphthylene	2670	2150		ug/Kg		80	45 - 105
Anthracene	2670	2240		ug/Kg		84	55 - 105
Benzo[a]anthracene	2670	2280		ug/Kg		85	50 - 110
Benzo[a]pyrene	2670	2310		ug/Kg		87	50 - 110
Benzo[b]fluoranthene	2670	2470		ug/Kg		93	45 - 115
Benzo[g,h,i]perylene	2670	2520		ug/Kg		94	40 - 125
Benzo[k]fluoranthene	2670	2340		ug/Kg		88	45 - 125
Benzoic acid	2670	2230		ug/Kg		84	10 - 110
Benzyl alcohol	2670	2340		ug/Kg		88	20 - 125
Bis(2-chloroethoxy)methane	2670	2180		ug/Kg		82	45 - 110
Bis(2-chloroethyl)ether	2670	2270		ug/Kg		85	40 - 105
Bis(2-ethylhexyl) phthalate	2670	2470		ug/Kg		92	45 - 125
Butyl benzyl phthalate	2670	2390		ug/Kg		90	50 - 125
Carbazole	2670	2330		ug/Kg		87	45 - 115
Chrysene	2670	2250		ug/Kg		84	55 - 110
Dibenz(a,h)anthracene	2670	2590		ug/Kg		97	40 - 125
Dibenzofuran	2670	2170		ug/Kg		81	50 - 105
Diethyl phthalate	2670	2290		ug/Kg		86	50 - 115
Dimethyl phthalate	2670	2260		ug/Kg		85	50 - 110
Di-n-butyl phthalate	2670	2310		ug/Kg		87	55 - 110
Di-n-octyl phthalate	2670	2530		ug/Kg		95	40 - 130
Fluoranthene	2670	2240		ug/Kg		84	55 - 115
Fluorene	2670	2210		ug/Kg		83	50 - 110
Hexachlorobenzene	2670	2080		ug/Kg		78	45 - 120
Hexachlorobutadiene	2670	1940		ug/Kg		73	40 - 115
Hexachloroethane	2670	2090		ug/Kg		78	35 - 110
Indeno[1,2,3-cd]pyrene	2670	2560	M	ug/Kg		96	40 - 120
Isophorone	2670	2060		ug/Kg		77	45 - 110

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

Lab Sample ID: LCS 280-217475/2-A
Matrix: Solid
Analysis Batch: 217695

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217475

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	2670	2160		ug/Kg		81	40 - 105
Nitrobenzene	2670	2200		ug/Kg		83	40 - 115
N-Nitrosodimethylamine	2670	2110		ug/Kg		79	20 - 115
N-Nitrosodi-n-propylamine	2670	2200		ug/Kg		83	40 - 115
N-Nitrosodiphenylamine	2670	2350		ug/Kg		88	50 - 115
Pentachlorophenol	5330	4280		ug/Kg		80	25 - 120
Phenanthrene	2670	2280		ug/Kg		86	50 - 110
Phenol	2670	2320		ug/Kg		87	40 - 100
Pyrene	2670	2360		ug/Kg		88	45 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*79*		*35 - 125*
2-Fluorobiphenyl	*78*		*45 - 105*
2-Fluorophenol (Surr)	*84*		*35 - 105*
Nitrobenzene-d5 (Surr)	*82*		*35 - 100*
Phenol-d5 (Surr)	*87*		*40 - 100*
Terphenyl-d14 (Surr)	*85*		*30 - 125*

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

Lab Sample ID: LB 280-217689/1-C
Matrix: Solid
Analysis Batch: 218401

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 218033

Analyte	LB Result	LB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0050	U	0.020	0.0016	mg/L		03/24/14 10:13	03/26/14 10:32	1
2,4,5-Trichlorophenol	0.0050	U	0.050	0.0022	mg/L		03/24/14 10:13	03/26/14 10:32	1
2,4,6-Trichlorophenol	0.0050	U	0.025	0.0014	mg/L		03/24/14 10:13	03/26/14 10:32	1
2,4-Dinitrotoluene	0.020	U	0.050	0.0082	mg/L		03/24/14 10:13	03/26/14 10:32	1
2-Methylphenol	0.020	U	0.050	0.0049	mg/L		03/24/14 10:13	03/26/14 10:32	1
3 & 4 Methylphenol	0.0050	U	0.050	0.0012	mg/L		03/24/14 10:13	03/26/14 10:32	1
Hexachlorobenzene	0.0050	U	0.050	0.0033	mg/L		03/24/14 10:13	03/26/14 10:32	1
Hexachlorobutadiene	0.050	U	0.050	0.016	mg/L		03/24/14 10:13	03/26/14 10:32	1
Hexachloroethane	0.020	U	0.050	0.010	mg/L		03/24/14 10:13	03/26/14 10:32	1
Nitrobenzene	0.0099	U	0.050	0.0040	mg/L		03/24/14 10:13	03/26/14 10:32	1
Pentachlorophenol	0.20	U	0.25	0.0050	mg/L		03/24/14 10:13	03/26/14 10:32	1
Pyridine	0.0099	U	0.099	0.0056	mg/L		03/24/14 10:13	03/26/14 10:32	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*87*		*51 - 120*	*03/24/14 10:13*	*03/26/14 10:32*	*1*
2-Fluorobiphenyl	*87*		*49 - 120*	*03/24/14 10:13*	*03/26/14 10:32*	*1*
2-Fluorophenol (Surr)	*83*		*50 - 120*	*03/24/14 10:13*	*03/26/14 10:32*	*1*
Nitrobenzene-d5 (Surr)	*89*		*51 - 120*	*03/24/14 10:13*	*03/26/14 10:32*	*1*
Phenol-d5 (Surr)	*76*		*47 - 120*	*03/24/14 10:13*	*03/26/14 10:32*	*1*
Terphenyl-d14 (Surr)	*96*		*56 - 120*	*03/24/14 10:13*	*03/26/14 10:32*	*1*

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

Lab Sample ID: LCS 280-217689/2-C
Matrix: Solid
Analysis Batch: 218401

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 218033

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	0.250	0.202		mg/L		81	36 - 120
2,4,5-Trichlorophenol	0.250	0.234		mg/L		93	46 - 120
2,4,6-Trichlorophenol	0.250	0.221		mg/L		88	43 - 120
2,4-Dinitrotoluene	0.100	0.0744		mg/L		74	36 - 120
2-Methylphenol	0.250	0.220		mg/L		88	45 - 120
3 & 4 Methylphenol	0.500	0.448		mg/L		90	44 - 120
Hexachlorobenzene	0.100	0.0839		mg/L		84	52 - 120
Hexachlorobutadiene	0.250	0.186		mg/L		74	35 - 120
Hexachloroethane	0.250	0.185		mg/L		74	35 - 120
Nitrobenzene	0.250	0.225		mg/L		90	50 - 120
Pentachlorophenol	0.500	0.454		mg/L		91	39 - 120
Pyridine	0.250	0.0311	J	mg/L		12	10 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*87*		*51 - 120*
2-Fluorobiphenyl	*91*		*49 - 120*
2-Fluorophenol (Surr)	*83*		*50 - 120*
Nitrobenzene-d5 (Surr)	*91*		*51 - 120*
Phenol-d5 (Surr)	*76*		*47 - 120*
Terphenyl-d14 (Surr)	*97*		*56 - 120*

Lab Sample ID: 280-53170-3 MS
Matrix: Solid
Analysis Batch: 218401

Client Sample ID: AC5 CONCRETE
Prep Type: TCLP
Prep Batch: 218033

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	0.0050	U	0.245	0.195		mg/L		80	36 - 120
2,4,5-Trichlorophenol	0.0050	U	0.245	0.229		mg/L		93	46 - 120
2,4,6-Trichlorophenol	0.0050	U	0.245	0.218		mg/L		89	43 - 120
2,4-Dinitrotoluene	0.020	U	0.0980	0.0728		mg/L		74	36 - 120
2-Methylphenol	0.020	U	0.245	0.210		mg/L		86	45 - 120
3 & 4 Methylphenol	0.0050	U	0.490	0.425		mg/L		87	44 - 120
Hexachlorobenzene	0.0050	U	0.0980	0.0812		mg/L		83	52 - 120
Hexachlorobutadiene	0.050	U	0.245	0.173		mg/L		70	35 - 120
Hexachloroethane	0.020	U	0.245	0.179		mg/L		73	35 - 120
Nitrobenzene	0.010	U	0.245	0.222		mg/L		91	50 - 120
Pentachlorophenol	0.20	U	0.490	0.469		mg/L		96	39 - 120
Pyridine	0.010	U J	0.245	0.0533	J	mg/L		22	10 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*87*		*51 - 120*
2-Fluorobiphenyl	*89*		*49 - 120*
2-Fluorophenol (Surr)	*82*		*50 - 120*
Nitrobenzene-d5 (Surr)	*91*		*51 - 120*
Phenol-d5 (Surr)	*75*		*47 - 120*
Terphenyl-d14 (Surr)	*96*		*56 - 120*

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

Lab Sample ID: 280-53170-3 MSD
Matrix: Solid
Analysis Batch: 218401

Client Sample ID: AC5 CONCRETE
Prep Type: TCLP
Prep Batch: 218033

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	0.0050	U	0.248	0.195		mg/L		79	36 - 120	0	30
2,4,5-Trichlorophenol	0.0050	U	0.248	0.228		mg/L		92	46 - 120	1	30
2,4,6-Trichlorophenol	0.0050	U	0.248	0.220		mg/L		89	43 - 120	1	30
2,4-Dinitrotoluene	0.020	U	0.0990	0.0709		mg/L		72	36 - 120	3	30
2-Methylphenol	0.020	U	0.248	0.208		mg/L		84	45 - 120	1	30
3 & 4 Methylphenol	0.0050	U	0.495	0.429		mg/L		87	44 - 120	1	30
Hexachlorobenzene	0.0050	U	0.0990	0.0826		mg/L		83	52 - 120	2	30
Hexachlorobutadiene	0.050	U	0.248	0.177		mg/L		71	35 - 120	2	30
Hexachloroethane	0.020	U	0.248	0.176		mg/L		71	35 - 120	2	30
Nitrobenzene	0.010	U	0.248	0.224		mg/L		90	50 - 120	1	30
Pentachlorophenol	0.20	U	0.495	0.464		mg/L		94	39 - 120	1	30
Pyridine	0.010	U J	0.248	0.0776	J	mg/L		31	10 - 121	37	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*85*		*51 - 120*
2-Fluorobiphenyl	*87*		*49 - 120*
2-Fluorophenol (Surr)	*82*		*50 - 120*
Nitrobenzene-d5 (Surr)	*90*		*51 - 120*
Phenol-d5 (Surr)	*74*		*47 - 120*
Terphenyl-d14 (Surr)	*93*		*56 - 120*

Lab Sample ID: LB2 280-217690/1-C
Matrix: Solid
Analysis Batch: 218401

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 218040

Analyte	LB2 Result	LB2 Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0050	U	0.020	0.0016	mg/L		03/24/14 10:13	03/26/14 11:25	1
2,4,5-Trichlorophenol	0.0050	U	0.050	0.0022	mg/L		03/24/14 10:13	03/26/14 11:25	1
2,4,6-Trichlorophenol	0.0050	U	0.025	0.0014	mg/L		03/24/14 10:13	03/26/14 11:25	1
2,4-Dinitrotoluene	0.020	U	0.050	0.0083	mg/L		03/24/14 10:13	03/26/14 11:25	1
2-Methylphenol	0.020	U	0.050	0.0049	mg/L		03/24/14 10:13	03/26/14 11:25	1
3 & 4 Methylphenol	0.0050	U	0.050	0.0013	mg/L		03/24/14 10:13	03/26/14 11:25	1
Hexachlorobenzene	0.0050	U	0.050	0.0033	mg/L		03/24/14 10:13	03/26/14 11:25	1
Hexachlorobutadiene	0.050	U	0.050	0.017	mg/L		03/24/14 10:13	03/26/14 11:25	1
Hexachloroethane	0.020	U	0.050	0.011	mg/L		03/24/14 10:13	03/26/14 11:25	1
Nitrobenzene	0.010	U	0.050	0.0041	mg/L		03/24/14 10:13	03/26/14 11:25	1
Pentachlorophenol	0.20	U	0.25	0.0050	mg/L		03/24/14 10:13	03/26/14 11:25	1
Pyridine	0.010	U	0.10	0.0057	mg/L		03/24/14 10:13	03/26/14 11:25	1

Surrogate	*LB2 %Recovery*	*LB2 Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*76*		*51 - 120*	*03/24/14 10:13*	*03/26/14 11:25*	*1*
2-Fluorobiphenyl	*78*		*49 - 120*	*03/24/14 10:13*	*03/26/14 11:25*	*1*
2-Fluorophenol (Surr)	*71*		*50 - 120*	*03/24/14 10:13*	*03/26/14 11:25*	*1*
Nitrobenzene-d5 (Surr)	*77*		*51 - 120*	*03/24/14 10:13*	*03/26/14 11:25*	*1*
Phenol-d5 (Surr)	*65*		*47 - 120*	*03/24/14 10:13*	*03/26/14 11:25*	*1*
Terphenyl-d14 (Surr)	*95*		*56 - 120*	*03/24/14 10:13*	*03/26/14 11:25*	*1*

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

Lab Sample ID: LCS 280-217690/2-C
Matrix: Solid
Analysis Batch: 218401

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 218040

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	0.250	0.187		mg/L		75	36 - 120
2,4,5-Trichlorophenol	0.250	0.229		mg/L		91	46 - 120
2,4,6-Trichlorophenol	0.250	0.224		mg/L		90	43 - 120
2,4-Dinitrotoluene	0.100	0.0737		mg/L		74	36 - 120
2-Methylphenol	0.250	0.220		mg/L		88	45 - 120
3 & 4 Methylphenol	0.500	0.440		mg/L		88	44 - 120
Hexachlorobenzene	0.100	0.0832		mg/L		83	52 - 120
Hexachlorobutadiene	0.250	0.172		mg/L		69	35 - 120
Hexachloroethane	0.250	0.180		mg/L		72	35 - 120
Nitrobenzene	0.250	0.218		mg/L		87	50 - 120
Pentachlorophenol	0.500	0.447		mg/L		89	39 - 120
Pyridine	0.250	0.0979	J	mg/L		39	10 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*85*		*51 - 120*
2-Fluorobiphenyl	*89*		*49 - 120*
2-Fluorophenol (Surr)	*81*		*50 - 120*
Nitrobenzene-d5 (Surr)	*88*		*51 - 120*
Phenol-d5 (Surr)	*74*		*47 - 120*
Terphenyl-d14 (Surr)	*95*		*56 - 120*

Lab Sample ID: 280-53170-1 MS
Matrix: Solid
Analysis Batch: 218401

Client Sample ID: AC1 CONCRETE
Prep Type: TCLP
Prep Batch: 218040

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	0.0050	U	0.248	0.196		mg/L		79	36 - 120
2,4,5-Trichlorophenol	0.0062	J	0.248	0.233		mg/L		91	46 - 120
2,4,6-Trichlorophenol	0.0050	U	0.248	0.215		mg/L		87	43 - 120
2,4-Dinitrotoluene	0.020	U	0.0990	0.0713		mg/L		72	36 - 120
2-Methylphenol	0.020	U	0.248	0.211		mg/L		85	45 - 120
3 & 4 Methylphenol	0.0050	U	0.495	0.425		mg/L		86	44 - 120
Hexachlorobenzene	0.0050	U	0.0990	0.0826		mg/L		83	52 - 120
Hexachlorobutadiene	0.050	U	0.248	0.188		mg/L		76	35 - 120
Hexachloroethane	0.020	U	0.248	0.182		mg/L		73	35 - 120
Nitrobenzene	0.010	U	0.248	0.218		mg/L		88	50 - 120
Pentachlorophenol	0.20	U	0.495	0.472		mg/L		95	39 - 120
Pyridine	0.010	U J	0.248	0.0346	J	mg/L		14	10 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*83*		*51 - 120*
2-Fluorobiphenyl	*88*		*49 - 120*
2-Fluorophenol (Surr)	*81*		*50 - 120*
Nitrobenzene-d5 (Surr)	*89*		*51 - 120*
Phenol-d5 (Surr)	*74*		*47 - 120*
Terphenyl-d14 (Surr)	*94*		*56 - 120*

