ALEWIFE BROOK PUMP STATION
SOMERVILLE, MASSACHUSETTS

PCB ABATEMENT PLAN
NOVEMBER 2012

1.0 INTRODUCTION

1.1 Site Details

The Massachusetts Water Resource Authority (MWRA) operates the Alewife Brook Pump Station in Somerville, Massachusetts as part of the wastewater collection system for the metropolitan Boston area. Specifically, the station receives wastewater flows from Belmont, Arlington, Cambridge, and Somerville through the Belmont Extension Sewers, Alewife Brook Sewer, and the Alewife Brook Conduit. It also receives flow from local community sewers in Arlington and Medford. Dry weather flow from the station is discharged to the North Metropolitan Sewer and during wet weather to the North Metropolitan Relief Sewer. These sewers flow to the Chelsea Creek Headworks in Chelsea and from there to the Deer Island Treatment Plant. The average dry weather flow rate is approximately 9.8 million gallons per day (mgd). The wet weather design capacity of the station is 90 mgd. The station had a combined sewerage overflow connection to the adjoining Alewife Brook that was closed in 1998.

The station is located in a mixed use area of Somerville near the borders with Arlington and Medford. The station is situated on the banks of Alewife Brook immediately south of the Alewife Brook Parkway – Mystic Valley Parkway rotary. The station is bordered to the north by the Mystic Valley Parkway and parkland along the Alewife Brook – Mystic River confluence, to east by Alewife Brook Parkway and gasoline filling stations, to the south by a parking lot and small sports stadium, and to the west by Alewife Brook and a residential neighborhood. Figure 1 in Attachment 1 shows the general site location and the following oblique aerial photograph shows the general site configuration.

This approximately 4,300 square foot single story building was constructed in 1951 is divided into three sections plus an underground wet well. The northern portion (right in the photograph below) contains the a below grade Pump Room and a Main Room containing pumps with discharge piping, pump motors, and electrical control equipment for one dry weather and three wet weather pumps. The central portion of the structure contains the Screen Room with two sets of influent screens, and restrooms. The southern portion of the building (left in the photograph on the following page) contains, from right to left, the Store Room, Boiler Room, and Generator Room.

MWRA is currently designing upgrades to the pump station. Among other improvements this contract will include replacement of the wet weather pumps including pump motors and piping, screening equipment, heating and backup power systems, and a repainting of the building interior. Because of the significant scope of work a survey of the building was conducted to identify potential hazardous building materials including asbestos, lead paint, and polychlorinated biphenyls.

In September and October 2010 Environmental & Construction Management Services, Inc., a sub-consultant to the project's preliminary design engineer Camp Dresser & McKee collected caulking and paint samples from representative locations throughout the facility. Of the nine caulking samples three contained detectable concentrations of PCBs, the highest of which was 2.04 milligrams per kilogram (mg/kg). Five paint samples were collected for PCB analysis. Results are detailed below:

1. Stairway Wall from Main Room to Pump Room: Arochlor 1254 at 1,320 mg/kg
2. Discharge Piping in Pump Room: Arochlor 1254 at 493 mg/kg
3. Ladders and Stair Rails, Basement Level: Arochlor 1254 at 447 mg/kg
4. Pump Equipment in Main Room: Arochlor 1254 at 498 mg/kg
5. Structural Steel Columns in Main Room: Arochlor 1254 at 297 mg/kg

Under 40 CFR 761 the presence of PCBs in paint at concentrations above 50 mg/kg represents an unauthorized use of PCBs. Based on these results a more systematic follow-up sampling program was completed between January and December 2011 with the goal of identifying all of the painted surfaces containing PCBs greater than 50 mg/kg as well as determining the extent of impact to porous surfaces in contact with PCB-containing paint. PCBs were found in paint at concentrations up to 11,000 mg/kg and in impacted shallow concrete up to 540 mg/kg.

Under 40 CFR 761 the paint containing PCBs above 50 mg/kg upon removal will be classified as a PCB Bulk Product Waste in accordance with 40 CFR 761.62 and managed accordingly. Impacted porous building materials containing PCBs will either be removed and managed as a

PCB Remediation Waste in accordance with 40 CFR 761.61 or will be encapsulated under a risk-based abatement approach.

1.2 Abatement Plan Organization

The Abatement Plan is organized into the following sections.

Section 2.0: Site Characterization**:** This section summarizes the site characterization data that have been collected and delineates the nature and extent of PCB impacts at the facility.

Section 3.0: Abatement Plan: The Abatement Plan presents a discussion of the abatement goals and cleanup levels, the abatement approach for the various impacted building materials, discussion of the sequencing of the abatement activities, materials management and disposal requirements, engineering oversight, verification sampling, and a long term monitoring plan.

This abatement plan has been to satisfy the requirements of 40 CFR 761.61(c) and includes a proposal to use a risk-based approach to encapsulate certain PCB-containing porous surfaces throughout the facility that contain PCBs above the unrestricted use high occupancy standard of 1 mg/kg.

Section 4.0: Schedule: This section discusses the proposed project schedule.

2.0 SITE CHARACTERIZATION

This section describes the nature and extent of PCB impacts at the facility.