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

Lab Sample ID: 280-53170-1 MSD
Matrix: Solid
Analysis Batch: 218401

Client Sample ID: AC1 CONCRETE
Prep Type: TCLP
Prep Batch: 218040

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	0.0050	U	0.250	0.194		mg/L		78	36 - 120	1	30
2,4,5-Trichlorophenol	0.0062	J	0.250	0.253		mg/L		99	46 - 120	9	30
2,4,6-Trichlorophenol	0.0050	U	0.250	0.232		mg/L		93	43 - 120	8	30
2,4-Dinitrotoluene	0.020	U	0.100	0.0788		mg/L		79	36 - 120	10	30
2-Methylphenol	0.020	U	0.250	0.221		mg/L		88	45 - 120	5	30
3 & 4 Methylphenol	0.0050	U	0.500	0.455		mg/L		91	44 - 120	7	30
Hexachlorobenzene	0.0050	U	0.100	0.0863		mg/L		86	52 - 120	4	30
Hexachlorobutadiene	0.050	U	0.250	0.179		mg/L		72	35 - 120	5	30
Hexachloroethane	0.020	U	0.250	0.184		mg/L		74	35 - 120	1	30
Nitrobenzene	0.010	U	0.250	0.232		mg/L		93	50 - 120	6	30
Pentachlorophenol	0.20	U	0.500	0.504		mg/L		101	39 - 120	7	30
Pyridine	0.010	U J	0.250	0.0609	J	mg/L		24	10 - 121	55	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*90*		*51 - 120*
2-Fluorobiphenyl	*94*		*49 - 120*
2-Fluorophenol (Surr)	*86*		*50 - 120*
Nitrobenzene-d5 (Surr)	*93*		*51 - 120*
Phenol-d5 (Surr)	*78*		*47 - 120*
Terphenyl-d14 (Surr)	*98*		*56 - 120*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 280-217827/1-A
Matrix: Solid
Analysis Batch: 218848

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217827

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	0.43	U	1.6	0.16	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
Endosulfan II	0.43	U	1.6	0.27	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
Endosulfan sulfate	0.43	U	1.6	0.26	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
Endrin	0.43	U	1.6	0.29	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
Endrin aldehyde	0.43	U	1.6	0.16	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
Endrin ketone	0.64	U	1.6	0.46	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
beta-BHC	0.64	U	1.6	0.62	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
alpha-BHC	0.43	U	1.6	0.20	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
delta-BHC	0.64	U	1.6	0.37	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
gamma-BHC (Lindane)	0.64	U	1.6	0.43	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
gamma-Chlordane	0.64	U	1.6	0.25	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
4,4'-DDD	0.64	U	1.6	0.51	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
4,4'-DDE	0.43	U	1.6	0.22	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
4,4'-DDT	0.64	U	1.9	0.55	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
Heptachlor	0.43	U	1.6	0.20	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
Heptachlor epoxide	0.64	U	1.6	0.40	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
Dieldrin	0.43	U	1.6	0.20	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
Aldrin	0.43	U	1.6	0.23	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
Methoxychlor	0.64	U	3.1	0.42	ug/Kg		03/21/14 13:30	03/28/14 16:23	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 280-217827/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 218848 — **Prep Batch: 217827**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene	25	U	160	15	ug/Kg		03/21/14 13:30	03/28/14 16:23	1
alpha-Chlordane	0.43	U	1.6	0.30	ug/Kg		03/21/14 13:30	03/28/14 16:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*83*		*55 - 130*	*03/21/14 13:30*	*03/28/14 16:23*	*1*
Tetrachloro-m-xylene	*76*		*70 - 125*	*03/21/14 13:30*	*03/28/14 16:23*	*1*

Lab Sample ID: LCS 280-217827/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 218580 — **Prep Batch: 217827**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Endosulfan I	15.2	12.9		ug/Kg		85	15 - 135
Endosulfan II	15.2	13.3		ug/Kg		87	35 - 140
Endosulfan sulfate	15.2	12.8		ug/Kg		84	60 - 135
Endrin	15.2	13.5		ug/Kg		89	60 - 135
Endrin aldehyde	15.2	10.2		ug/Kg		67	54 - 115
Endrin ketone	15.2	13.2		ug/Kg		87	65 - 135
beta-BHC	15.2	12.2		ug/Kg		80	60 - 125
alpha-BHC	15.2	12.6		ug/Kg		83	60 - 125
delta-BHC	15.2	12.4		ug/Kg		81	55 - 130
gamma-BHC (Lindane)	15.2	12.4		ug/Kg		82	60 - 125
gamma-Chlordane	15.2	12.9		ug/Kg		85	65 - 125
4,4'-DDD	15.2	13.5		ug/Kg		89	30 - 135
4,4'-DDE	15.2	12.6		ug/Kg		83	70 - 125
4,4'-DDT	15.2	13.4		ug/Kg		88	45 - 140
Heptachlor	15.2	12.8		ug/Kg		84	50 - 140
Heptachlor epoxide	15.2	12.9		ug/Kg		85	65 - 130
Dieldrin	15.2	13.2		ug/Kg		87	65 - 125
Aldrin	15.2	12.5		ug/Kg		82	45 - 140
Methoxychlor	15.2	13.8		ug/Kg		91	55 - 145
alpha-Chlordane	15.2	12.7		ug/Kg		83	65 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*91*		*55 - 130*
Tetrachloro-m-xylene	*77*		*70 - 125*

Lab Sample ID: LCS 280-217827/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 218580 — **Prep Batch: 217827**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene	60.8	50.0	J	ug/Kg		82	51 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*107*		*55 - 130*
Tetrachloro-m-xylene	*94*		*70 - 125*

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LB 280-217689/1-E — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218064**

Analyte	LB Result	LB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	0.000099	U	0.00050	0.000078	mg/L		03/24/14 14:33	03/27/14 22:25	1
Technical Chlordane	0.0048	U	0.0050	0.0014	mg/L		03/24/14 14:33	03/27/14 22:25	1
gamma-BHC (Lindane)	0.000099	U	0.00050	0.000068	mg/L		03/24/14 14:33	03/27/14 22:25	1
Heptachlor	0.000099	U	0.00050	0.000076	mg/L		03/24/14 14:33	03/27/14 22:25	1
Heptachlor epoxide	0.000099	U	0.00050	0.000074	mg/L		03/24/14 14:33	03/27/14 22:25	1
Methoxychlor	0.00020	U	0.00099	0.00013	mg/L		03/24/14 14:33	03/27/14 22:25	1
Toxaphene	0.0079	U	0.020	0.0036	mg/L		03/24/14 14:33	03/27/14 22:25	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*118*		*34 - 122*	*03/24/14 14:33*	*03/27/14 22:25*	*1*
Tetrachloro-m-xylene	*101*		*28 - 115*	*03/24/14 14:33*	*03/27/14 22:25*	*1*

Lab Sample ID: LCS 280-217689/2-E — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218064**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Endrin	0.00500	0.00618		mg/L		124	66 - 143
gamma-BHC (Lindane)	0.00500	0.00606		mg/L		121	68 - 142
Heptachlor	0.00500	0.00628		mg/L		126	59 - 143
Heptachlor epoxide	0.00500	0.00614		mg/L		123	37 - 142
Methoxychlor	0.00500	0.00561		mg/L		112	30 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*117*		*34 - 122*
Tetrachloro-m-xylene	*101*		*28 - 115*

Lab Sample ID: LCS 280-217689/2-F — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218064**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene	0.0192	0.0172	J	mg/L		90	63 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*114*		*34 - 122*
Tetrachloro-m-xylene	*99*		*28 - 115*

Lab Sample ID: 280-53170-3 MS — **Client Sample ID: AC5 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218064**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Endrin	0.00010	U	0.00490	0.00609		mg/L		124	66 - 143
gamma-BHC (Lindane)	0.00010	U	0.00490	0.00598		mg/L		122	68 - 142
Heptachlor	0.00010	U	0.00490	0.00599		mg/L		122	59 - 143
Heptachlor epoxide	0.00010	U	0.00490	0.00605		mg/L		123	37 - 142

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 280-53170-3 MS — **Client Sample ID: AC5 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218064**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methoxychlor	0.00020	U	0.00490	0.00531		mg/L		108	30 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*116*		*34 - 122*
Tetrachloro-m-xylene	*100*		*28 - 115*

Lab Sample ID: 280-53170-3 MS — **Client Sample ID: AC5 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218064**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene	0.0080	U	0.0200	0.0162	J	mg/L		81	63 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*113*		*34 - 122*
Tetrachloro-m-xylene	*95*		*28 - 115*

Lab Sample ID: 280-53170-3 MSD — **Client Sample ID: AC5 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218064**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Endrin	0.00010	U	0.00500	0.00595		mg/L		119	66 - 143	2	30
gamma-BHC (Lindane)	0.00010	U	0.00500	0.00579		mg/L		116	68 - 142	3	30
Heptachlor	0.00010	U	0.00500	0.00585		mg/L		117	59 - 143	2	30
Heptachlor epoxide	0.00010	U	0.00500	0.00589		mg/L		118	37 - 142	3	30
Methoxychlor	0.00020	U	0.00500	0.00534		mg/L		107	30 - 150	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*113*		*34 - 122*
Tetrachloro-m-xylene	*95*		*28 - 115*

Lab Sample ID: 280-53170-3 MSD — **Client Sample ID: AC5 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218064**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toxaphene	0.0080	U	0.0200	0.0187	J	mg/L		93	63 - 142	14	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*83*		*34 - 122*
Tetrachloro-m-xylene	*97*		*28 - 115*

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LB2 280-217690/1-D — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218083**

Analyte	LB2 Result	LB2 Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	0.00010	U	0.00050	0.000079	mg/L		03/24/14 14:33	03/27/14 20:08	1
Technical Chlordane	0.0048	U	0.0050	0.0014	mg/L		03/24/14 14:33	03/27/14 20:08	1
gamma-BHC (Lindane)	0.00010	U	0.00050	0.000069	mg/L		03/24/14 14:33	03/27/14 20:08	1
Heptachlor	0.00010	U	0.00050	0.000077	mg/L		03/24/14 14:33	03/27/14 20:08	1
Heptachlor epoxide	0.00010	U	0.00050	0.000075	mg/L		03/24/14 14:33	03/27/14 20:08	1
Methoxychlor	0.00020	U	0.0010	0.00013	mg/L		03/24/14 14:33	03/27/14 20:08	1
Toxaphene	0.0080	U	0.020	0.0037	mg/L		03/24/14 14:33	03/27/14 20:08	1

Surrogate	*LB2 %Recovery*	*LB2 Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*117*		*34 - 122*	*03/24/14 14:33*	*03/27/14 20:08*	*1*
Tetrachloro-m-xylene	*97*		*28 - 115*	*03/24/14 14:33*	*03/27/14 20:08*	*1*

Lab Sample ID: LCS 280-217690/2-D — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218083**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Endrin	0.00500	0.00616		mg/L		123	66 - 143
gamma-BHC (Lindane)	0.00500	0.00577		mg/L		115	68 - 142
Heptachlor	0.00500	0.00609		mg/L		122	59 - 143
Heptachlor epoxide	0.00500	0.00585		mg/L		117	37 - 142
Methoxychlor	0.00500	0.00550		mg/L		110	30 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*105*		*34 - 122*
Tetrachloro-m-xylene	*95*		*28 - 115*

Lab Sample ID: LCS 280-217690/2-E — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218083**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene	0.0200	0.0166	J	mg/L		83	63 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*109*		*34 - 122*
Tetrachloro-m-xylene	*97*		*28 - 115*

Lab Sample ID: 280-53170-2 MS — **Client Sample ID: AC3 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218083**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Endrin	0.000099	U	0.00500	0.00630		mg/L		126	66 - 143
gamma-BHC (Lindane)	0.000099	U	0.00500	0.00593		mg/L		119	68 - 142
Heptachlor	0.000099	U	0.00500	0.00622		mg/L		124	59 - 143
Heptachlor epoxide	0.000099	U	0.00500	0.00603		mg/L		121	37 - 142

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 280-53170-2 MS — **Client Sample ID: AC3 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218083**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methoxychlor	0.00020	U	0.00500	0.00587		mg/L		117	30 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*100*		*34 - 122*
Tetrachloro-m-xylene	*97*		*28 - 115*

Lab Sample ID: 280-53170-2 MSD — **Client Sample ID: AC3 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218083**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Endrin	0.000099	U	0.00500	0.00627		mg/L		125	66 - 143	0	30
gamma-BHC (Lindane)	0.000099	U	0.00500	0.00594		mg/L		119	68 - 142	0	30
Heptachlor	0.000099	U	0.00500	0.00615		mg/L		123	59 - 143	1	30
Heptachlor epoxide	0.000099	U	0.00500	0.00608		mg/L		122	37 - 142	1	30
Methoxychlor	0.00020	U	0.00500	0.00585		mg/L		117	30 - 150	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*102*		*34 - 122*
Tetrachloro-m-xylene	*95*		*28 - 115*

Lab Sample ID: 280-53170-4 MS — **Client Sample ID: AC6 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218083**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene	0.0078	U	0.0196	0.0172	J	mg/L		88	63 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*113*		*34 - 122*
Tetrachloro-m-xylene	*93*		*28 - 115*

Lab Sample ID: 280-53170-4 MSD — **Client Sample ID: AC6 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218601 — **Prep Batch: 218083**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toxaphene	0.0078	U	0.0196	0.0160	J	mg/L		82	63 - 142	7	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*112*		*34 - 122*
Tetrachloro-m-xylene	*90*		*28 - 115*

QC Sample Results

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 280-217827/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 218424 — **Prep Batch: 217827**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	19	U	31	15	ug/Kg		03/21/14 13:30	03/26/14 13:57	1
PCB-1016	9.3	U	31	4.7	ug/Kg		03/21/14 13:30	03/26/14 13:57	1
PCB-1232	14	U	31	4.8	ug/Kg		03/21/14 13:30	03/26/14 13:57	1
PCB-1242	9.3	U	31	8.5	ug/Kg		03/21/14 13:30	03/26/14 13:57	1
PCB-1248	9.3	U	31	5.2	ug/Kg		03/21/14 13:30	03/26/14 13:57	1
PCB-1254	9.3	U	31	5.1	ug/Kg		03/21/14 13:30	03/26/14 13:57	1
PCB-1260	9.3	U	31	2.5	ug/Kg		03/21/14 13:30	03/26/14 13:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*98*		*60 - 125*	*03/21/14 13:30*	*03/26/14 13:57*	*1*

Lab Sample ID: LCS 280-217827/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 218424 — **Prep Batch: 217827**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	61.9	57.2		ug/Kg		92	40 - 140
PCB-1260	61.9	64.5		ug/Kg		104	60 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*100*		*60 - 125*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-217734/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 218018 — **Prep Batch: 217734**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	5.3	U	19	2.2	ug/Kg		03/20/14 21:30	03/24/14 16:57	1
2,4-D	18	U	78	14	ug/Kg		03/20/14 21:30	03/24/14 16:57	1
2,4-DB	19	U	78	7.2	ug/Kg		03/20/14 21:30	03/24/14 16:57	1
Dalapon	5.3	U	39	1.4	ug/Kg		03/20/14 21:30	03/24/14 16:57	1
Dicamba	5.3	U	39	1.4	ug/Kg		03/20/14 21:30	03/24/14 16:57	1
Dichlorprop	5.3	U	78	3.1	ug/Kg		03/20/14 21:30	03/24/14 16:57	1
MCPA	4500	U	7800	1900	ug/Kg		03/20/14 21:30	03/24/14 16:57	1
Silvex (2,4,5-TP)	5.3	U	19	1.4	ug/Kg		03/20/14 21:30	03/24/14 16:57	1
MCPP	4500	U	7800	1900	ug/Kg		03/20/14 21:30	03/24/14 16:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*64*		*31 - 105*	*03/20/14 21:30*	*03/24/14 16:57*	*1*

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 280-217734/2-A
Matrix: Solid
Analysis Batch: 218018

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217734

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	97.3	63.7		ug/Kg		65	24 - 98
2,4-D	97.3	62.4	J	ug/Kg		64	32 - 97
2,4-DB	97.3	55.0	J	ug/Kg		57	37 - 119
Dalapon	97.3	62.3	M	ug/Kg		64	11 - 87
Dicamba	97.3	63.8		ug/Kg		66	11 - 87
Dichlorprop	97.3	60.3	J	ug/Kg		62	35 - 115
MCPA	9730	4600	J	ug/Kg		47	37 - 115
Silvex (2,4,5-TP)	97.3	62.8		ug/Kg		65	48 - 119
MCPP	9730	4880	J	ug/Kg		50	48 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*61*		*31 - 105*

Lab Sample ID: MB 280-218046/1-A
Matrix: Solid
Analysis Batch: 218393

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 218046

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	5.4	U	20	2.3	ug/Kg		03/24/14 13:36	03/26/14 10:07	1
2,4-D	18	U	79	14	ug/Kg		03/24/14 13:36	03/26/14 10:07	1
2,4-DB	20	U	79	7.4	ug/Kg		03/24/14 13:36	03/26/14 10:07	1
Dalapon	5.4	U	39	1.4	ug/Kg		03/24/14 13:36	03/26/14 10:07	1
Dicamba	5.4	U	39	1.4	ug/Kg		03/24/14 13:36	03/26/14 10:07	1
Dichlorprop	5.4	U	79	3.2	ug/Kg		03/24/14 13:36	03/26/14 10:07	1
MCPA	4600	U	7900	2000	ug/Kg		03/24/14 13:36	03/26/14 10:07	1
Silvex (2,4,5-TP)	5.4	U	20	1.4	ug/Kg		03/24/14 13:36	03/26/14 10:07	1
MCPP	4600	U	7900	2000	ug/Kg		03/24/14 13:36	03/26/14 10:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*94*		*31 - 105*	*03/24/14 13:36*	*03/26/14 10:07*	*1*

Lab Sample ID: LCS 280-218046/2-A
Matrix: Solid
Analysis Batch: 218393

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 218046

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	96.2	86.4		ug/Kg		90	24 - 98
2,4-D	96.2	91.4		ug/Kg		95	32 - 97
2,4-DB	96.2	88.2		ug/Kg		92	37 - 119
Dalapon	96.2	82.9		ug/Kg		86	11 - 87
Dicamba	96.2	85.4	Q	ug/Kg		89	11 - 87
Dichlorprop	96.2	85.2		ug/Kg		89	35 - 115
MCPA	9620	8260		ug/Kg		86	37 - 115
Silvex (2,4,5-TP)	96.2	86.9		ug/Kg		90	48 - 119
MCPP	9620	8260		ug/Kg		86	48 - 132

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 280-218046/2-A
Matrix: Solid
Analysis Batch: 218393

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 218046

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	92		31 - 105

Lab Sample ID: 280-53170-2 MS
Matrix: Solid
Analysis Batch: 218393

Client Sample ID: AC3 CONCRETE
Prep Type: Total/NA
Prep Batch: 218046

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.9	U	109	91.6		ug/Kg	☼	84	24 - 98
2,4-D	20	U	109	94.9		ug/Kg	☼	87	32 - 97
2,4-DB	22	U	109	92.7		ug/Kg	☼	85	37 - 119
Dalapon	5.9	U	109	84.3		ug/Kg	☼	77	11 - 87
Dicamba	5.9	U Q	109	91.3		ug/Kg	☼	84	11 - 87
Dichlorprop	5.9	U	109	89.9		ug/Kg	☼	83	35 - 115
MCPA	5000	U	10900	9230		ug/Kg	☼	85	37 - 115
Silvex (2,4,5-TP)	5.9	U	109	91.8		ug/Kg	☼	84	48 - 119
MCPP	5000	U	10900	9250		ug/Kg	☼	85	48 - 132

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4-Dichlorophenylacetic acid	83		31 - 105

Lab Sample ID: 280-53170-2 MSD
Matrix: Solid
Analysis Batch: 218393

Client Sample ID: AC3 CONCRETE
Prep Type: Total/NA
Prep Batch: 218046

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.9	U	109	92.3		ug/Kg	☼	84	24 - 98	1	40
2,4-D	20	U	109	95.6		ug/Kg	☼	87	32 - 97	1	40
2,4-DB	22	U	109	75.0	J	ug/Kg	☼	69	37 - 119	21	50
Dalapon	5.9	U	109	87.6		ug/Kg	☼	80	11 - 87	4	50
Dicamba	5.9	U Q	109	94.3		ug/Kg	☼	86	11 - 87	3	50
Dichlorprop	5.9	U	109	86.1	J	ug/Kg	☼	79	35 - 115	4	50
MCPA	5000	U	10900	9240		ug/Kg	☼	85	37 - 115	0	50
Silvex (2,4,5-TP)	5.9	U	109	91.2		ug/Kg	☼	83	48 - 119	1	40
MCPP	5000	U	10900	8870		ug/Kg	☼	81	48 - 132	4	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	81		31 - 105

Lab Sample ID: LB 280-217689/1-G
Matrix: Solid
Analysis Batch: 218393

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 218202

Analyte	LB Result	LB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0092	U	0.040	0.0021	mg/L		03/25/14 07:08	03/26/14 15:41	1
Silvex (2,4,5-TP)	0.0028	U	0.010	0.0017	mg/L		03/25/14 07:08	03/26/14 15:41	1

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LB 280-217689/1-G — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218393 — **Prep Batch: 218202**

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	34		10 - 131	03/25/14 07:08	03/26/14 15:41	1

Lab Sample ID: LCS 280-217689/2-H — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218393 — **Prep Batch: 218202**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	0.0500	0.0280	J	mg/L		56	13 - 115
Silvex (2,4,5-TP)	0.0500	0.0217		mg/L		43	10 - 158

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	31		10 - 131

Lab Sample ID: 280-53170-3 MS — **Client Sample ID: AC5 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218393 — **Prep Batch: 218202**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	0.0094	U	0.0521	0.0248	J	mg/L		48	13 - 115
Silvex (2,4,5-TP)	0.0029	U	0.0521	0.0207		mg/L		40	10 - 158

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4-Dichlorophenylacetic acid	27		10 - 131

Lab Sample ID: LB2 280-217690/1-F — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218393 — **Prep Batch: 218203**

Analyte	LB2 Result	LB2 Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0094	U	0.041	0.0021	mg/L		03/25/14 07:08	03/26/14 12:47	1
Silvex (2,4,5-TP)	0.0029	U	0.010	0.0017	mg/L		03/25/14 07:08	03/26/14 12:47	1

Surrogate	LB2 %Recovery	LB2 Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	25		10 - 131	03/25/14 07:08	03/26/14 12:47	1

Lab Sample ID: LCS 280-217690/2-G — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218394 — **Prep Batch: 218203**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	0.0510	0.0325	J	mg/L		64	13 - 115
Silvex (2,4,5-TP)	0.0510	0.0261		mg/L		51	10 - 158

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	31		10 - 131

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: 280-53170-4 MS — **Client Sample ID: AC6 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218393 — **Prep Batch: 218203**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	0.0092	U	0.0500	0.0251	J	mg/L		50	13 - 115
Silvex (2,4,5-TP)	0.0028	U	0.0500	0.0226		mg/L		45	10 - 158

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*25*		*10 - 131*

Lab Sample ID: 280-53170-4 MSD — **Client Sample ID: AC6 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218393 — **Prep Batch: 218203**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-D	0.0092	U	0.0510	0.0273	J	mg/L		53	13 - 115	8	30
Silvex (2,4,5-TP)	0.0028	U	0.0510	0.0252		mg/L		49	10 - 158	11	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*35*		*10 - 131*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-217344/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217614 — **Prep Batch: 217344**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2.8	U	47	1.5	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Antimony	0.57	U	1.9	0.36	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Arsenic	0.94	U	2.4	0.62	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Barium	0.17	U	1.9	0.072	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Beryllium	0.066	U	0.47	0.031	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Cadmium	0.094	U Q	0.47	0.039	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Calcium	19	U	94	13	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Chromium	0.14	U Q	3.3	0.055	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Cobalt	0.19	U	0.94	0.094	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Copper	0.47	U	4.7	0.20	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Iron	4.7	U	75	3.6	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Lead	0.75	U	0.85	0.25	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Magnesium	4.7	U	28	3.5	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Manganese	0.14	U	4.2	0.094	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Molybdenum	0.47	U	2.4	0.25	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Nickel	0.19	U	3.8	0.12	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Phosphorus	2.8	U	280	1.5	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Potassium	47	U	280	39	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Selenium	1.1	U	2.8	0.81	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Silver	0.19	U	1.4	0.15	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Sodium	94	U	470	56	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Thallium	1.1	U	2.8	0.61	mg/Kg		03/19/14 12:45	03/20/14 10:14	1
Vanadium	0.19	U	1.9	0.089	mg/Kg		03/19/14 12:45	03/20/14 10:14	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 280-217344/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217614 — **Prep Batch: 217344**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	0.614	J	7.5	0.38	mg/Kg		03/19/14 12:45	03/20/14 10:14	1

Lab Sample ID: LCS 280-217344/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217614 — **Prep Batch: 217344**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	196	187		mg/Kg		96	80 - 120
Antimony	49.0	47.4		mg/Kg		97	80 - 120
Arsenic	98.0	94.0		mg/Kg		96	80 - 120
Barium	196	194		mg/Kg		99	80 - 120
Beryllium	4.90	4.52		mg/Kg		92	80 - 120
Cadmium	9.80	9.55	Q	mg/Kg		97	80 - 120
Calcium	4900	4600		mg/Kg		94	80 - 120
Chromium	19.6	19.1	Q	mg/Kg		97	80 - 120
Cobalt	49.0	46.7		mg/Kg		95	80 - 120
Copper	24.5	23.5		mg/Kg		96	80 - 120
Iron	98.0	91.0		mg/Kg		93	80 - 120
Lead	49.0	47.7		mg/Kg		97	80 - 120
Magnesium	4900	4680		mg/Kg		95	80 - 120
Manganese	49.0	45.9		mg/Kg		94	80 - 120
Molybdenum	98.0	95.2		mg/Kg		97	80 - 120
Nickel	49.0	46.8		mg/Kg		96	80 - 120
Phosphorus	980	941		mg/Kg		96	80 - 112
Potassium	4900	4840		mg/Kg		99	80 - 120
Selenium	196	189		mg/Kg		96	80 - 120
Silver	4.90	4.85		mg/Kg		99	80 - 120
Sodium	4900	5150		mg/Kg		105	80 - 120
Thallium	196	188		mg/Kg		96	80 - 120
Vanadium	49.0	47.1		mg/Kg		96	80 - 120
Zinc	49.0	46.7		mg/Kg		95	80 - 120

Lab Sample ID: 280-53170-4 MS — **Client Sample ID: AC6 CONCRETE**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217614 — **Prep Batch: 217344**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	8200	J	211	10800	4	mg/Kg	☼	1233	80 - 120
Antimony	0.60	U J	52.7	27.4	J	mg/Kg	☼	52	80 - 120
Arsenic	2.1	J	105	99.9		mg/Kg	☼	93	80 - 120
Barium	91	J	211	246	J	mg/Kg	☼	73	80 - 120
Beryllium	0.20	J	5.27	4.74		mg/Kg	☼	86	80 - 120
Cadmium	0.16	J Q	10.5	10.1	Q	mg/Kg	☼	94	80 - 120
Calcium	80000	J	5270	79300	4	mg/Kg	☼	-8	80 - 120
Chromium	9.5	Q	21.1	32.3	Q	mg/Kg	☼	108	80 - 120
Cobalt	13		52.7	59.6		mg/Kg	☼	89	80 - 120
Copper	22	J	26.4	49.5		mg/Kg	☼	103	80 - 120
Iron	8800	J	105	10900	4	mg/Kg	☼	2002	80 - 120
Lead	8.7		52.7	57.1		mg/Kg	☼	92	80 - 120

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-53170-4 MS — **Client Sample ID: AC6 CONCRETE**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217614 — **Prep Batch: 217344**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Magnesium	5300		5270	10500		mg/Kg	☼	98	80 - 120
Manganese	260	J	52.7	239	4	mg/Kg	☼	-46	80 - 120
Molybdenum	0.48	J	105	94.1		mg/Kg	☼	89	80 - 120
Nickel	6.1		52.7	52.7		mg/Kg	☼	88	80 - 120
Phosphorus	320		1050	1320		mg/Kg	☼	95	75 - 125
Potassium	460		5270	5610		mg/Kg	☼	98	80 - 120
Selenium	1.2	U	211	193		mg/Kg	☼	92	80 - 120
Silver	0.20	U	5.27	5.30		mg/Kg	☼	101	80 - 120
Sodium	340	J	5270	5660		mg/Kg	☼	101	80 - 120
Thallium	1.2	U	211	171		mg/Kg	☼	81	80 - 120
Vanadium	22		52.7	75.1		mg/Kg	☼	101	80 - 120
Zinc	22		52.7	68.2		mg/Kg	☼	89	80 - 120

Lab Sample ID: 280-53170-4 MSD — **Client Sample ID: AC6 CONCRETE**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217614 — **Prep Batch: 217344**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	8200	J	217	11300	4	mg/Kg	☼	1466	80 - 120	5	20
Antimony	0.60	U J	54.3	28.6	J	mg/Kg	☼	53	80 - 120	4	20
Arsenic	2.1	J	109	103		mg/Kg	☼	93	80 - 120	3	20
Barium	91	J	217	252	J	mg/Kg	☼	74	80 - 120	3	20
Beryllium	0.20	J	5.43	4.87		mg/Kg	☼	86	80 - 120	3	20
Cadmium	0.16	J Q	10.9	10.4	Q	mg/Kg	☼	95	80 - 120	4	20
Calcium	80000	J	5430	80200	4	mg/Kg	☼	9	80 - 120	1	20
Chromium	9.5	Q	21.7	31.2	Q	mg/Kg	☼	100	80 - 120	3	20
Cobalt	13		54.3	64.8		mg/Kg	☼	96	80 - 120	8	20
Copper	22	J	27.1	55.1	J	mg/Kg	☼	121	80 - 120	11	20
Iron	8800	J	109	10800	4	mg/Kg	☼	1859	80 - 120	1	20
Lead	8.7		54.3	56.2		mg/Kg	☼	88	80 - 120	2	20
Magnesium	5300		5430	10800		mg/Kg	☼	100	80 - 120	3	20
Manganese	260	J	54.3	236	4	mg/Kg	☼	-52	80 - 120	2	20
Molybdenum	0.48	J	109	97.8		mg/Kg	☼	90	80 - 120	4	20
Nickel	6.1		54.3	54.3		mg/Kg	☼	89	80 - 120	3	20
Phosphorus	320		1090	1320		mg/Kg	☼	93	75 - 125	0	20
Potassium	460		5430	5830		mg/Kg	☼	99	80 - 120	4	20
Selenium	1.2	U	217	200		mg/Kg	☼	92	80 - 120	3	20
Silver	0.20	U	5.43	5.47		mg/Kg	☼	101	80 - 120	3	20
Sodium	340	J	5430	6040		mg/Kg	☼	105	80 - 120	7	20
Thallium	1.2	U	217	177		mg/Kg	☼	82	80 - 120	3	20
Vanadium	22		54.3	85.2		mg/Kg	☼	117	80 - 120	13	20
Zinc	22		54.3	70.1		mg/Kg	☼	90	80 - 120	3	20

Lab Sample ID: LB2 280-217690/1-B — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218254 — **Prep Batch: 217857**

Analyte	LB2 Result	LB2 Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.065	U	0.50	0.022	mg/L		03/24/14 07:30	03/24/14 20:29	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LB2 280-217690/1-B — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218254 — **Prep Batch: 217857**

Analyte	LB2 Result	LB2 Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.0187	J	1.0	0.0020	mg/L		03/24/14 07:30	03/24/14 20:29	1
Cadmium	0.0070	U	0.10	0.0020	mg/L		03/24/14 07:30	03/24/14 20:29	1
Chromium	0.0045	U	0.50	0.0030	mg/L		03/24/14 07:30	03/24/14 20:29	1
Lead	0.035	U	0.50	0.013	mg/L		03/24/14 07:30	03/24/14 20:29	1
Selenium	0.0322	J	0.10	0.024	mg/L		03/24/14 07:30	03/24/14 20:29	1
Silver	0.015	U	0.50	0.0040	mg/L		03/24/14 07:30	03/24/14 20:29	1

Lab Sample ID: LCS 280-217690/2-B — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218254 — **Prep Batch: 217857**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.00	3.89		mg/L		97	80 - 120
Barium	12.0	12.1		mg/L		101	80 - 120
Cadmium	1.10	1.11		mg/L		101	80 - 120
Chromium	5.20	5.21		mg/L		100	80 - 120
Lead	5.50	5.64		mg/L		103	80 - 120
Selenium	3.00	2.99		mg/L		100	80 - 120
Silver	1.05	1.02		mg/L		97	80 - 120