2.1 SAMPLE COLLECTION AND LABORATORY ANALYSIS

2.1.1 Sample Collection

As noted above the detection of elevated concentrations of PCBs in paint at the Alewife Brook Pump Station necessitated a more systematic sampling program to identify the extent of PCB-contaminated paint. This program consisted of the sampling and analysis of a representative sample of paint from every color and every type of surface in each room of the facility. Rooms and building equipment that have been renovated or replaced since the PCB ban took effect in 1977 were not sampled, with the exception of the Main Room Hallway Ceiling.

Samples of paint were collected in January and March 2011 by EnviroSense, Inc. Additional follow-up sampling was conducted by Geosphere Environmental Management, Inc. between March and December 2011. Paint samples were collected by using a dedicated or decontaminated razor blade or other sharp scraping device to remove the paint from the substrate. It was noted that most samples contained multiple layers of paint that could not be separated. Unless otherwise specified, each paint sample therefore represents a mixture of all paint layers present.

Samples of paint and impacted building materials including concrete, brick, mortar, insulation, and wood were collected in March 2011 by EnviroSense, Inc. and between June 2011 and April 2012 by Geosphere. Sampling of concrete, brick and mortar, insulation, and wood was conducted in accordance with the USEPA Region 1 *Draft Standard Operating Procedure for Sampling Concrete in the Field* (December 1997), later finalized in May 2011 as the *Standard Operating Procedure for Sampling Porous Surfaces for Polychlorinated Biphenyls*.

Sample numbering was coded to the specific room in which each sample was collected and which round of sampling it was conducted in. Sample numbers contain a two letter alphabetic prefix. The following is an explanation of the prefixes.

- HL: Main Hallway
- MR: Main Room
- PR: Pump Room
- SC: Screen Room
- SR: Store Room
- BR: Boiler Room
- GR: Generator Room and Entrance Hallway
- OD, OG, and OH: Outdoors

Following the prefix letters the sample number contains a four digit number. The first number in the sequence identified which round the sample was collected in. Samples starting with “1” are from January 2011, samples from March and June 2011 start with “2”, samples from November and December start with “3, and samples from April 2012 start with “4”. The three digits following the first number were assigned in numerical order in the order each sample was collected from the applicable room. Some samples have a suffix letter. This generally identifies

the matrix. The letter “C” indicates concrete, “B” indicates brick, and “I” indicates insulation. Samples with no suffix letter are of paint.

For example, the sample number PR2006C indicates that the sample is from the Pump Room, it was collected in March 2011, was the sixth sample location from the Pump Room and the matrix was concrete.

Surface wipe samples of painted surfaces and air samples from various locations within the facility were collected by Environmental Health & Engineering, Inc. (EHE) in December 2010. Additional wipe samples of PCB-impacted concrete surfaces in which paint had been removed were collected in March 2011. The surface wipe samples were collected in accordance with the standard wipe test method described in 40 CFR 761.123. Indoor air samples were collected and analyzed in accordance with NIOSH manual of Analytical Methods, Method 5503: Polychlorobiphenyls.

All samples were logged on a Chain of Custody form, placed on ice, and delivered to the environmental laboratory. Samples were placed into laboratory-prepared glassware, placed on ice, and delivered under chain-of-custody to the analytical laboratory. Sampling equipment was decontaminated between each sampling location with Alconox™ and water solution and/or hexane followed by a deionized water rinse. Field equipment rinse blanks were collected and analyzed during each sampling round.

2.1.2 Laboratory Analysis

December 2010 surface wipe samples were analyzed by Groundwater Analytical of Buzzards Bay, Massachusetts. December 2010 indoor air samples were analyzed by Galson Laboratories of East Syracuse, New York. January and March 2011 paint and porous media samples were analyzed by Test-America of Westfield, Massachusetts. Paint, porous media, and surface wipe samples collected in June, October, and December 2011, and April 2012 were analyzed by Rhode Island Analytical of Hudson, Massachusetts.

All bulk material samples including paint, concrete and other building materials, and surface wipe samples were extracted using USEPA Method 3540C (Soxhlet Extraction) and analyzed for PCBs by USEPA Method 8082. Indoor air samples were analyzed by NIOSH Method 5503: Polychlorobiphenyls.

Sampling summary reports with appended laboratory analytical reports are included as Attachment 4 (EH&E), Attachment 5 (EnviroSense), and Attachment 6 (Geosphere). Data summary tables of the analytical results are included in the relevant sections of the abatement plan text.

2.1.3 Data Quality Assessment

A data quality assessment was conducted to evaluate the usability of the site characterization data. The assessment included a review of sample custody, holding times, surrogate recoveries, method blanks, matrix spike/matrix spike duplicates, trip blanks, equipment blanks, and field duplicates. The validation was conducted in general conformance with US EPA Region 1 *Data Validation Functional Guidelines and for Evaluating Environmental Analyses*, July 1996, and

revised December 1996. Summaries of the data validations are included in each consultant's assessment report included in Attachments 4, 5, and 6.

All paint and substrate samples were collected following the protocols described above. The sampling protocol and laboratory analysis were consistent for all sampling phases. All samples were collected into laboratory-prepared glassware and submitted for PCB analysis via USEPA Method 8082A, utilizing Soxhlet extraction via USEPA Method 3540. According to the laboratory reports, all samples were received by the laboratories preserved to Method criteria and analyzed within specified holding times. During March 2011 EnviroSense sampling round, contamination of Aroclor 1254 was noted in one separate method blank in each laboratory report. Although Aroclor 1254 contamination was noted in the method blanks, the reported concentrations of affected samples were either significantly below or significantly above the paint action level of 50 mg/kg and therefore the method blank contamination did not appear significant enough to incorrectly skew reported concentrations above/below the 50 mg/kg threshold and so the data were deemed usable.