Lab Sample ID: 280-53170-4 MS — **Client Sample ID: AC6 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218254 — **Prep Batch: 217857**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.065	U	4.00	3.93		mg/L		98	80 - 120
Barium	0.56	J	12.0	12.3		mg/L		98	80 - 120
Cadmium	0.0070	U	1.10	1.11		mg/L		101	80 - 120
Chromium	0.0045	U	5.20	5.00		mg/L		96	80 - 120
Lead	0.035	U	5.50	5.28		mg/L		96	80 - 120
Selenium	0.028	J	3.00	2.98		mg/L		98	80 - 120
Silver	0.015	U	1.05	1.03		mg/L		98	80 - 120

Lab Sample ID: 280-53170-4 MSD — **Client Sample ID: AC6 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218254 — **Prep Batch: 217857**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.065	U	4.00	4.07		mg/L		102	80 - 120	3	20
Barium	0.56	J	12.0	12.8		mg/L		102	80 - 120	4	20
Cadmium	0.0070	U	1.10	1.16		mg/L		105	80 - 120	4	20
Chromium	0.0045	U	5.20	5.18		mg/L		100	80 - 120	4	20
Lead	0.035	U	5.50	5.49		mg/L		100	80 - 120	4	20
Selenium	0.028	J	3.00	3.14		mg/L		104	80 - 120	5	20
Silver	0.015	U	1.05	1.07		mg/L		102	80 - 120	4	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LB 280-217689/1-B — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218267 — **Prep Batch: 217859**

Analyte	LB Result	LB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.065	U	0.50	0.022	mg/L		03/24/14 07:30	03/24/14 23:06	1
Barium	0.0120	J	1.0	0.0020	mg/L		03/24/14 07:30	03/24/14 23:06	1
Cadmium	0.00350	J	0.10	0.0020	mg/L		03/24/14 07:30	03/24/14 23:06	1
Chromium	0.00405	J	0.50	0.0030	mg/L		03/24/14 07:30	03/24/14 23:06	1
Lead	0.035	U	0.50	0.013	mg/L		03/24/14 07:30	03/24/14 23:06	1
Selenium	0.075	U	0.10	0.024	mg/L		03/24/14 07:30	03/24/14 23:06	1
Silver	0.015	U	0.50	0.0040	mg/L		03/24/14 07:30	03/24/14 23:06	1

Lab Sample ID: LCS 280-217689/2-B — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218267 — **Prep Batch: 217859**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.00	3.98		mg/L		100	80 - 120
Barium	12.0	12.2		mg/L		102	80 - 120
Cadmium	1.10	1.11		mg/L		101	80 - 120
Chromium	5.20	5.08		mg/L		98	80 - 120
Lead	5.50	5.41		mg/L		98	80 - 120
Selenium	3.00	2.97		mg/L		99	80 - 120
Silver	1.05	1.04		mg/L		99	80 - 120

Lab Sample ID: 280-53170-3 MS — **Client Sample ID: AC5 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218267 — **Prep Batch: 217859**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.065	U	4.00	4.05		mg/L		101	80 - 120
Barium	0.11	J	12.0	12.4		mg/L		103	80 - 120
Cadmium	0.0070	U	1.10	1.12		mg/L		102	80 - 120
Chromium	0.019	J	5.20	5.16		mg/L		99	80 - 120
Lead	0.035	U	5.50	5.42		mg/L		98	80 - 120
Selenium	0.075	U	3.00	3.00		mg/L		100	80 - 120
Silver	0.015	U	1.05	1.06		mg/L		101	80 - 120

Lab Sample ID: 280-53170-3 MSD — **Client Sample ID: AC5 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218267 — **Prep Batch: 217859**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.065	U	4.00	4.09		mg/L		102	80 - 120	1	20
Barium	0.11	J	12.0	12.3		mg/L		102	80 - 120	1	20
Cadmium	0.0070	U	1.10	1.13		mg/L		103	80 - 120	1	20
Chromium	0.019	J	5.20	5.16		mg/L		99	80 - 120	0	20
Lead	0.035	U	5.50	5.42		mg/L		98	80 - 120	0	20
Selenium	0.075	U	3.00	3.02		mg/L		101	80 - 120	0	20
Silver	0.015	U	1.05	1.06		mg/L		101	80 - 120	0	20

QC Sample Results

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB2 280-217690/1-E — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218457 — **Prep Batch: 218138**

Analyte	LB2 Result	LB2 Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000080	U	0.0020	0.000030	mg/L		03/25/14 11:45	03/26/14 02:42	1

Lab Sample ID: LCS 280-217690/2-F — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218457 — **Prep Batch: 218138**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00478		mg/L		96	90 - 116

Lab Sample ID: LB 280-217689/1-F — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218457 — **Prep Batch: 218141**

Analyte	LB Result	LB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000080	U	0.0020	0.000030	mg/L		03/25/14 11:45	03/26/14 03:08	1

Lab Sample ID: LCS 280-217689/2-G — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218457 — **Prep Batch: 218141**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00480		mg/L		96	90 - 116

Lab Sample ID: 280-53170-3 MS — **Client Sample ID: AC5 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218457 — **Prep Batch: 218141**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000080	U	0.00500	0.00480		mg/L		96	90 - 116

Lab Sample ID: 280-53170-3 MSD — **Client Sample ID: AC5 CONCRETE**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 218457 — **Prep Batch: 218141**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000080	U	0.00500	0.00488		mg/L		98	90 - 116	2	10

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Lab Sample ID: MB 280-217443/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217680 — **Prep Batch: 217443**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	16	U	20	6.5	ug/Kg		03/19/14 13:00	03/19/14 17:04	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique) (Continued)

Lab Sample ID: LCS 280-217443/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217680 — **Prep Batch: 217443**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	446	482		ug/Kg		108	80 - 120

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 280-217813/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217970 — **Prep Batch: 217813**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.25	U	0.50	0.10	mg/Kg		03/21/14 10:06	03/21/14 16:35	1

Lab Sample ID: HLCS 280-217813/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217970 — **Prep Batch: 217813**

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	20.0	19.5		mg/Kg		98	90 - 110

Lab Sample ID: LCS 280-217813/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217970 — **Prep Batch: 217813**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	5.00	5.24		mg/Kg		105	90 - 110

Lab Sample ID: LCSD 280-217813/4-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217970 — **Prep Batch: 217813**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	5.00	5.33		mg/Kg		107	90 - 110	2	10

Lab Sample ID: LLCS 280-217813/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217970 — **Prep Batch: 217813**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	5.00	5.33		mg/Kg		107	51 - 150

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 280-217628/3-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217785 — **Prep Batch: 217628**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	4.7	U	5.0	2.4	mg/Kg		03/20/14 11:06	03/20/14 16:00	1

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: LCS 280-217628/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217785 — **Prep Batch: 217628**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	93.0	53.3		mg/Kg		57	47 - 100

Lab Sample ID: LCSD 280-217628/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217785 — **Prep Batch: 217628**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	93.0	53.9		mg/Kg		58	47 - 100	1	35

Method: 9045D - pH

Lab Sample ID: LCS 280-217347/4 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217347

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.020		SU		100	97 - 103

Lab Sample ID: LCSD 280-217347/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217347

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
pH	7.00	7.010		SU		100	97 - 103	0	5

Lab Sample ID: 280-53170-2 DU — **Client Sample ID: AC3 CONCRETE**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 217347

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	12.4		12.38		SU		0.2	5

Method: D 2216 - Percent Moisture

Lab Sample ID: 280-53170-4 DU — **Client Sample ID: AC6 CONCRETE**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217346

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	8.8		8.7		%		2	20

QC Association Summary

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

GC/MS VOA

Prep Batch: 217472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	5030B	
280-53170-2	AC3 CONCRETE	Total/NA	Solid	5030B	
280-53170-3	AC5 CONCRETE	Total/NA	Solid	5030B	
280-53170-4	AC6 CONCRETE	Total/NA	Solid	5030B	
LCS 280-217472/2-A	Lab Control Sample	Total/NA	Solid	5030B	
MB 280-217472/1-A	Method Blank	Total/NA	Solid	5030B	

Analysis Batch: 217548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	8260B/DoD	217472
280-53170-2	AC3 CONCRETE	Total/NA	Solid	8260B/DoD	217472
280-53170-3	AC5 CONCRETE	Total/NA	Solid	8260B/DoD	217472
280-53170-4	AC6 CONCRETE	Total/NA	Solid	8260B/DoD	217472
LCS 280-217472/2-A	Lab Control Sample	Total/NA	Solid	8260B/DoD	217472
MB 280-217472/1-A	Method Blank	Total/NA	Solid	8260B/DoD	217472

Leach Batch: 217688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	1311	
280-53170-2	AC3 CONCRETE	TCLP	Solid	1311	
280-53170-3	AC5 CONCRETE	TCLP	Solid	1311	
280-53170-4	AC6 CONCRETE	TCLP	Solid	1311	
LB 280-217688/1-A	Method Blank	TCLP	Solid	1311	
LCS 280-217688/2-A	Lab Control Sample	TCLP	Solid	1311	

Analysis Batch: 217893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-5	TRIP BLANK	Total/NA	Water	8260B/DoD	
LCS 280-217893/4	Lab Control Sample	Total/NA	Water	8260B/DoD	
LCSD 280-217893/8	Lab Control Sample Dup	Total/NA	Water	8260B/DoD	
MB 280-217893/5	Method Blank	Total/NA	Water	8260B/DoD	

Analysis Batch: 218760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	8260B	217688
280-53170-2	AC3 CONCRETE	TCLP	Solid	8260B	217688
280-53170-3	AC5 CONCRETE	TCLP	Solid	8260B	217688
280-53170-4	AC6 CONCRETE	TCLP	Solid	8260B	217688
LB 280-217688/1-A	Method Blank	TCLP	Solid	8260B	217688
LCS 280-217688/2-A	Lab Control Sample	TCLP	Solid	8260B	217688

GC/MS Semi VOA

Prep Batch: 217475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	3550C	
280-53170-2	AC3 CONCRETE	Total/NA	Solid	3550C	
280-53170-3	AC5 CONCRETE	Total/NA	Solid	3550C	
280-53170-4	AC6 CONCRETE	Total/NA	Solid	3550C	
LCS 280-217475/2-A	Lab Control Sample	Total/NA	Solid	3550C	

GC/MS Semi VOA (Continued)

Prep Batch: 217475 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-217475/1-A	Method Blank	Total/NA	Solid	3550C	

Leach Batch: 217689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-3	AC5 CONCRETE	TCLP	Solid	1311	
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	1311	
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	1311	
LB 280-217689/1-C	Method Blank	TCLP	Solid	1311	
LCS 280-217689/2-C	Lab Control Sample	TCLP	Solid	1311	

Leach Batch: 217690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	1311	
280-53170-1 MS	AC1 CONCRETE	TCLP	Solid	1311	
280-53170-1 MSD	AC1 CONCRETE	TCLP	Solid	1311	
280-53170-2	AC3 CONCRETE	TCLP	Solid	1311	
280-53170-4	AC6 CONCRETE	TCLP	Solid	1311	
LB2 280-217690/1-C	Method Blank	TCLP	Solid	1311	
LCS 280-217690/2-C	Lab Control Sample	TCLP	Solid	1311	

Analysis Batch: 217695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	8270C/DoD	217475
280-53170-2	AC3 CONCRETE	Total/NA	Solid	8270C/DoD	217475
280-53170-3	AC5 CONCRETE	Total/NA	Solid	8270C/DoD	217475
280-53170-4	AC6 CONCRETE	Total/NA	Solid	8270C/DoD	217475
LCS 280-217475/2-A	Lab Control Sample	Total/NA	Solid	8270C/DoD	217475
MB 280-217475/1-A	Method Blank	Total/NA	Solid	8270C/DoD	217475

Prep Batch: 218033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-3	AC5 CONCRETE	TCLP	Solid	3510C	217689
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	3510C	217689
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	3510C	217689
LB 280-217689/1-C	Method Blank	TCLP	Solid	3510C	217689
LCS 280-217689/2-C	Lab Control Sample	TCLP	Solid	3510C	217689

Prep Batch: 218040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	3510C	217690
280-53170-1 MS	AC1 CONCRETE	TCLP	Solid	3510C	217690
280-53170-1 MSD	AC1 CONCRETE	TCLP	Solid	3510C	217690
280-53170-2	AC3 CONCRETE	TCLP	Solid	3510C	217690
280-53170-4	AC6 CONCRETE	TCLP	Solid	3510C	217690
LB2 280-217690/1-C	Method Blank	TCLP	Solid	3510C	217690
LCS 280-217690/2-C	Lab Control Sample	TCLP	Solid	3510C	217690

Analysis Batch: 218401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	8270D	218040
280-53170-1 MS	AC1 CONCRETE	TCLP	Solid	8270D	218040

GC/MS Semi VOA (Continued)

Analysis Batch: 218401 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1 MSD	AC1 CONCRETE	TCLP	Solid	8270D	218040
280-53170-2	AC3 CONCRETE	TCLP	Solid	8270D	218040
280-53170-3	AC5 CONCRETE	TCLP	Solid	8270D	218033
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	8270D	218033
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	8270D	218033
280-53170-4	AC6 CONCRETE	TCLP	Solid	8270D	218040
LB 280-217689/1-C	Method Blank	TCLP	Solid	8270D	218033
LB2 280-217690/1-C	Method Blank	TCLP	Solid	8270D	218040
LCS 280-217689/2-C	Lab Control Sample	TCLP	Solid	8270D	218033
LCS 280-217690/2-C	Lab Control Sample	TCLP	Solid	8270D	218040

GC Semi VOA

Leach Batch: 217689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-3	AC5 CONCRETE	TCLP	Solid	1311	
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	1311	
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	1311	
LB 280-217689/1-E	Method Blank	TCLP	Solid	1311	
LB 280-217689/1-G	Method Blank	TCLP	Solid	1311	
LCS 280-217689/2-E	Lab Control Sample	TCLP	Solid	1311	
LCS 280-217689/2-F	Lab Control Sample	TCLP	Solid	1311	
LCS 280-217689/2-H	Lab Control Sample	TCLP	Solid	1311	

Leach Batch: 217690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	1311	
280-53170-2	AC3 CONCRETE	TCLP	Solid	1311	
280-53170-2 MS	AC3 CONCRETE	TCLP	Solid	1311	
280-53170-2 MSD	AC3 CONCRETE	TCLP	Solid	1311	
280-53170-4	AC6 CONCRETE	TCLP	Solid	1311	
280-53170-4 MS	AC6 CONCRETE	TCLP	Solid	1311	
280-53170-4 MSD	AC6 CONCRETE	TCLP	Solid	1311	
LB2 280-217690/1-D	Method Blank	TCLP	Solid	1311	
LB2 280-217690/1-F	Method Blank	TCLP	Solid	1311	
LCS 280-217690/2-D	Lab Control Sample	TCLP	Solid	1311	
LCS 280-217690/2-E	Lab Control Sample	TCLP	Solid	1311	
LCS 280-217690/2-G	Lab Control Sample	TCLP	Solid	1311	

Prep Batch: 217734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	8151A	
280-53170-3	AC5 CONCRETE	Total/NA	Solid	8151A	
280-53170-4	AC6 CONCRETE	Total/NA	Solid	8151A	
LCS 280-217734/2-A	Lab Control Sample	Total/NA	Solid	8151A	
MB 280-217734/1-A	Method Blank	Total/NA	Solid	8151A	

Prep Batch: 217827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	3546	

GC Semi VOA (Continued)

Prep Batch: 217827 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-2	AC3 CONCRETE	Total/NA	Solid	3546	
280-53170-3	AC5 CONCRETE	Total/NA	Solid	3546	
280-53170-4	AC6 CONCRETE	Total/NA	Solid	3546	
LCS 280-217827/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-217827/3-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-217827/4-A	Lab Control Sample	Total/NA	Solid	3546	
MB 280-217827/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 218018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	8151A	217734
280-53170-3	AC5 CONCRETE	Total/NA	Solid	8151A	217734
280-53170-4	AC6 CONCRETE	Total/NA	Solid	8151A	217734
LCS 280-217734/2-A	Lab Control Sample	Total/NA	Solid	8151A	217734
MB 280-217734/1-A	Method Blank	Total/NA	Solid	8151A	217734

Prep Batch: 218046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-2	AC3 CONCRETE	Total/NA	Solid	8151A	
280-53170-2 MS	AC3 CONCRETE	Total/NA	Solid	8151A	
280-53170-2 MSD	AC3 CONCRETE	Total/NA	Solid	8151A	
LCS 280-218046/2-A	Lab Control Sample	Total/NA	Solid	8151A	
MB 280-218046/1-A	Method Blank	Total/NA	Solid	8151A	

Prep Batch: 218064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-3	AC5 CONCRETE	TCLP	Solid	3510C	217689
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	3510C	217689
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	3510C	217689
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	3510C	217689
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	3510C	217689
LB 280-217689/1-E	Method Blank	TCLP	Solid	3510C	217689
LCS 280-217689/2-E	Lab Control Sample	TCLP	Solid	3510C	217689
LCS 280-217689/2-F	Lab Control Sample	TCLP	Solid	3510C	217689

Prep Batch: 218083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	3510C	217690
280-53170-2	AC3 CONCRETE	TCLP	Solid	3510C	217690
280-53170-2 MS	AC3 CONCRETE	TCLP	Solid	3510C	217690
280-53170-2 MSD	AC3 CONCRETE	TCLP	Solid	3510C	217690
280-53170-4	AC6 CONCRETE	TCLP	Solid	3510C	217690
280-53170-4 MS	AC6 CONCRETE	TCLP	Solid	3510C	217690
280-53170-4 MSD	AC6 CONCRETE	TCLP	Solid	3510C	217690
LB2 280-217690/1-D	Method Blank	TCLP	Solid	3510C	217690
LCS 280-217690/2-D	Lab Control Sample	TCLP	Solid	3510C	217690
LCS 280-217690/2-E	Lab Control Sample	TCLP	Solid	3510C	217690

Prep Batch: 218202

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-3	AC5 CONCRETE	TCLP	Solid	8151A	217689

GC Semi VOA (Continued)

Prep Batch: 218202 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	8151A	217689
LB 280-217689/1-G	Method Blank	TCLP	Solid	8151A	217689
LCS 280-217689/2-H	Lab Control Sample	TCLP	Solid	8151A	217689

Prep Batch: 218203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	8151A	217690
280-53170-2	AC3 CONCRETE	TCLP	Solid	8151A	217690
280-53170-4	AC6 CONCRETE	TCLP	Solid	8151A	217690
280-53170-4 MS	AC6 CONCRETE	TCLP	Solid	8151A	217690
280-53170-4 MSD	AC6 CONCRETE	TCLP	Solid	8151A	217690
LB2 280-217690/1-F	Method Blank	TCLP	Solid	8151A	217690
LCS 280-217690/2-G	Lab Control Sample	TCLP	Solid	8151A	217690

Analysis Batch: 218393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	8151A	218203
280-53170-2	AC3 CONCRETE	TCLP	Solid	8151A	218203
280-53170-2	AC3 CONCRETE	Total/NA	Solid	8151A	218046
280-53170-2 MS	AC3 CONCRETE	Total/NA	Solid	8151A	218046
280-53170-2 MSD	AC3 CONCRETE	Total/NA	Solid	8151A	218046
280-53170-3	AC5 CONCRETE	TCLP	Solid	8151A	218202
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	8151A	218202
280-53170-4	AC6 CONCRETE	TCLP	Solid	8151A	218203
280-53170-4 MS	AC6 CONCRETE	TCLP	Solid	8151A	218203
280-53170-4 MSD	AC6 CONCRETE	TCLP	Solid	8151A	218203
LB 280-217689/1-G	Method Blank	TCLP	Solid	8151A	218202
LB2 280-217690/1-F	Method Blank	TCLP	Solid	8151A	218203
LCS 280-217689/2-H	Lab Control Sample	TCLP	Solid	8151A	218202
LCS 280-218046/2-A	Lab Control Sample	Total/NA	Solid	8151A	218046
MB 280-218046/1-A	Method Blank	Total/NA	Solid	8151A	218046

Analysis Batch: 218394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-217690/2-G	Lab Control Sample	TCLP	Solid	8151A	218203

Analysis Batch: 218424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	8082A	217827
280-53170-2	AC3 CONCRETE	Total/NA	Solid	8082A	217827
280-53170-3	AC5 CONCRETE	Total/NA	Solid	8082A	217827
280-53170-4	AC6 CONCRETE	Total/NA	Solid	8082A	217827
LCS 280-217827/4-A	Lab Control Sample	Total/NA	Solid	8082A	217827
MB 280-217827/1-A	Method Blank	Total/NA	Solid	8082A	217827

Analysis Batch: 218580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-217827/2-A	Lab Control Sample	Total/NA	Solid	8081B	217827
LCS 280-217827/3-A	Lab Control Sample	Total/NA	Solid	8081B	217827

GC Semi VOA (Continued)

Analysis Batch: 218601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	8081B	218083
280-53170-2	AC3 CONCRETE	TCLP	Solid	8081B	218083
280-53170-2 MS	AC3 CONCRETE	TCLP	Solid	8081B	218083
280-53170-2 MSD	AC3 CONCRETE	TCLP	Solid	8081B	218083
280-53170-3	AC5 CONCRETE	TCLP	Solid	8081B	218064
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	8081B	218064
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	8081B	218064
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	8081B	218064
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	8081B	218064
280-53170-4	AC6 CONCRETE	TCLP	Solid	8081B	218083
280-53170-4 MS	AC6 CONCRETE	TCLP	Solid	8081B	218083
280-53170-4 MSD	AC6 CONCRETE	TCLP	Solid	8081B	218083
LB 280-217689/1-E	Method Blank	TCLP	Solid	8081B	218064
LB2 280-217690/1-D	Method Blank	TCLP	Solid	8081B	218083
LCS 280-217689/2-E	Lab Control Sample	TCLP	Solid	8081B	218064
LCS 280-217689/2-F	Lab Control Sample	TCLP	Solid	8081B	218064
LCS 280-217690/2-D	Lab Control Sample	TCLP	Solid	8081B	218083
LCS 280-217690/2-E	Lab Control Sample	TCLP	Solid	8081B	218083

Analysis Batch: 218848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	8081B	217827
280-53170-2	AC3 CONCRETE	Total/NA	Solid	8081B	217827
280-53170-3	AC5 CONCRETE	Total/NA	Solid	8081B	217827
280-53170-4	AC6 CONCRETE	Total/NA	Solid	8081B	217827
MB 280-217827/1-A	Method Blank	Total/NA	Solid	8081B	217827

Metals

Prep Batch: 217344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	3050B	
280-53170-2	AC3 CONCRETE	Total/NA	Solid	3050B	
280-53170-3	AC5 CONCRETE	Total/NA	Solid	3050B	
280-53170-4	AC6 CONCRETE	Total/NA	Solid	3050B	
280-53170-4 MS	AC6 CONCRETE	Total/NA	Solid	3050B	
280-53170-4 MSD	AC6 CONCRETE	Total/NA	Solid	3050B	
LCS 280-217344/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 280-217344/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 217443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	7471B	
280-53170-2	AC3 CONCRETE	Total/NA	Solid	7471B	
280-53170-3	AC5 CONCRETE	Total/NA	Solid	7471B	
280-53170-4	AC6 CONCRETE	Total/NA	Solid	7471B	
LCS 280-217443/2-A	Lab Control Sample	Total/NA	Solid	7471B	
MB 280-217443/1-A	Method Blank	Total/NA	Solid	7471B	

Metals (Continued)

Analysis Batch: 217614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	6010C	217344
280-53170-2	AC3 CONCRETE	Total/NA	Solid	6010C	217344
280-53170-3	AC5 CONCRETE	Total/NA	Solid	6010C	217344
280-53170-4	AC6 CONCRETE	Total/NA	Solid	6010C	217344
280-53170-4 MS	AC6 CONCRETE	Total/NA	Solid	6010C	217344
280-53170-4 MSD	AC6 CONCRETE	Total/NA	Solid	6010C	217344
LCS 280-217344/2-A	Lab Control Sample	Total/NA	Solid	6010C	217344
MB 280-217344/1-A	Method Blank	Total/NA	Solid	6010C	217344

Analysis Batch: 217680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	7471B	217443
280-53170-2	AC3 CONCRETE	Total/NA	Solid	7471B	217443
280-53170-3	AC5 CONCRETE	Total/NA	Solid	7471B	217443
280-53170-4	AC6 CONCRETE	Total/NA	Solid	7471B	217443
LCS 280-217443/2-A	Lab Control Sample	Total/NA	Solid	7471B	217443
MB 280-217443/1-A	Method Blank	Total/NA	Solid	7471B	217443

Leach Batch: 217689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-3	AC5 CONCRETE	TCLP	Solid	1311	
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	1311	
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	1311	
LB 280-217689/1-B	Method Blank	TCLP	Solid	1311	
LB 280-217689/1-F	Method Blank	TCLP	Solid	1311	
LCS 280-217689/2-B	Lab Control Sample	TCLP	Solid	1311	
LCS 280-217689/2-G	Lab Control Sample	TCLP	Solid	1311	

Leach Batch: 217690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	1311	
280-53170-2	AC3 CONCRETE	TCLP	Solid	1311	
280-53170-4	AC6 CONCRETE	TCLP	Solid	1311	
280-53170-4 MS	AC6 CONCRETE	TCLP	Solid	1311	
280-53170-4 MSD	AC6 CONCRETE	TCLP	Solid	1311	
LB2 280-217690/1-B	Method Blank	TCLP	Solid	1311	
LB2 280-217690/1-E	Method Blank	TCLP	Solid	1311	
LCS 280-217690/2-B	Lab Control Sample	TCLP	Solid	1311	
LCS 280-217690/2-F	Lab Control Sample	TCLP	Solid	1311	

Prep Batch: 217857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	3010A	217690
280-53170-2	AC3 CONCRETE	TCLP	Solid	3010A	217690
280-53170-4	AC6 CONCRETE	TCLP	Solid	3010A	217690
280-53170-4 MS	AC6 CONCRETE	TCLP	Solid	3010A	217690
280-53170-4 MSD	AC6 CONCRETE	TCLP	Solid	3010A	217690
LB2 280-217690/1-B	Method Blank	TCLP	Solid	3010A	217690
LCS 280-217690/2-B	Lab Control Sample	TCLP	Solid	3010A	217690

Metals (Continued)

Prep Batch: 217859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-3	AC5 CONCRETE	TCLP	Solid	3010A	217689
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	3010A	217689
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	3010A	217689
LB 280-217689/1-B	Method Blank	TCLP	Solid	3010A	217689
LCS 280-217689/2-B	Lab Control Sample	TCLP	Solid	3010A	217689

Prep Batch: 218138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	7470A	217690
280-53170-2	AC3 CONCRETE	TCLP	Solid	7470A	217690
280-53170-4	AC6 CONCRETE	TCLP	Solid	7470A	217690
LB2 280-217690/1-E	Method Blank	TCLP	Solid	7470A	217690
LCS 280-217690/2-F	Lab Control Sample	TCLP	Solid	7470A	217690

Prep Batch: 218141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-3	AC5 CONCRETE	TCLP	Solid	7470A	217689
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	7470A	217689
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	7470A	217689
LB 280-217689/1-F	Method Blank	TCLP	Solid	7470A	217689
LCS 280-217689/2-G	Lab Control Sample	TCLP	Solid	7470A	217689

Analysis Batch: 218254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	6010C	217857
280-53170-2	AC3 CONCRETE	TCLP	Solid	6010C	217857
280-53170-4	AC6 CONCRETE	TCLP	Solid	6010C	217857
280-53170-4 MS	AC6 CONCRETE	TCLP	Solid	6010C	217857
280-53170-4 MSD	AC6 CONCRETE	TCLP	Solid	6010C	217857
LB2 280-217690/1-B	Method Blank	TCLP	Solid	6010C	217857
LCS 280-217690/2-B	Lab Control Sample	TCLP	Solid	6010C	217857

Analysis Batch: 218267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-3	AC5 CONCRETE	TCLP	Solid	6010C	217859
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	6010C	217859
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	6010C	217859
LB 280-217689/1-B	Method Blank	TCLP	Solid	6010C	217859
LCS 280-217689/2-B	Lab Control Sample	TCLP	Solid	6010C	217859

Analysis Batch: 218457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	TCLP	Solid	7470A	218138
280-53170-2	AC3 CONCRETE	TCLP	Solid	7470A	218138
280-53170-3	AC5 CONCRETE	TCLP	Solid	7470A	218141
280-53170-3 MS	AC5 CONCRETE	TCLP	Solid	7470A	218141
280-53170-3 MSD	AC5 CONCRETE	TCLP	Solid	7470A	218141
280-53170-4	AC6 CONCRETE	TCLP	Solid	7470A	218138
LB 280-217689/1-F	Method Blank	TCLP	Solid	7470A	218141
LB2 280-217690/1-E	Method Blank	TCLP	Solid	7470A	218138
LCS 280-217689/2-G	Lab Control Sample	TCLP	Solid	7470A	218141

Metals (Continued)

Analysis Batch: 218457 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-217690/2-F	Lab Control Sample	TCLP	Solid	7470A	218138

General Chemistry

Leach Batch: 217340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Soluble	Solid	DI Leach	
280-53170-2	AC3 CONCRETE	Soluble	Solid	DI Leach	
280-53170-2 DU	AC3 CONCRETE	Soluble	Solid	DI Leach	
280-53170-3	AC5 CONCRETE	Soluble	Solid	DI Leach	
280-53170-4	AC6 CONCRETE	Soluble	Solid	DI Leach	

Analysis Batch: 217346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	D 2216	
280-53170-2	AC3 CONCRETE	Total/NA	Solid	D 2216	
280-53170-3	AC5 CONCRETE	Total/NA	Solid	D 2216	
280-53170-4	AC6 CONCRETE	Total/NA	Solid	D 2216	
280-53170-4 DU	AC6 CONCRETE	Total/NA	Solid	D 2216	

Analysis Batch: 217347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Soluble	Solid	9045D	217340
280-53170-2	AC3 CONCRETE	Soluble	Solid	9045D	217340
280-53170-2 DU	AC3 CONCRETE	Soluble	Solid	9045D	217340
280-53170-3	AC5 CONCRETE	Soluble	Solid	9045D	217340
280-53170-4	AC6 CONCRETE	Soluble	Solid	9045D	217340
LCS 280-217347/4	Lab Control Sample	Total/NA	Solid	9045D	
LCSD 280-217347/5	Lab Control Sample Dup	Total/NA	Solid	9045D	

Analysis Batch: 217360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	7.1.2	
280-53170-2	AC3 CONCRETE	Total/NA	Solid	7.1.2	
280-53170-3	AC5 CONCRETE	Total/NA	Solid	7.1.2	
280-53170-4	AC6 CONCRETE	Total/NA	Solid	7.1.2	

Prep Batch: 217628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	9030B	
280-53170-2	AC3 CONCRETE	Total/NA	Solid	9030B	
280-53170-3	AC5 CONCRETE	Total/NA	Solid	9030B	
280-53170-4	AC6 CONCRETE	Total/NA	Solid	9030B	
LCS 280-217628/1-A	Lab Control Sample	Total/NA	Solid	9030B	
LCSD 280-217628/2-A	Lab Control Sample Dup	Total/NA	Solid	9030B	
MB 280-217628/3-A	Method Blank	Total/NA	Solid	9030B	

Analysis Batch: 217785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	9034	217628

General Chemistry (Continued)

Analysis Batch: 217785 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-2	AC3 CONCRETE	Total/NA	Solid	9034	217628
280-53170-3	AC5 CONCRETE	Total/NA	Solid	9034	217628
280-53170-4	AC6 CONCRETE	Total/NA	Solid	9034	217628
LCS 280-217628/1-A	Lab Control Sample	Total/NA	Solid	9034	217628
LCSD 280-217628/2-A	Lab Control Sample Dup	Total/NA	Solid	9034	217628
MB 280-217628/3-A	Method Blank	Total/NA	Solid	9034	217628

Prep Batch: 217813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	9012B	
280-53170-2	AC3 CONCRETE	Total/NA	Solid	9012B	
280-53170-3	AC5 CONCRETE	Total/NA	Solid	9012B	
280-53170-4	AC6 CONCRETE	Total/NA	Solid	9012B	
HLCS 280-217813/1-A	Lab Control Sample	Total/NA	Solid	9012B	
LCS 280-217813/3-A	Lab Control Sample	Total/NA	Solid	9012B	
LCSD 280-217813/4-A	Lab Control Sample Dup	Total/NA	Solid	9012B	
LLCS 280-217813/2-A	Lab Control Sample	Total/NA	Solid	9012B	
MB 280-217813/5-A	Method Blank	Total/NA	Solid	9012B	