The precision of the analytical method and resulting data were assessed by reviewing reported quality assessment/quality control data contained in the laboratory reports. Field duplicates and equipment blanks were collected as part of the sampling program. During the January 2011 sampling round two field duplicates were collected. The calculated RPD between the primary and duplicate sample indicated that both pairs were above the acceptance criteria of 50 percent. The difference for the SR1002 and Field Dup1 pair may be due to a sampling error in which Field Dup 1 was collected at SR1002 one day after collecting SR1002. The difference for the GR1001 and Field Dup 2 pair is likely associated with sample heterogeneity. The reported concentrations for both pairs were above the action level of 50 mg/kg and therefore, the discrepancy in precision is not considered to affect the usability of the data.

During the March 2011 sampling round one field duplicate was collected for the paint samples and three field duplicates were collected for underlying substrate samples. The calculated RPD between the primary and duplicate paint sample were within the acceptance criteria of 50 percent. The calculated RPD for three underlying substrate pairs (MR2023Ca / Field Dup 1a, MR2023Cb / Field Dup 1b, and GR2007C / Field Dup 3) were all above the acceptance criteria of 50 percent. During the June 2011 sampling round the calculated RPD between the primary and duplicate concrete samples (SC2012Cb/Field Dup.) was above the acceptance criteria of 50 percent. Sample heterogeneity, slight variations in sample depth and sampling technique, sampling personnel change, and concentration gradients likely play a significant role in the observed variability of the PCB analysis results for these duplicate samples. Although variability exists, all samples obtained during this sampling program are considered usable, and valid. The reported concentration for each of the three pairs were either all below the action level of 1 mg/kg or all at or above this standard and therefore, the discrepancy in precision is not considered to affect the usability of the data.

In addition to field duplicates equipment blanks were also collected. PCBs were not reported above laboratory detection limits in the equipment blanks indicating that no significant interferences were introduced during field procedures to collect underlying substrate samples.

Accuracy of the analytical methods and resulting data was assessed by reviewing surrogate recoveries, and RPD of laboratory control samples and laboratory control sample duplicates. Several discrepancies were noted in the laboratory reports concerning surrogate recoveries. For

the January 2011 sampling round several of the samples had surrogate recoveries below acceptance criteria which would result in laboratory results which could potentially under-report actual sample concentrations. For the March 2011 sampling round there were surrogate recoveries both below and above acceptance criteria which would result in laboratory results which could potentially under-report or over-report, respectively, actual sample concentrations.

For paint samples MR1017 and BR1004, the reported Aroclor 1254 concentrations were slightly below the action level of 50 mg/kg. Based on the low surrogate recoveries in these two samples, it is possible that the actual Aroclor 1254 concentrations for these two samples are above the 50 mg/kg action level. Follow-up sampling yielded results above 50 mg/kg indicating abatement of these materials is required. For the remaining samples from January and March 2011 the reported PCB concentrations in paint were either so far above or so far below the 50 mg/kg threshold that the potential biases indicated by the surrogate recoveries associated with these samples would have not been significant enough to alter the reported concentrations' relationship to the 50 mg/kg threshold. In other words, despite the potential high or low biases indicated by the surrogate recovery data, confidence is high that those concentrations reported as above the 50 mg/kg threshold are truly above the 50 mg/kg threshold. Likewise, confidence is also high that those concentrations reported as below the 50 mg/kg threshold are truly below the 50 mg/kg threshold.

Surrogate recoveries from samples OG2099CA, OG2099CB, and DUP collected during the June 2011 sampling round were significantly elevated, which would result in a high bias for these samples. However, no PCBs were detected in any of these samples, so the elevated surrogate recoveries would not impact the overall data quality for these samples. Insufficient sample volume was collected to determine percent moisture for sample OG1099P and results were reported as wet weight. During the November 2011 sampling round insufficient sample volume was collected to determine percent moisture for the following samples: PR3013CA, PR3013CB, PR3014CA, PR3014CB, SC3017P, SC3017CA, SC3017CB, SC3018P, SC3018CA, SC3018CB, SD3001CB, SC30200, SC3020CB, SC3021CB, SC3022P, SC3022CB, GR3008P, SR3009PR, and GR3007CB. Results were reported as wet weight for these samples. This would result in a low bias for the sample results (true PCB content may be higher than reported), however given the low expected moisture content of concrete and paint samples (< 4%), this would not be expected to significantly impact data quality for these samples. Detection limits were 1000 times greater for samples PR3013P and PR3014P than other samples due to the elevated concentrations of Aroclor 1254; this resulted in the inability to detect surrogate recoveries as the surrogates were diluted to the point of non-detection. All other surrogate recoveries matrix spike and matrix spike duplicates were within allowable QC parameters.

Based on this review of the existing site data, the data adequately represents the materials tested and the samples collected are considered useable for the purposes of characterizing the degree of PCB impact on the affected media in accordance with 40 CFR 761.