Analysis Batch: 217970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	9012B	217813
280-53170-2	AC3 CONCRETE	Total/NA	Solid	9012B	217813
280-53170-3	AC5 CONCRETE	Total/NA	Solid	9012B	217813
280-53170-4	AC6 CONCRETE	Total/NA	Solid	9012B	217813
HLCS 280-217813/1-A	Lab Control Sample	Total/NA	Solid	9012B	217813
LCS 280-217813/3-A	Lab Control Sample	Total/NA	Solid	9012B	217813
LCSD 280-217813/4-A	Lab Control Sample Dup	Total/NA	Solid	9012B	217813
LLCS 280-217813/2-A	Lab Control Sample	Total/NA	Solid	9012B	217813
MB 280-217813/5-A	Method Blank	Total/NA	Solid	9012B	217813

Lab Chronicle

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

Client Sample ID: AC1 CONCRETE

Lab Sample ID: 280-53170-1

Date Collected: 03/13/14 09:15

Matrix: Solid

Date Received: 03/15/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	217688	03/20/14 16:10	JJW	TAL DEN
TCLP	Analysis	8260B		1	2 mL	20 mL	218760	03/28/14 05:36	JNL	TAL DEN
Total/NA	Prep	5030B			4.977 g	5 mL	217472	03/19/14 14:17	JLS	TAL DEN
Total/NA	Analysis	8260B/DoD		1	4.977 g	5 mL	217548	03/19/14 19:22	JLS	TAL DEN
Total/NA	Prep	3550C			30.5 g	1 mL	217475	03/19/14 17:10	ACF	TAL DEN
Total/NA	Analysis	8270C/DoD		1	30.5 g	1 mL	217695	03/21/14 00:54	DCK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3510C			201 mL	1 mL	218040	03/24/14 10:13	EER	TAL DEN
TCLP	Analysis	8270D		1	201 mL	1 mL	218401	03/26/14 15:23	MGH	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3510C			101 mL	10 mL	218083	03/24/14 14:33	EER	TAL DEN
TCLP	Analysis	8081B		1	101 mL	10 mL	218601	03/27/14 18:08	DAW	TAL DEN
Total/NA	Prep	3546			30.2 g	10 mL	217827	03/21/14 13:30	DFB1	TAL DEN
Total/NA	Analysis	8081B		1	30.2 g	10 mL	218848	03/28/14 15:14	DAW	TAL DEN
Total/NA	Prep	3546			30.2 g	10 mL	217827	03/21/14 13:30	DFB1	TAL DEN
Total/NA	Analysis	8082A		1	30.2 g	10 mL	218424	03/26/14 15:56	TDJ	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	8151A			100 mL	10 mL	218203	03/25/14 07:08	AMA	TAL DEN
TCLP	Analysis	8151A		1	100 mL	10 mL	218393	03/26/14 13:48	LKG	TAL DEN
Total/NA	Prep	8151A			50.0 g	10 mL	217734	03/20/14 21:30	EJP	TAL DEN
Total/NA	Analysis	8151A		1	50.0 g	10 mL	218018	03/24/14 17:46	LKG	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	217857	03/24/14 07:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1	10 mL	50 mL	218254	03/24/14 20:34	JKH	TAL DEN
Total/NA	Prep	3050B			1.02 g	100 mL	217344	03/19/14 12:45	WAW	TAL DEN
Total/NA	Analysis	6010C		1	1.02 g	100 mL	217614	03/20/14 10:18	JKH	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	7470A			30 mL	30 mL	218138	03/25/14 11:45	WAW	TAL DEN
TCLP	Analysis	7470A		1	30 mL	30 mL	218457	03/26/14 02:47	WAW	TAL DEN
Total/NA	Prep	7471B			0.50 g	50 mL	217443	03/19/14 13:00	WAW	TAL DEN
Total/NA	Analysis	7471B		1	0.50 g	50 mL	217680	03/19/14 17:08	WAW	TAL DEN
Total/NA	Analysis	7.1.2		1			217360	03/18/14 22:37	MW1	TAL DEN
Total/NA	Prep	9012B			1.02 mL	50 mL	217813	03/21/14 10:06	AJA	TAL DEN
Total/NA	Analysis	9012B		1	1.02 mL	50 mL	217970	03/21/14 16:52	AJA	TAL DEN
Total/NA	Prep	9030B			50.06 g	250 mL	217628	03/20/14 11:06	AJS	TAL DEN
Total/NA	Analysis	9034		1	50.06 g	250 mL	217785	03/20/14 16:00	AJS	TAL DEN
Soluble	Leach	DI Leach			40.70 g	40 mL	217340	03/18/14 18:35	MRB	TAL DEN
Soluble	Analysis	9045D		1	1 mL	1 mL	217347	03/18/14 19:42	MRB	TAL DEN
Total/NA	Analysis	D 2216		1			217346	03/18/14 19:17	MRB	TAL DEN

Lab Chronicle

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

Client Sample ID: AC3 CONCRETE

Lab Sample ID: 280-53170-2

Date Collected: 03/13/14 11:40

Matrix: Solid

Date Received: 03/15/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	217688	03/20/14 16:10	JJW	TAL DEN
TCLP	Analysis	8260B		1	2 mL	20 mL	218760	03/28/14 05:58	JNL	TAL DEN
Total/NA	Prep	5030B			5.029 g	5 mL	217472	03/19/14 14:17	JLS	TAL DEN
Total/NA	Analysis	8260B/DoD		1	5.029 g	5 mL	217548	03/19/14 19:43	JLS	TAL DEN
Total/NA	Prep	3550C			30.7 g	1 mL	217475	03/19/14 17:10	ACF	TAL DEN
Total/NA	Analysis	8270C/DoD		1	30.7 g	1 mL	217695	03/21/14 01:20	DCK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3510C			202 mL	1 mL	218040	03/24/14 10:13	EER	TAL DEN
TCLP	Analysis	8270D		1	202 mL	1 mL	218401	03/26/14 16:31	MGH	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3510C			101 mL	10 mL	218083	03/24/14 14:33	EER	TAL DEN
TCLP	Analysis	8081B		1	101 mL	10 mL	218601	03/27/14 18:25	DAW	TAL DEN
Total/NA	Prep	3546			30.4 g	10 mL	217827	03/21/14 13:30	DFB1	TAL DEN
Total/NA	Analysis	8081B		1	30.4 g	10 mL	218848	03/28/14 15:31	DAW	TAL DEN
Total/NA	Prep	3546			30.4 g	10 mL	217827	03/21/14 13:30	DFB1	TAL DEN
Total/NA	Analysis	8082A		1	30.4 g	10 mL	218424	03/26/14 16:20	TDJ	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	8151A			102 mL	10 mL	218203	03/25/14 07:08	AMA	TAL DEN
TCLP	Analysis	8151A		1	102 mL	10 mL	218393	03/26/14 14:10	LKG	TAL DEN
Total/NA	Prep	8151A			51.2 g	10 mL	218046	03/24/14 13:36	AMA	TAL DEN
Total/NA	Analysis	8151A		1	51.2 g	10 mL	218393	03/26/14 10:53	LKG	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	217857	03/24/14 07:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1	10 mL	50 mL	218254	03/24/14 20:36	JKH	TAL DEN
Total/NA	Prep	3050B			1.06 g	100 mL	217344	03/19/14 12:45	WAW	TAL DEN
Total/NA	Analysis	6010C		1	1.06 g	100 mL	217614	03/20/14 10:20	JKH	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	7470A			30 mL	30 mL	218138	03/25/14 11:45	WAW	TAL DEN
TCLP	Analysis	7470A		1	30 mL	30 mL	218457	03/26/14 02:49	WAW	TAL DEN
Total/NA	Prep	7471B			0.57 g	50 mL	217443	03/19/14 13:00	WAW	TAL DEN
Total/NA	Analysis	7471B		1	0.57 g	50 mL	217680	03/19/14 17:15	WAW	TAL DEN
Total/NA	Analysis	7.1.2		1			217360	03/18/14 22:37	MW1	TAL DEN
Total/NA	Prep	9012B			0.98 mL	50 mL	217813	03/21/14 10:06	AJA	TAL DEN
Total/NA	Analysis	9012B		1	0.98 mL	50 mL	217970	03/21/14 16:53	AJA	TAL DEN
Total/NA	Prep	9030B			49.97 g	250 mL	217628	03/20/14 11:06	AJS	TAL DEN
Total/NA	Analysis	9034		1	49.97 g	250 mL	217785	03/20/14 16:00	AJS	TAL DEN
Soluble	Leach	DI Leach			40.27 g	40 mL	217340	03/18/14 18:35	MRB	TAL DEN
Soluble	Analysis	9045D		1	1 mL	1 mL	217347	03/18/14 19:42	MRB	TAL DEN
Total/NA	Analysis	D 2216		1			217346	03/18/14 19:17	MRB	TAL DEN

Lab Chronicle

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

Client Sample ID: AC5 CONCRETE

Lab Sample ID: 280-53170-3

Date Collected: 03/13/14 13:20

Matrix: Solid

Date Received: 03/15/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	217688	03/20/14 16:10	JJW	TAL DEN
TCLP	Analysis	8260B		1	2 mL	20 mL	218760	03/28/14 06:20	JNL	TAL DEN
Total/NA	Prep	5030B			4.995 g	5 mL	217472	03/19/14 14:17	JLS	TAL DEN
Total/NA	Analysis	8260B/DoD		1	4.995 g	5 mL	217548	03/19/14 20:03	JLS	TAL DEN
Total/NA	Prep	3550C			32.5 g	1 mL	217475	03/19/14 17:10	ACF	TAL DEN
Total/NA	Analysis	8270C/DoD		1	32.5 g	1 mL	217695	03/21/14 01:46	DCK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217689	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3510C			200 mL	1 mL	218033	03/24/14 10:13	EER	TAL DEN
TCLP	Analysis	8270D		1	200 mL	1 mL	218401	03/26/14 12:20	MGH	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217689	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3510C			100 mL	10 mL	218064	03/24/14 14:33	EER	TAL DEN
TCLP	Analysis	8081B		1	100 mL	10 mL	218601	03/27/14 20:59	DAW	TAL DEN
Total/NA	Prep	3546			30.8 g	10 mL	217827	03/21/14 13:30	DFB1	TAL DEN
Total/NA	Analysis	8081B		1	30.8 g	10 mL	218848	03/28/14 15:49	DAW	TAL DEN
Total/NA	Prep	3546			30.8 g	10 mL	217827	03/21/14 13:30	DFB1	TAL DEN
Total/NA	Analysis	8082A		1	30.8 g	10 mL	218424	03/26/14 16:44	TDJ	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217689	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	8151A			98 mL	10 mL	218202	03/25/14 07:08	AMA	TAL DEN
TCLP	Analysis	8151A		1	98 mL	10 mL	218393	03/26/14 16:27	LKG	TAL DEN
Total/NA	Prep	8151A			51.2 g	10 mL	217734	03/20/14 21:30	EJP	TAL DEN
Total/NA	Analysis	8151A		1	51.2 g	10 mL	218018	03/24/14 18:34	LKG	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217689	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	217859	03/24/14 07:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1	10 mL	50 mL	218267	03/24/14 23:14	SJS	TAL DEN
Total/NA	Prep	3050B			1.02 g	100 mL	217344	03/19/14 12:45	WAW	TAL DEN
Total/NA	Analysis	6010C		1	1.02 g	100 mL	217614	03/20/14 10:23	JKH	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217689	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	7470A			30 mL	30 mL	218141	03/25/14 11:45	WAW	TAL DEN
TCLP	Analysis	7470A		1	30 mL	30 mL	218457	03/26/14 03:39	WAW	TAL DEN
Total/NA	Prep	7471B			0.52 g	50 mL	217443	03/19/14 13:00	WAW	TAL DEN
Total/NA	Analysis	7471B		1	0.52 g	50 mL	217680	03/19/14 17:18	WAW	TAL DEN
Total/NA	Analysis	7.1.2		1			217360	03/18/14 22:37	MW1	TAL DEN
Total/NA	Prep	9012B			0.99 mL	50 mL	217813	03/21/14 10:06	AJA	TAL DEN
Total/NA	Analysis	9012B		1	0.99 mL	50 mL	217970	03/21/14 16:55	AJA	TAL DEN
Total/NA	Prep	9030B			50.12 g	250 mL	217628	03/20/14 11:06	AJS	TAL DEN
Total/NA	Analysis	9034		1	50.12 g	250 mL	217785	03/20/14 16:00	AJS	TAL DEN
Soluble	Leach	DI Leach			40.14 g	40 mL	217340	03/18/14 18:35	MRB	TAL DEN
Soluble	Analysis	9045D		1	1 mL	1 mL	217347	03/18/14 19:42	MRB	TAL DEN
Total/NA	Analysis	D 2216		1			217346	03/18/14 19:17	MRB	TAL DEN

Lab Chronicle

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

Client Sample ID: AC6 CONCRETE

Lab Sample ID: 280-53170-4

Date Collected: 03/13/14 15:15

Matrix: Solid

Date Received: 03/15/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	217688	03/20/14 16:10	JJW	TAL DEN
TCLP	Analysis	8260B		1	2 mL	20 mL	218760	03/28/14 06:42	JNL	TAL DEN
Total/NA	Prep	5030B			5.005 g	5 mL	217472	03/19/14 14:17	JLS	TAL DEN
Total/NA	Analysis	8260B/DoD		1	5.005 g	5 mL	217548	03/19/14 20:24	JLS	TAL DEN
Total/NA	Prep	3550C			30.5 g	1 mL	217475	03/19/14 17:10	ACF	TAL DEN
Total/NA	Analysis	8270C/DoD		1	30.5 g	1 mL	217695	03/21/14 02:13	DCK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3510C			200 mL	1 mL	218040	03/24/14 10:13	EER	TAL DEN
TCLP	Analysis	8270D		1	200 mL	1 mL	218401	03/26/14 16:54	MGH	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3510C			102 mL	10 mL	218083	03/24/14 14:33	EER	TAL DEN
TCLP	Analysis	8081B		1	102 mL	10 mL	218601	03/27/14 19:16	DAW	TAL DEN
Total/NA	Prep	3546			30.7 g	10 mL	217827	03/21/14 13:30	DFB1	TAL DEN
Total/NA	Analysis	8081B		1	30.7 g	10 mL	218848	03/28/14 16:06	DAW	TAL DEN
Total/NA	Prep	3546			30.7 g	10 mL	217827	03/21/14 13:30	DFB1	TAL DEN
Total/NA	Analysis	8082A		1	30.7 g	10 mL	218424	03/26/14 17:08	TDJ	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	8151A			100 mL	10 mL	218203	03/25/14 07:08	AMA	TAL DEN
TCLP	Analysis	8151A		1	100 mL	10 mL	218393	03/26/14 14:33	LKG	TAL DEN
Total/NA	Prep	8151A			50.5 g	10 mL	217734	03/20/14 21:30	EJP	TAL DEN
Total/NA	Analysis	8151A		1	50.5 g	10 mL	218018	03/24/14 18:59	LKG	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	217857	03/24/14 07:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1	10 mL	50 mL	218254	03/24/14 20:39	JKH	TAL DEN
Total/NA	Prep	3050B			1.09 g	100 mL	217344	03/19/14 12:45	WAW	TAL DEN
Total/NA	Analysis	6010C		1	1.09 g	100 mL	217614	03/20/14 10:25	JKH	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	217690	03/20/14 17:09	JJW	TAL DEN
TCLP	Prep	7470A			30 mL	30 mL	218138	03/25/14 11:45	WAW	TAL DEN
TCLP	Analysis	7470A		1	30 mL	30 mL	218457	03/26/14 02:52	WAW	TAL DEN
Total/NA	Prep	7471B			0.56 g	50 mL	217443	03/19/14 13:00	WAW	TAL DEN
Total/NA	Analysis	7471B		1	0.56 g	50 mL	217680	03/19/14 17:20	WAW	TAL DEN
Total/NA	Analysis	7.1.2		1			217360	03/18/14 22:37	MW1	TAL DEN
Total/NA	Prep	9012B			0.99 mL	50 mL	217813	03/21/14 10:06	AJA	TAL DEN
Total/NA	Analysis	9012B		1	0.99 mL	50 mL	217970	03/21/14 16:56	AJA	TAL DEN
Total/NA	Prep	9030B			50.13 g	250 mL	217628	03/20/14 11:06	AJS	TAL DEN
Total/NA	Analysis	9034		1	50.13 g	250 mL	217785	03/20/14 16:00	AJS	TAL DEN
Soluble	Leach	DI Leach			40.32 g	40 mL	217340	03/18/14 18:35	MRB	TAL DEN
Soluble	Analysis	9045D		1	1 mL	1 mL	217347	03/18/14 19:42	MRB	TAL DEN
Total/NA	Analysis	D 2216		1			217346	03/18/14 19:17	MRB	TAL DEN

Lab Chronicle

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 280-53170-5

Date Collected: 03/13/14 09:15

Matrix: Water

Date Received: 03/15/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/DoD		1	20 mL	20 mL	217893	03/21/14 20:38	EC	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Login Sample Receipt Checklist

Client: AMO Environmental Decisions, Inc.

Job Number: 280-53170-1

Login Number: 53170

List Source: TestAmerica Denver

List Number: 1

Creator: Knauf, James R

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

TestAmerica Denver
4955 Yarrow Street

Arvada, CO 80002
phone 303.736.0100 fax

280-53170 Chain of Custody

Chain of Custody Record

0.9 FRS+0.2
JK 3-15-14

TestAmerica
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TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other:

Client Contact	Project Manager: Vince Piazza	Site Contact: Vince Piazza	Date:	COC No:
AMO Environmental Decisions	Tel/Fax: (215) 906-4767	Lab Contact:	Carrier:	_____ of _____ COCs
4327 Point Pleasant Pike, P.O. Box 410	Analysis Turnaround Time			Sampler:
Danboro, PA 18916	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
(215) 230-8282 PHONE	TAT if different from Below Normal T-A-T			Walk-in Client:
(215) 230-8283 FAX	☑ 2 weeks			Lab Sampling:
Project Name: USACE Concrete Sampling & Testing	☐ 1 week			
Site: Assunpink Creek Broad Street Culvert	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TCL VOCs	TCL SVOCs	TCL Pesticides	TCL Herbicides	TCL PCBs	TAL Metals	Extractable Petroleum Hydrocarbons	TCLP VOCs, SVOCs, Metals	TCLP Pesticides	TCLP Herbicides	Ignitability, Corrosivity	Reactivity as Sulfide	Reactivity as Cyanide					Sample Specific Notes:
AC2 CONCRETE	3/13/14	0945	G	S	6			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
AC3 CONCRETE	↓	1140	↓	↓	↓			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓					
AC5 CONCRETE	↓	1320	↓	↓	↓			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓					
AC6 CONCRETE	↓	1515	↓	↓	↓			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓					
TRIP BLANK	3/12/14	—	↓	AQ	2			X																	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other								1	1	1	1	1	1	1	1	1	1	1							

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Vince Piazza	AMO	3/14/14	Julie Gilmore	TAKOP	3-14-14 1035
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[illegible]	TA	3/14/14 1055	[illegible]	TA	3-15-14 945
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-53170-2
Client Project/Site: Assunpink Creek Broad Street Culvert

For:
AMO Environmental Decisions, Inc.
4327 Point Pleasant Pike
PO BOX 410
Danboro, Pennsylvania 18916

Attn: Mr. Vince Piazza

M. Elaine Walker

Authorized for release by:
4/3/2014 12:32:14 PM

Elaine Walker, Project Manager II
(303)736-0156
elaine.walker@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

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

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Job ID: 280-53170-2

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE
Client: AMO Environmental Decisions, Inc.
Project: Assunpink Creek Broad Street Culvert
Report Number: 280-53170-2

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

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

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

RECEIPT

Five samples were received on 03/15/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.1ºC.

This report only contains results of the NJEPH analyses, which were subcontracted to TestAmerica Edison, NJ. These results need to be reported separately because TestAmerica Edison does not hold DoD ELAP Certification. The remaining analyses received with this delivery group will be reported under job 280-53170-1.

NEW JERSEY EXTRACTABLE PETROLEUM HYDROCARBONS

Samples AC1 CONCRETE (280-53170-1), AC3 CONCRETE (280-53170-2), AC5 CONCRETE (280-53170-3), and AC6 CONCRETE (280-53170-4) were analyzed for New Jersey Extractable Petroleum Hydrocarbons in accordance with NJDEP EPH. The samples were prepared on 03/21/2014 and analyzed on 03/25/2014.

No difficulties were encountered during the New Jersey Extractable Petroleum Hydrocarbons analysis.

All quality control parameters were within the acceptance limits.

Definitions/Glossary

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-2

Qualifiers

GC Semi VOA

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

Glossary

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

Detection Summary

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-2

Client Sample ID: AC1 CONCRETE — Lab Sample ID: 280-53170-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Total EPH (C9-C40)	46		2.1	2.1	mg/Kg	1	☼	NJDEP EPH	Total/NA

Client Sample ID: AC3 CONCRETE — Lab Sample ID: 280-53170-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Total EPH (C9-C40)	89		2.2	2.2	mg/Kg	1	☼	NJDEP EPH	Total/NA

Client Sample ID: AC5 CONCRETE — Lab Sample ID: 280-53170-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Total EPH (C9-C40)	36		2.1	2.1	mg/Kg	1	☼	NJDEP EPH	Total/NA

Client Sample ID: AC6 CONCRETE — Lab Sample ID: 280-53170-4

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-2

Method	Method Description	Protocol	Laboratory
NJDEP EPH	New Jersey Extractable Petroleum Hydrocarbons	NJDEP	TAL EDI

Protocol References:

NJDEP = New Jersey Department of Environmental Protection

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-53170-1	AC1 CONCRETE	Solid	03/13/14 09:15	03/15/14 09:45
280-53170-2	AC3 CONCRETE	Solid	03/13/14 11:40	03/15/14 09:45
280-53170-3	AC5 CONCRETE	Solid	03/13/14 13:20	03/15/14 09:45
280-53170-4	AC6 CONCRETE	Solid	03/13/14 15:15	03/15/14 09:45

Client Sample Results

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-2

Method: NJDEP EPH - New Jersey Extractable Petroleum Hydrocarbons

Client Sample ID: AC1 CONCRETE — **Lab Sample ID: 280-53170-1**
Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 93.5**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total EPH (C9-C40)	46		2.1	2.1	mg/Kg	☼	03/21/14 14:35	03/25/14 10:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*40 - 140*	*03/21/14 14:35*	*03/25/14 10:23*	*1*
1-Chlorooctadecane	*83*		*40 - 140*	*03/21/14 14:35*	*03/25/14 10:23*	*1*

Client Sample ID: AC3 CONCRETE — **Lab Sample ID: 280-53170-2**
Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total EPH (C9-C40)	89		2.2	2.2	mg/Kg	☼	03/21/14 14:35	03/25/14 10:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*40 - 140*	*03/21/14 14:35*	*03/25/14 10:38*	*1*
1-Chlorooctadecane	*84*		*40 - 140*	*03/21/14 14:35*	*03/25/14 10:38*	*1*

Client Sample ID: AC5 CONCRETE — **Lab Sample ID: 280-53170-3**
Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 94.0**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total EPH (C9-C40)	36		2.1	2.1	mg/Kg	☼	03/21/14 14:35	03/25/14 10:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*40 - 140*	*03/21/14 14:35*	*03/25/14 10:53*	*1*
1-Chlorooctadecane	*70*		*40 - 140*	*03/21/14 14:35*	*03/25/14 10:53*	*1*

Client Sample ID: AC6 CONCRETE — **Lab Sample ID: 280-53170-4**
Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total EPH (C9-C40)	2.2	U	2.2	2.2	mg/Kg	☼	03/21/14 14:35	03/25/14 11:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*40 - 140*	*03/21/14 14:35*	*03/25/14 11:09*	*1*
1-Chlorooctadecane	*74*		*40 - 140*	*03/21/14 14:35*	*03/25/14 11:09*	*1*

QC Sample Results

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-2

Method: NJDEP EPH - New Jersey Extractable Petroleum Hydrocarbons

Lab Sample ID: MB 460-214149/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 214635 — **Prep Batch: 214149**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total EPH (C9-C40)	2.0	U	2.0	2.0	mg/Kg		03/21/14 14:35	03/25/14 09:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*121*		*40 - 140*	*03/21/14 14:35*	*03/25/14 09:05*	*1*
1-Chlorooctadecane	*112*		*40 - 140*	*03/21/14 14:35*	*03/25/14 09:05*	*1*

Lab Sample ID: LCS 460-214149/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 214635 — **Prep Batch: 214149**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total EPH (C9-C40)	133	161		mg/Kg		121	40 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*83*		*40 - 140*
1-Chlorooctadecane	*99*		*40 - 140*

QC Association Summary

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-2

GC Semi VOA

Prep Batch: 214149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	3546	
280-53170-2	AC3 CONCRETE	Total/NA	Solid	3546	
280-53170-3	AC5 CONCRETE	Total/NA	Solid	3546	
280-53170-4	AC6 CONCRETE	Total/NA	Solid	3546	
LCS 460-214149/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 460-214149/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 214635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-53170-1	AC1 CONCRETE	Total/NA	Solid	NJDEP EPH	214149
280-53170-2	AC3 CONCRETE	Total/NA	Solid	NJDEP EPH	214149
280-53170-3	AC5 CONCRETE	Total/NA	Solid	NJDEP EPH	214149
280-53170-4	AC6 CONCRETE	Total/NA	Solid	NJDEP EPH	214149
LCS 460-214149/2-A	Lab Control Sample	Total/NA	Solid	NJDEP EPH	214149
MB 460-214149/1-A	Method Blank	Total/NA	Solid	NJDEP EPH	214149

Lab Chronicle

Client: AMO Environmental Decisions, Inc.
Project/Site: Assunpink Creek Broad Street Culvert

TestAmerica Job ID: 280-53170-2

Client Sample ID: AC1 CONCRETE — Lab Sample ID: 280-53170-1

Date Collected: 03/13/14 09:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 93.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.01 g	2 mL	214149	03/21/14 14:35	FHW	TAL EDI
Total/NA	Analysis	NJDEP EPH		1	15.01 g	2 mL	214635	03/25/14 10:23	HJK	TAL EDI

Client Sample ID: AC3 CONCRETE — Lab Sample ID: 280-53170-2

Date Collected: 03/13/14 11:40 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 90.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.01 g	2 mL	214149	03/21/14 14:35	FHW	TAL EDI
Total/NA	Analysis	NJDEP EPH		1	15.01 g	2 mL	214635	03/25/14 10:38	HJK	TAL EDI

Client Sample ID: AC5 CONCRETE — Lab Sample ID: 280-53170-3

Date Collected: 03/13/14 13:20 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 94.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.01 g	2 mL	214149	03/21/14 14:35	FHW	TAL EDI
Total/NA	Analysis	NJDEP EPH		1	15.01 g	2 mL	214635	03/25/14 10:53	HJK	TAL EDI

Client Sample ID: AC6 CONCRETE — Lab Sample ID: 280-53170-4

Date Collected: 03/13/14 15:15 — **Matrix: Solid**
Date Received: 03/15/14 09:45 — **Percent Solids: 91.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.04 g	2 mL	214149	03/21/14 14:35	FHW	TAL EDI
Total/NA	Analysis	NJDEP EPH		1	15.04 g	2 mL	214635	03/25/14 11:09	HJK	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Login Sample Receipt Checklist

Client: AMO Environmental Decisions, Inc.

Job Number: 280-53170-2

Login Number: 53170

List Source: TestAmerica Denver

List Number: 1

Creator: Knauf, James R

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

Login Sample Receipt Checklist

Client: AMO Environmental Decisions, Inc.

Job Number: 280-53170-2

Login Number: 53170
List Number: 2
Creator: Meyers, Gary

List Source: TestAmerica Edison
List Creation: 03/21/14 10:12 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	109549
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4 ° C IR #5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica Denver
4955 Yarrow Street

Arvada, CO 80002
phone 303.736.0100 fax

280-53170 Chain of Custody

Chain of Custody Record

0.9 FRS+0.2
JK 3-15-14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other:

Client Contact	Project Manager: Vince Piazza	Site Contact: Vince Piazza	Date:	COC No:
AMO Environmental Decisions	Tel/Fax: (215) 906-4767	Lab Contact:	Carrier:	_____ of _____ COCs
4327 Point Pleasant Pike, P.O. Box 410	Analysis Turnaround Time			Sampler:
Danboro, PA 18916	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
(215) 230-8282 PHONE	TAT if different from Below Normal T-A-T			Walk-in Client:
(215) 230-8283 FAX	☑ 2 weeks			Lab Sampling:
Project Name: USACE Concrete Sampling & Testing	☐ 1 week			
Site: Assunpink Creek Broad Street Culvert	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TCL VOCs	TCL SVOCs	TCL Pesticides	TCL Herbicides	TCL PCBs	TAL Metals	Extractable Petroleum Hydrocarbons	TCLP VOCs, SVOCs, Metals	TCLP Pesticides	TCLP Herbicides	Ignitability, Corrosivity	Reactivity as Sulfide	Reactivity as Cyanide					Sample Specific Notes:
AC2 CONCRETE	3/13/14	0945	G	S	6			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
AC3 CONCRETE	↓	1140	↓	↓	↓			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓					
AC5 CONCRETE	↓	1320	↓	↓	↓			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓					
AC6 CONCRETE	↓	1515	↓	↓	↓			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓					
TRIP BLANK	3/12/14	—	↓	AQ	2			X																	
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other								1	1	1	1	1	1	1	1	1	1	1							

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Vince Piazza	AMO	3/14/14	Julie Gilmore	TAKOP	3-14-14 1035
Relinquished by:	Company:	Date/Time: 1055 3/14/14	Received by:	Company:	Date/Time: 3-15-14 945
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

APPENDIX F

FIELD NOTES, FORMS, AND CHAIN-OF-CUSTODY FORMS (COMPACT DISC)

ANGULAR ROCK FRAGMENTS TRACE SILT, VF SAND NO ODORS + NO PID READINGS
EPI DEMOBBING

1115 VP ASKS SA TO OPEN SEPTIC TANK TANK IS ONLY THREE FEET DEEP + DOES NOT FEEL LIKE IT HAS ANY SLUDGE PID = 7.4 INSIDE TANK

1130 COLLECTED STL01 (SEPTIC TANK LIQUID)

1145 LIQUID SAMPLES IN BAILER WERE CLEAR TO YELLOW FROM 0-2, FROM 2-3 THEY WERE BROWN LIQUID EVEN BAILER WENT RIGHT TO BOTTOM OF TANK, APPARENT THAT NO SLUDGE IS PRESENT WHEN BAILER WAS POURED, ALL CONTENTS WERE LIQUID MOB TO FILL FLOOR DRAINS WITH WATER DN SAYS SKIP SLUDGE SAMPLE SINCE NO SLUDGE PRESENT

1230 PIPE AT FLOOR DRAIN HAS HAD HOSE RUNNING FULL BLAST FOR 40 MINS SPOKE W/ DN, ESTIMATE FLOW RATE OF WELL + CALCULATE VOLUME OF WATER PIPE SHOULD HOLD

1245 VP COLLECTS FD010005 FROM FLOOR DRAIN DISCHARGE ON WEST SIDE OF FACILITY

1300 MOB TO CALCULATE HOSE FLOW + SEE IF WE CAN CHARGE FLOOR DRAIN ON EAST SIDE OF FACILITY

1330 CHARGE 4" PVC DRAIN IN NORTHERN MOST BAY ON EAST SIDE OF BUILDING NEVER SAW ANY WATER, LOOKED LONG, HARD + WAY NORTH SA + AA SAY THEY HAVE NO KNOWLEDGE CONCERNING THAT DRAIN PIPE COULD END AT SHEDS NE OF REAR OVERHANG VP COLLECTED SAMPLE IN LINE W/ PIPE JUST ON NORTH SIDE OF SHED IN A SMALL DRAINAGE SWALE