2.2 SITE CHARACTERIZATION RESULTS

The results of the sampling programs are discussed in the following sub-sections by sample media type.

2.2.1 Paint

2.2.1.1 Summary of Results

As noted above in Section 2.1.1 a survey of the different types of painted surfaces throughout the facility was made. Within each room all the different paint types were identified based on type of surface and paint color, e.g., blue painted steel pipe, white painted walls, etc. In each room or major area at least one representative sample per paint type was collected and analyzed. Multiple samples were collected from relatively larger surface areas.

The first rounds of sampling took place in January and March 2011 in which 47 samples and 21 samples respectively were collected. With the exception of the Main Room Hallway (which after the sampling was determined to have been constructed after the 1977 ban) and the Boiler Room interior the sampling program determined that all the rooms contained at least one type of painted concrete or metal surface on which paint contained PCBs over 50 mg/kg. In these two rounds PCBs were detected at concentrations up to 18,500 mg/kg in paint on concrete and up to 7,440 mg/kg on steel. In the entire sampling program only Aroclor 1254 was detected.

The sampling results of the pump motors require additional explanation. The initial sample collected in September-October 2010 of the gray paint on one of the motors yielded a result of 498 mg/kg. Additional sampling in 2011 of different paint types from the motors yielded considerably lower results with a range of 14.0 mg/kg to 55.0 mg/kg. These three pumps are planned to be replaced in the upcoming facility upgrade and will be included in the PCB abatement.

Based on comments received from EPA on an earlier version of this Abatement Plan additional rounds of sampling were conducted in June and October, 2011 and April 2012. The additional sampling was primarily conducted to determine the following:

- To provide a higher sampling density of both paint and concrete samples on larger sized surfaces including walls and ceilings;
- To evaluate additional generally smaller sized painted surfaces not previously sampled; and
- To evaluate paint and/or concrete in surfaces where initial paint sampling indicated PCBs below but statistically close to 50 mg/kg.

Noteworthy results from the follow-up sampling rounds including the identification of a primer paint layer beneath the outer paint layer on the Store Room ceiling (sample location SR3009). Both paint layers were sampled as well as the concrete. Although the white outer paint layer only contained 20 mg/kg of PCBs the primer layer contained 2,500 mg/kg. Based on these results the Store Room ceiling paint will be treated as being greater than 50 mg/kg and will be included in the paint abatement.

One of the two additional floor paint samples from the Screen Room had PCBs detected at 92 mg/kg. Even though the other two paint samples from this surface were below 50 mg/kg the entire floor surface will be included in the paint abatement.

Also in the Screen Room, an additional sample from the roof access platform identified PCBs at 72 mg/kg in an additional paint sample. Based on these results this structure will also be included in the abatement.

An additional round of sampling was conducted in December 2011 to provide sampling coverage of the remaining surfaces throughout the facility that had not yet been sampled and to provide concrete sampling results on previously sampled surfaces that had PCB results in paint below 50 mg/kg.

Noteworthy results from the December round include the identification of multiple paint layers in the Boiler and Generator Room that could be separately sampled. In the Boiler Room wall a second blue paint layer was identified beneath the white paint previously sampled. In the sample from the wall the underlying blue paint PCBs were detected at 25 mg. In the ceiling sample the underlying blue layer was determined to be sheetrock. In the Generator Room a light gray primer layer was identified beneath the white paint previously sampled. A paint sample of the primer layer was collected and PCBs detected at 13 mg/kg. The paint and concrete of the Generator Room entrance hallway ceiling was not previously sampled and was included in this round. PCBs were detected in the paint at 11,000 mg/kg. Sampling of the concrete and sheetrock from these areas is discussed in Section 2.2.2.

Light gray paint sampled from the steel hatch associated with the gate valve and the other nearby oudoor steel hatches had PCBs detected at 550 mg/kg and 520 mg/kg respectively. These structures are all located outdoors on the north side of the building. These results were consistent with the 635 mg/kg result previously found for this color paint from the wet well hatch from the front of the building. On the basis of these results all gray paint on steel hatches will be included in the paint abatement. The additional outdoor sampling revealed very low (less than 2.4 mg/kg) results in all additional paint samples.

Another round of sampling was conducted in April 2012. The focus of this sampling was to collect representative paint samples from painted relatively small diameter pipe and conduit located throughout the facility. Painted pipe and conduit located on the high walls and ceilings of the Main Room, Pump Room, and Screen Room was not accessible without scaffolding and was not sampled. These structures are generally painted the same color as the associated ceiling or wall paint.

A final round of sampling was conducted in October 2012. The focus of this sampling was to collect representative shallow and deep concrete samples from the Pump Room floor. Note that the Pump Room floor is generally unpainted concrete. However, approximately 75% of the floor is covered by thin, discontinuous areas of paint immediately adjacent to the stairs and pumps 1, 2 and 3 and discharge piping concrete supports. This paint is the same color as on the adjacent stairs, and pumps and discharge piping. The shape of the areas of paint indicates that they originated as overspray from painting these structures. Samples of this paint from the floor could not be collected. Four samples were collected from areas with paint overspray and two samples were collected from unpainted areas. Shallow concrete results ranged from 5.2 mg/kg to 49 mg/kg and <0.9 mg/kg to 1.1 mg/kg in deeper samples. Abatement procedures for this paint are discussed in Section 3.2.1.1.

At the completion of the paint sampling 107 paint samples were collected throughout the facility. This included paint samples from 24 different porous interior building surfaces, 4 different porous outdoor building surfaces, 4 porous articles (painted insulation, wood table, air filter residue), and 40 different non-porous surfaces. Tables 1 through 7 include a tabulation of the sampling results for the paint as well as the subsequent porous building material sampling discussed below in Section 2.2.2. Each room has a separate table. The tables summarize the results by location, paint color, and type of substrate, i.e., concrete, structural steel integral to the building structure, and equipment manufactured from steel or other non-porous material. Figures 2 through 7, in Attachment 2, depict the locations of the samples collected as well as the results from each location. Each figure depicts the results from one room with the exception of Figure 5 which depicts the sampling results from both the Boiler and Generator Room and their connecting hallway.

2.2.1.2 Regulatory Classification of Paint

The referenced tables identified several painted surfaces that had detectable PCB results below 50 mg/kg. These are described below.

- The Main Room Hallway had PCBs in white paint at 21.8 mg/kg. It was determined after the sampling had taken place that this hallway was constructed in 1996, well after the 1977 PCB ban. PCBs were less than 1 mg/kg in the underlying concrete. The source of PCBs in this paint is not known. In addition, pipe with blue painted insulation located in this hallway was not sampled since it was installed in 1996.
- White paint is also present in the Boiler and Generator Rooms. The walls and ceiling of the Boiler Room had PCBs in the white top coat paint layer at a range of 3.57 to 3.67 mg/kg. The underlying blue paint on the wall had PCBs at 25 mg/kg. PCBs were not detected in the underlying concrete substrate on both surfaces.
- Similarly, PCBs were detected in the white top paint layer and in the primer layer in the Generator Room ceiling at 8.94 mg/kg and 13 mg/kg respectively. It is not known if the same white paint was used in the Main Room Hallway, and the Boiler and Generator Rooms. Even though multiple samples of the white paint from these areas were all well below 50 mg/kg, because the source of the PCBs in this white paint cannot be determined they will be included in the PCB abatement.
- PCBs were also detected in the blue paint of the single column in the Generator Room at 8.65 mg/kg. The source of PCBs in this paint is also not known and as such it will be included in the PCB abatement.
- Gray paint associated with outdoor structures including the wet well hatch, the hatches on the north side of the building and the gate valve structure had a wide range of results. Gray painted steel associated with the hatches had PCBs present up to 635 mg/kg while the gray painted concrete hatch bases had PCBs present up to 1.4 mg/kg. Two samples from gray painted non-porous metal and plastic surfaces on the gate valve structure mounted above one of these hatches had results up to 2.4 mg/kg. The source of the PCBs in the paint in the concrete and the gate valve is not known. As such, MWRA proposes to include these structures in the PCB abatement.

These painted surfaces will be recoated with paint as specified by the design consultant that is suitable for wastewater facility service. If existing paint is determined to be in poor condition and requires removal, the removed paint will be managed as a PCB remediation waste. The exterior gate valve structure will be removed and disposed of as PCB bulk product waste.

In addition, several exterior painted surfaces were also identified that had detectable PCB results well below 50 mg/kg and for which MWRA claims meets EPA's definition of an *Excluded PCB Product* and will therefore not be included in the PCB abatement. These are described below.

- Blue paint associated with catch basin inlet covers and underground fuel storage tank access covers had PCB results at 1.35 mg/kg. Multiple paint layers could not be sampled at these locations. MWRA proposes to not include this paint type in the PCB abatement.
- Gray paint associated with other outdoor structures including the roof drain pipe outside the Screen Room and the Generator Room window louvers had results in two samples well below 50 mg/kg at a range of 2.3 mg/kg and 5.93 mg/kg. MWRA proposes to not include these structures in the PCB abatement.

All other painted porous and non-porous surfaces or structures had at least one representative paint sample at or above 50 mg/kg and will therefore be included in the PCB abatement. Various painted equipment was installed during or after the 1996 facility rehabilitation and were not tested as part of this program. These materials including:

- facility windows and doors (except the three doors associated with the Boiler and Generator Rooms),
- electrical and control panels in the Main Room and equipment associated with pump no. 4 in the Main Room and Pump Room,
- all screening-related equipment including electrical controls, and sluice gate operators in the Screen Room,
- all boiler-related equipment in the Boiler Room,
- all emergency generator-related equipment in the Generator Room including the diesel fuel day tank and fuel lines, and
- all surfaces and infrastructure associated with the men's and ladies restrooms.

2.2.2 Porous Building Materials

Based on the results of the paint sampling additional sampling was conducted between March and December 2011 to characterize the degree to which the PCB-containing paint impacted the underlying porous concrete and brick surfaces.

2.2.2.1 Concrete and Brick Surfaces

At least one concrete sample was collected from each different type of painted concrete surface. In all cases these samples were collected from the location of a corresponding paint sample. Additional concrete samples were collected where a particular paint type covered a large area, such as the pump room walls.