1345 FLOW RATE OF WELL ~8GPM VP TELLS SA I'M DONE, OFFSITE

Steve Piazza
5/6/13

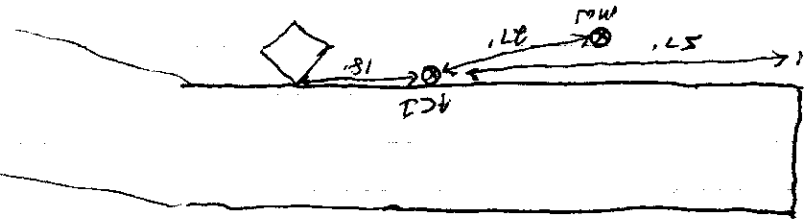
3/12/14 USACE ASSUNPINK CREEK BROAD STREET CULVERT TRENTON, NJ

0730 VP ONSITE CALIBRATE PID, ZEROED PROPERLY, CALIBRATED TO 101 PPM ON 100 PPM ISOBUTYLENE

0745 LEWIS ENVIRONMENTAL ONSITE, GET TRUCK IN GATE, UNLOAD MINI-EXCAVATOR AT BERO, ELVIS SCHWAGER, DEREK RUBINO

0805 AMO + LEWIS HOLD PRE-WORK JSA/TOOLBOX MEETING

0830 M. MOHN OF USACE ON SITE, START EXCAVATING PID READING ~1.0 PPM BACKGROUND START AT AC1 CONCRETE (SEE FIGURE IN WORK PLAN) AT SW END OF BOX CULVERT EXCAVATION IS 40" D x 5' x 5' SOIL IS HISTORIC FILL - BROWN + GRAY F-C SAND, GRAVEL, SILT, BRICK, CONCRETE, REBAR + SILT + CLAY NO PID READINGS ABOVE BACKGROUND AC1 IS 57' FROM SW END OF CULVERT, 27' FROM MONITOR WELL, AND 18' FROM CONCRETE BOX ON SAME SIDE OF CULVERT



3/12/14 (CONT) ASSUNPINK CREEK BROAD STREET CULVERT TRENTON, NJ

1030 FINISHED CORING AT AC1 LEWIS DOES NOT HAVE CHISEL BIT FOR ROTAHAMMER POST PONE CHIP SAMPLES UNTIL CHISEL BIT ARRIVES ALSO MM (USACE) ALSO WANTS FULL SUITE FOR WASTE CHARACTERIZATION (TCLP VOCS, SVOCS, PCBS, IGNITABILITY, CORROSIVITY, REACTIVITY, IGNITABILITY)

1050 START AC2 FROM SQUARE BOX ON SAME SIDE OF CULVERT
AC2 IS ~28' EAST OF AC1 EXCAVATION IS 40" Δ x 5' x 5'

1140 FIRST CORING RUN HIT REBAR, WILL HAVE TO MOVE & RE-MOUNT CORE MACHINE PROBLEMS GETTING BOLTS OUT VP MOBS TO MEASURE AC3 + AC4 DISTANCES
AC3 IS 193' FROM BROAD STREET END OF CULVERT, AC4 IS 100' FROM BROAD ST END

1200 M. MOHS OFFSITE

1230 START 2ND CORE RUN @ AC2 - OFFSET ~6" WEST

1300 CORE BARREL QUIT CUTTING @ 9" DEEP VP TELL A.J. TO BREAK IT OFF - CAME OUT AS 8" VP ALSO NOTES THAT AC1 WAS 8" BUT WAS BROKEN ON BOTH ENDS CHECKED W/ERIC SEKSINSKY - THEY CAN CUT AND DEAL W/SHORTER PIECES AS NEEDED

1320 START EXCAVATING @ AC4 - FURTHEST EAST ON SOUTH SIDE OF CULVERT

1335 AC4 EXCAVATION COMPLETED, NO PID READINGS ABOVE BACKGROUND OBSERVED SOIL WAS SAME AS AC1 + AC2, HISTORIC FILL

1340 SETTING UP TO CORE AT AC4 EXCAVATION IS 5' x 5' x 4'2" D A.J. STATES THAT CONCRETE HERE IS VERY SOFT, ROTAHAMMER CUTTING THROUGH IT LIKE BUTTER - WILL TRY TO CORE BUT IS NOT SURE ANCHOR BOLTS WILL HOLD MACHINE TO WALL

1400 VINCE (MAINTENANCE IN DHS BUILDING) AND TWO OTHERS APPROACH, ASK QUESTIONS ABOUT ACCESS + PERMITS, ETC VP GIVES THEM MY TAKE, GIVES THEM MM AND GW SHEETS PHONE #'S SINCE THEY LOOKED INTO PERMITTING ISSUES EVERYONE SEEMS HAPPY

1410 ~6" IN, CORE SNAPS DUE TO BRITTLENESS OF CONCRETE A.J. PULLS CORE FROM BARREL - CORE IS BREAKING APART AND HAS TWO SQUARE SIDES - APPEARS THAT WE MAY HAVE CORED THROUGH A SEAM BETWEEN TWO WALL SECTIONS AJ TO OPEN EXCAVATION, FLIP CORE MACHINE + TRY AGAIN

1430 2ND RUN HITS REBAR, MOVE CORING MACHINE + TRY AGAIN

1500 3RD RUN SUCCESFUL CORED 10 1/2", RECOVERED ~10" SIDE SURFACES OF CORE ARE DETERIORATED, ALMOST LIKE WATER HAS ERODED PORTIONS OF THE CORE

1530 ALL EXCAVATIONS BACKFILLED, ALL PERSONNEL OFFSITE

Vince Puzzo
3/12/14

3/13/14 ASSUNPINK CREEK BROAD STREET CULVERT TRENTON, NJ

0700 VP ONSITE, OPEN GATE CALIBRATE PID ZEROED PROPERLY, CALIBRATED TO 100 PPM

0710 LEWIS ONSITE SAME CREW AS YESTERDAY UNLOAD EQUIPMENT, HOLD PRE-WORK JSA/TOOL BOX SAFETY MEETING

0730 TOOL BOX MEETING COMPLETED, MOB TO UNLOAD EXCAVATOR

0735 DR INFORMS VP THAT BATTERY ON EXCAVATOR IS DEAD, NO ONE ONSITE HAS JUMPER CABLES LEWIS CHECKING BATTERY CONNECTIONS

"Rite in the Rain" ALL-WEATHER WRITING PAPER

3/13/14 (CONT.) ASSUNPINK CREEK BROAD STREET CULVERT TRENTON, NJ
AND STARTER

0800 LEWIS UNLOCKS TRAILER, OFFSITE TO PURCHASE JUMPER CABLES

0850 LEWIS BACK ONSITE, GET EXCAVATOR RUNNING, START RE-EXCAVATING AC1 TO COLLECT CHIP SAMPLES

0915 COLLECTED AC1 CHIP SAMPLE - 3 8oz, 3 4oz LEWIS SETTING UP TO CORE AC3

1000 START CORING AC3 - WRONG - WATER LINE TO CORE BARREL FROZEN LEWIS PUTTING HOSE IN TRUCK TO THAW WEATHER IS APPROXIMATELY 28°F, WIND FROM THE NORTH AT ~ 10 - 20 MPH

1045 LEWIS ATTEMPTING TO CORE AGAIN

1130 AC3 CORE COMPLETED, CORED 8" RECOVERED ~ 7"

1140 VP COLLECTED AC3 CONCRETE 3 8oz 3 4oz LEWIS STARTS EXCAVATING AC5 (NORTH SIDE, CLOSEST TO DHS BLDG, ~~#~~ VP 3/13/14 145' FROM BROAD STREET END OF CULVERT

1210 AC5 EXCAVATION COMPLETE DR + ES TO SET UP TO CORE AT MOBS TO EXCAVATE AC6 (FARTHEST WEST ON NORTH SIDE) 80' FROM BROAD STREET END OF CULVERT

1240 START CORING AT AC5

1320 CORING COMPLETED, CORED 8", RECOVERED 8" BUT MAY NEED TO BE CUT A LITTLE SHORTER ALSO COLLECTED AC5 CONCRETE 3 8oz, 3 4oz LEWIS MOVING TO CORE AC6

1515 CORING + CHIPPING AT AC6 COMPLETED VP COLLECTS AC6 CONCRETE 3 8oz, 3 4oz JARS LEWIS BACKFILLING EXCAVATIONS + WRAPPING UP

1600 ALL PERSONNEL OFFSITE

Vince Pagge
3/13/14

3/25/13 25°F OVERCAST CHRIS'S AUTO BODY LAMBERTVILLE, NJ

0815 VP ONSITE SET UP TO CALIBRATE PID - ZEROED OK, CALIBRATED TO 100.5 PPM

0830 RON HIGGINS + CHRIS FARLEY OF RPI ONSITE - TAILGATE SAFETY MEETING VP MET W/ALLEN OF CAB, HE WILL TRY TO GET FDD LOCATION CLEARED OF TREE LIMBS

0900 START DRIVING WELL POINT @ AOC 5

0910 REFUSAL @ 5' BGS

0915 WELL IS DRY, WILL LET SIT + SEE IF WATER COMES IN, MOB TO FDD AREA OF AOC 09

0930 START FDD BORING, FDDW

0940 VERY LITTLE RECOVERY, SEE IF I CAN MAKE DO ~~[illegible]~~ TO GO TO 6' TO GET VOLUME SAMPLED 0940, 0945, 0950

1030 SAMPLING AT FDD AREA COMPLETE, ALL SAMPLES WERE REDDISH GRAY CLAY, TR ROCK FRAGMENTS MOIST TO WET

1045 START AOC09R2 BORINGS PID = ~ 2.5 0-4'

Environmental Decisions

Entry/Exit Log

File Name 03ENTRY_LOG.docx
Revised: January 8, 2014

ATTACHMENT 3

Project Name	CONCRETE SAMPLING + TESTING BROAD STREET CULVERT	**Date**	3/4/14
Project Location	TRENTON, NJ	**Job & Phase #**	A57003

		Name	Company	Time In	Time Out	Reason
3/4/14	1	VINCE PIAZZA	AMO	0840	1300	UTILITY CLEARANCE
	2	JIM STUBY	ERT	1000	1230	" "
	3	ROBERT KORONCAI	ERT	1000	1230	" "
3/12/14	4	VINCE PIAZZA	AMO	0730		CONCRETE SAMPLING
	5	AJ Bero	Lewis	745	1530	concrete sampling
	6	Elvis Schwager	Lewis	7:44	1530	" " "
	7	Derek Rubino	Lewis	7:44	1530	" " "
	8	MIKE MOLLA	USACE	0830	1200	" " "
3/13/14	9	VINCE PIAZZA	AMO	0700	1600	" "
	10	A.J. BERO	LEWIS	0710	1600	" "
	11	ELVIS SHWAGER	"	0710	1600	" "
	12	DEREK RUBINO	"	0710	1600	" "
	13					
	14					
	15					
	16					
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	18					
	19					
	20					

Environmental Decisions

Safety/Toolbox Meeting

File Name 05TOOLBOX.docx
Revised: January 8, 2014

ATTACHMENT 5

Client:	USACE	**Project No.:**	457003
Project Name:	CONCRETE SAMPLING @ BROAD ST CULVERT	**Today's Date:**	3/4/14
Project Location:	TRENTON, NJ		
Conducted By:	V. PIAZZA		
Meeting Topic:	WEATHER, SNOW COVERED GROUND, SLIP, TRIPS, FALLS		

	Name	Signature	Company Name
1	VINCE PIAZZA	Vince Piazza	AMO
2	James Shaby	James J Shaby	ERT
3	Robert Bordnaai	[illegible]	ERT
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Meeting Topics (be specific): 1. SNOW COVERED GROUND IS SLICK, PARTICULARLY ON SLOPES.
2. DUE TO UNDER BRUSH + SNOW, RUTS, LARGE ROCKS + DEBRIS ARE TOUGH TO SEE AND PRESENT TRIPPING HAZARDS.
3. TEMPERATURE AT START OF WORK WAS 10°F. WEAR APPROPRIATE CLOTHING AND TAKE WARM UP BREAKS AS NEEDED. BE AWARE OF FROST BITE POTENTIAL.
4. NO PERSONNEL ARE PERMITTED ON TOP OF BOX CULVERT.
5. USE CAUTION IF MANHOLES ARE OPENED TO EVALUATE PIPES WITHIN VAULT. USE PROPER TOOLS, AVOID MUSCLE STRAINS, AND BE CAREFUL WITH HANDS + FEET WHEN REMOVING + RE-PLACING ~~MAN~~ COVERS.

-- Have EACH employee sign this form before they begin work on site --

Environmental Decisions

Safety/Toolbox Meeting

File Name 05TOOLBOX.docx
Revised: January 8, 2014

ATTACHMENT 5

Client:	USACE - PHILADELPHIA DISTRICT	Project No.:	A57003
Project Name:	ASSUNPINK CREEK BROAD ST. CULVERT	Today's Date:	3/12/14
Project Location:	TRENTON, NJ		
Conducted By:	V. PIAZZA		
Meeting Topic:	EXCAVATION SAFETY, SLIPS, TRIPS, FALLS		

	Name	Signature	Company Name
1	VINCE PIAZZA	Vince Piazza	AMO
2	AJ Bero	[illegible]	LEWIS
3	Elvis Schwegov	[illegible]	LEWIS
4	Derek Rubino	Derek Rubino	LEWIS
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Meeting Topics (be specific): LOOSE, NON-COHESIVE SOILS, PROPER SLOPING OF EXCAVATION SIDEWALLS, POTENTIAL TO ENCOUNTER CONTAMINATED SOIL, ROUGH TERRAIN WITH DEBRIS MAKES FOOTING DIFFICULT, PRESENCE OF UNDERGROUND UTILITIES

-- Have EACH employee sign this form before they begin work on site --

Environmental Decisions

Safety/Toolbox Meeting

File Name 05TOOLBOX.docx
Revised: January 8, 2014

ATTACHMENT 5

Client:	USACE	**Project No.:**	A57003
Project Name:	ASSUNPINK CREEK BROAD ST. CULVERT	**Today's Date:**	3/13/14
Project Location:	TRENTON, NJ		
Conducted By:	V. PIAZZA		
Meeting Topic:	EXCAVATION SAFETY, SLIPS, TRIPS + FALLS, COLD AND WIND CHILL		

	Name	Signature	Company Name
1	VINCE PIAZZA	Vince Piazza	AMO
2	A.J. BERO		LEWIS
3	ELVIS SCHWAGER		LEWIS
4	DEREK RUBINO		LEWIS
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Meeting Topics (be specific): BE CAREFUL W/EXCAVATIONS IN LOOSE, NON-COHESIVE SOILS, PROPER SLOPING OF SIDEWALLS, POTENTIAL TO ENCOUNTER CONTAMINATED SOIL, ROUGH TERRAIN + DEBRIS MAKES FOOTING DIFFICULT IN SOME AREAS, PRESENCE OF UNDERGROUND UTILITIES

* SPECIAL TOPIC OF THE DAY - BATTERY ON EXCAVATOR DEAD DUE TO COLD - USE CAUTION W/ JUMPER CABLES + BE AWARE THAT BATTERIES CAN PRODUCE EXPLOSIVE GAS

-- Have EACH employee sign this form before they begin work on site --

TestAmerica Denver
4955 Yarrow Street

Arvada, CO 80002
phone 303.736.0100 fax

280-53170 Chain of Custody

Chain of Custody Record

0.9 FRS+0.2
JK 3-15-14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other:

Client Contact	Project Manager: Vince Piazza	Site Contact: Vince Piazza	Date:	COC No:
AMO Environmental Decisions	Tel/Fax: (215) 906-4767	Lab Contact:	Carrier:	_____ of _____ COCs
4327 Point Pleasant Pike, P.O. Box 410	Analysis Turnaround Time			Sampler:
Danboro, PA 18916	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
(215) 230-8282 PHONE	TAT if different from Below Normal T-A-T			Walk-in Client:
(215) 230-8283 FAX	☑ 2 weeks			Lab Sampling:
Project Name: USACE Concrete Sampling & Testing	☐ 1 week			
Site: Assunpink Creek Broad Street Culvert	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TCL VOCs	TCL SVOCs	TCL Pesticides	TCL Herbicides	TCL PCBs	TAL Metals	Extractable Petroleum Hydrocarbons	TCLP VOCs, SVOCs, Metals	TCLP Pesticides	TCLP Herbicides	Ignitability, Corrosivity	Reactivity as Sulfide	Reactivity as Cyanide					Sample Specific Notes:
AC2 CONCRETE	3/13/14	0945	G	S	6			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
AC3 CONCRETE	↓	1140	↓	↓	↓			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓					
AC5 CONCRETE	↓	1320	↓	↓	↓			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓					
AC6 CONCRETE	↓	1515	↓	↓	↓			↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓					
TRIP BLANK	3/12/14	—	↓	AQ	2			X																	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other								1	1	1	1	1	1	1	1	1	1	1							

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Vince Piazza	AMO	3/14/14	Julie Gilmore	TAKOP	3-14-14 1035
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[illegible]	TA	3/14/14 1055	[illegible]	TA	3-15-14 945
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013