In this effort hand tools and an electric drill equipped with a wire brush were used to remove all visible traces of paint from the concrete surface. An electric impact drill was then used to drill a 0.5 inch deep hole into the prepared concrete surface. Most sample locations having relatively

high initial PCB concentrations in the paint were sampled at two depths, one from zero to one half inch deep and a second from one half to one inch deep. For these deeper samples the initial 0.5 inch hole was thoroughly cleaned of concrete dust and then a smaller diameter drill used to collect the deeper sample. Tables 1 through 7 contain the porous media sampling results paired with each corresponding paint sample.

In addition to concrete one brick surface was sampled. This sample is identified in Table 1 above as numbers MR1013 and MR2013. At this location in the Main Room separate 0.5 inch deep samples of brick and mortar were collected. The brick sample was collected with the electric impact drill while the mortar was collected with a chisel.

In the June 2011 sampling round it was noted that at the Generator Room entrance hallway wall not all traces of the paint had been removed from the concrete wall surface prior to the collection of the zero to one half inch sample and its duplicate in March. Therefore a repeat zero to one half inch sample was collected. A result of 1.3 mg/kg was obtained, significantly less than the prior results.

The October sampling concentrated on increasing the sampling density in rooms with surfaces with larger surface areas. Additional paint and concrete samples were collected from the ceiling of the Pump Room and Screen Room, the floor of the Screen Room, the Main Room stairs, and the Screen Room roof access platform. As noted above, a second paint sample from the Screen Room roof access platform identified PCBs above 50 mg/kg. PCBs were identified at 190 mg/kg and 8.8 mg/kg in the shallow and deep concrete samples respectively. Abatement and management of this structure is discussed in Section 3.2.4.

In the December sampling concrete was sampled from the Boiler Room and Generator Room with no detectable results. PCBs were detected in the concrete from the ceiling of the Generator Room entrance hallway at 46 mg/kg and 5.2 mg/kg in the shallow and deep concrete samples respectively. PCBs were not detected in concrete samples collected from the Outdoor structures.

2.2.2.2 Other Misc. Surfaces

In the Main Room where PCBs were detected in paint on water pipe insulation at 56.8 mg/kg and in HVAC duct insulation at 48 mg/kg, a representative cross section of the entire insulation thickness including the paint layer was cut out and submitted for analysis. PCBs were detected in these two samples at 27.0 and 25.0 mg/kg respectively. Abatement and management of this material is discussed in Section 3.2.2.1. All other insulated pipe in the facility including pipe in the Main Room Hallway, Pump Room, and Store Room was determined to have been installed in 1996.

A gray painted wooden work bench is present in the Screen Room. A sample of the paint from this structure was found to contain 2,300 mg/kg. The underlying wood was not sampled. Abatement and management of this material is discussed in Section 3.2.2.1.

Also in The Screen Room, a sample of the filter media from the air handling system was sampled and found to contain PCBs at 3.46 mg/kg. This air handling system draws air from the Screen Room and underground wet well and exhausts it to the outdoors. The inside of the air handling unit and the associated duct work has not been sampled as part of this program. Since it appears

that this structure became contaminated through the presence of PCB sources in the Screen Room the air handling unit and the duct work will be managed as a PCB remediation waste.

In the Boiler Room a blue layer of sheetrock was identified below the white paint that was previously identified as containing 3.67 mg/kg of PCBs. The sheetrock was sampled and found to contain PCBs at 1.0 mg/kg. A new encapsulating coat of paint will be applied to the Boiler Room ceiling as part of the facility rehabilitation as described above in Section 2.2.1.2.

2.2.3 Non-Porous Surfaces

No additional sampling was conducted on the painted non-porous, generally steel surfaces containing PCBs at concentrations above 50 mg/kg. For the purposes of the upcoming construction these surfaces are divided into three categories: structural steel surfaces such as beams and columns that are integral parts of the building structure and therefore will remain: equipment such as piping and crane that will remain and will be abated in place; and equipment or other metal items that are being removed and/or replaced. The details of the required abatement of non-porous surfaces are presented in Section 3.1.

Table 1: Main Room & Hallway Sampling Results						
				Aroclor 1254 Results (mg/kg)		
Location	**Paint Color**	**Substrate**	**Sample No.**	**Paint**	**Shallow Concrete 0-0.5”**	**Deep Concrete 0.5-1.0”**
Hallway Ceiling	White	Concrete	HL1001/3001C	21.8	0.4	<0.3
Hallway Walls	Unpainted	Brick	na	Na	na	na
Hallway Floor	Unpainted	Tile	na	Na	na	na
Ceiling	White	Concrete	MR1001/2001C	**87.7**	1.3	---
			MR2019/2019C	**100**	0.14	---
Ceiling Beams	White	Structural Steel	MR1002	**6,410**	na	na
Columns	Blue	Structural Steel	MR1003	**337**	na	na
Walls	Unpainted	Masonry	na	Na	na	na
Wall-Back Corner	White	Brick	MR1013/2013B	**63.5**	<0.14	---
		Mortar	MR2013M	---	0.74	---
	Blue	Brick	MR1014	26.1	---	---
Floor	Unpainted	Tile	Na	Na	na	na
Stair Treads	Gray	Concrete	MR1008/2008C/3008C	**7,810**	5.8	0.4
			MR2022/2022C	**5,400**	13	---
Stairway Walls	Lt. Blue	Concrete	MR1009/2009C	**8,750**	6.7	---
			MR2023/2023C	**4,000**	6.2	0.37
			Field Dup. 1a & 1b (concrete; both depths)	---	1.0	0.79
Stair Rails	Orange	Equipment-Steel	MR1007	**1,380**	na	na
Crane	Orange	Structural Steel	MR1004	**2,990**	na	na
Pump Motors	Gray	Equipment-Steel	MR1005	42.8	na	na
			MR2020	**55.0**	na	na
	Lt. Gray	Equipment-Steel	MR1006	19.9	na	na
			MR2021	14.0	na	na
Water Pipe Insulation	Lt. Blue	Paint Layer	MR1012	**56.8**	na	na
		Insulation & Paint	MR2012I	27.0	na	na
Wet Well Foundation	Blue	Concrete	MR1015/2015C	**156**	14	0.1
HVAC Intake Duct Insulation	Lt. Gray	Paint Layer	MR1017	48.0	na	na
		Insulation & Paint	MR2041	25.0	na	na
Pump Room Exhaust Duct	Dk. Blue	Equipment-Steel	MR1018	**5,500**	na	na
Rain Leader Pipe	Dk. Blue/Lt. Blue	Equipment-Pipe	MR4024	**200**	na	na
Water Pipe	Lt. Blue	Equipment-Pipe	MR4025	**100**	na	na
Water Pipe	Dk. Blue/Lt. Blue	Equipment-Pipe	MR4026	**100**	na	na
Heat Loop Pipe	Lt. Blue/Yellow	Equipment-Pipe	MR4027	<1	na	na

Table 2: Pump Room Sampling Results						
				Aroclor 1254 Results (mg/kg)		
Location	**Paint Color**	**Substrate**	**Sample No.**	**Paint**	**Shallow Concrete 0-0.5”**	**Deep Concrete 0.5-1.0”**
Ceiling	White	Concrete	PR1002/2002C	**18,500**	8.1	2.6
			PR3013/3013C	**21,000**	16	13
			PR3014/3014C	**19,000**	34	2.7
Wall	Blue with white beneath	Concrete	PR1001/2001C	**7,010**	3.8	---
			PR2008/2008C	**1,300**	0.49	---
			PR2009/2009C	**430**	0.77	---
			PR2010/2010C	**1,900**	1.7	<0.22
Floor	*Unpainted, w/overspray*	*Concrete w/overspray*	*PR4003*	*na*	*10*	*0.4*
			PR4004	*na*	*22*	*<1*
			PR4007	*na*	*5.4*	*0.2*
			PR4008	*na*	*5.2*	*<0.9*
		Bare Concrete	*PR4005*	*na*	*44*	*<1*
			PR4006	*na*	*49*	*0.2*
Pump Equipment: Pump, Pipe, Concrete Support	Gray	Steel & Concrete Composite	PR1006	**739**	---	---
		Concrete	PR2012/2006C	**600**	0.71	---
		Equipment-Steel	PR2011	**550**	na	na
Duct: Exhaust Fan	Dark Blue	Equipment-Steel	PR1003	**754**	na	na
Exhaust Fan Stand	Dark Gray	Equipment-Steel	PR1004	**761**	na	na
Drive Shafts	Orange	Equipment-Steel	PR1007	**615**	na	na
Electrical Conduit	Lt. Blue	Equipment-Pipe	PR4015	**610**	na	na
Water Pipe	Lt. Blue	Equipment-Pipe	PR4016	**400**	na	na

Table 3: Store Room Sampling Results						
				Aroclor 1254 Results (mg/kg)		
Location	**Paint Color**	**Substrate**	**Sample No.**	**Paint**	**Shallow Concrete 0-0.5”**	**Deep Concrete 0.5-1.0”**
Ceiling	White	Concrete	SR1001	16.6	---	---
			SR3009 (Primer)/3009C	**2,500**	0.8	<0.3
			SR3009 (Paint)	20		
Wall	Dark Gray	Concrete	SR1002/2002C	**356**	47	0.6
			Field Dup 1 (paint)	**3,860**		
			SR2007/2007C	**110**	26	0.4
			Field Dup 2 (paint)	**160**	---	---
Floor	Dark Gray	Concrete	SR1003/2003C	**612**	20	---
			SR2008/2008C	**500**	40	1.0
Column	Blue	Concrete	SR1004/2004C	**1,480**	25	3.2
Water Pipes	Lt. Blue	Equipment-Pipe	SR1005	**1,850**	na	na
Electrical Conduit	White	Equipment-Pipe	SR4011	4.3	na	na

Table 4: Screen Room Sampling Results						
				Aroclor 1254 Results (mg/kg)		
Location	**Paint Color**	**Substrate**	**Sample No.**	**Paint**	**Shallow Concrete 0-0.5”**	**Deep Concrete 0.5-1.0”**
Ceiling	Gray	Concrete	SC2015/2015C	**73**	0.68	---
			SC3017/3017C	22	<0.4	<0.2
			SC3018/3018C	32	<0.5	<0.8
Floor	Gray	Concrete	SC1001/3001C	21.9	6.9	0.4
			SC3020/3020C	12	6.7	<0.3
			SC3021/3021C	**92**	14	0.9
Wall *(including stairs and landing)*	Blue	Concrete	SC1002/2002C	**3,160**	240	11
			SC2012/2012C	**1,700**	62	0.9
			Field Dup. (concrete)	**---**	---	<0.1
			SC2013/2013C	**1,100**	540	0.7
			SC2014/2014C	**3,000**	430	4.4
Roof Access Platform	Lt. Blue	Concrete	SC1005	32.2	---	---
			SC3022/3022C	**72**	190	8.8
Columns	Blue	Structural Steel	SC1006	**7,440**	na	na
Ceiling Beams & Upper Wall Columns	Gray	Structural Steel	SC1007	**7,010**	na	na
Crane	Orange	Equipment-Steel	SC1008	**3,010**	na	na
HVAC Equipment	Residue	Fibrous Filter Residue	SC1011	3.46 (filter residue)	na	na
	White	Sheet Metal	SC1004	5.91	na	na
Wood Work Bench	Gray	Wood	SC2016	**2,300**	na	na
Stair Rail	Blue/Orange/Gray/Cream	Equipment-Steel	SC4023	**3,400**	na	na
Floor Plates	Lt. Blue/White/Cream	Equipment-Metal	SC4024	**630**	na	na
Water Pipe	Lt. Blue	Equipment-Pipe	SC4025	19	na	na
Water Pipe	Lt. Blue	Equipment-Pipe	SC4026	**<1**	na	na

Table 5: Boiler Room Sampling Results						
				Aroclor 1254 Results (mg/kg)		
Location	**Paint Color**	**Substrate**	**Sample No.**	**Paint**	**Shallow Concrete 0-0.5”**	**Deep Concrete 0.5-1.0”**
Ceiling	White-top	Sheetrock	BR1001	3.67	1.0 (gypsum)	---
	Blue-base		BR3001G	---		
Walls	White-top	Concrete	BR1002	3.57	<0.2	<0.2
	Blue-base		BR3002/3002C	25		
Floor	Unpainted	Tile	na	na	na	na
Door	Gray	Equipment-Steel	BR1004	45.4	na	na
			BR2005	**61**	na	na

Table 6: Generator Room & Entrance Hallway Sampling Results						
				Aroclor 1254 Results (mg/kg)		
Location	**Paint Color**	**Substrate**	**Sample No.**	**Paint**	**Shallow Concrete 0-0.5”**	**Deep Concrete 0.5-1.0”**
Ceiling	White-top	Concrete	GR1002	8.94	<0.2	<0.2
	Lt. Gray Base		GR3002/3002C	13		
Walls	Unpainted	Masonry	na	na	na	na
Floor	Unpainted	Concrete	na	na	na	na
Column	Blue	Concrete	GR1005	8.65	---	---
			GR3008/3008C	13	<0.3	<0.3
Louver Frame	Dark Gray	Equipment-Steel	GR1006	**88.3**	na	na
Entrance Hallway Ceiling	White	Concrete	GR3009/3009C	**11,000**	46	5.2
Entrance Hallway Wall	Dark Gray	Concrete	GR2007/2007C	**820**	13	0.4
			Field Dup 3 (concrete)	---	8.0	---
			GR2007CDup (concrete)	---	1.3	---
Entrance Hallway Floor/Stairs	Dark Gray	Concrete	GR1001/2001C/3001C	**356**	3.2	<0.3
			Field Dup 2 (paint)	**193**	---	---
Water Pipe	Lt. Blue/White	Equipment-Pipe	GR4010	**69**	na	na
Electrical Conduit	White	Equipment-Pipe	GR4011	20	na	na

Table 7: Outdoor Sampling Results						
				Aroclor 1254 Results (mg/kg)		
Location	**Paint Color**	**Substrate**	**Sample No.**	**Paint**	**Shallow Concrete 0-0.5”**	**Deep Concrete 0.5-1.0”**
Generator Room Louvers	Gray	Equipment-Steel	OD1001	5.93	na	na
Screen Over Air Intake to Main Room	Blue/Gray	Equipment-Steel	OD1002	40.5	na	na
			OD2008	**170**	na	na
Fence	Black	Equipment-Steel	OD1003	<0.263	na	na
Manhole Covers	Blue	Equipment-Steel	OD1005	1.35	na	na
Wet Well Hatch	Light Gray	Equipment-Steel	OD1004	**635**	na	na
		Concrete	OD3004/3004C	1.4	<0.3	<0.3
Hatch Concrete Base-Rear	Light Gray	Concrete	OH1098/2098C	<0.1	<0.1	<0.1
Gate Valve Structure	Light Gray	Concrete	OG1099/2099C	0.6	<0.1	<0.1
	Light. Gray	Steel Hatch	OG3099A	**550**	na	na
	Light Gray	Plastic Control Box	OG3099B	2.4	na	na
	Dark Gray	Valve Motor-Steel	OG3099C	1.1	na	na
Hatches: North Side of Building	Light Gray	Steel Hatch	OD3005	**520**	na	na
	Light Gray	Concrete Base	OD3006/3006C	1.4	<0.3	<0.3
Rain leader Pipe	Gray/Lt. Blue	Equipment-Pipe	OD4009	2.3	na	na

2.2.4 Surface Wipe Samples

Two rounds of surface wipe samples were collected from the facility. In December 2010 Environmental Health & Engineering, Inc. in the context of performing a preliminary site-specific risk characterization collected four surface wipe samples from painted porous and non-porous surfaces workers would likely come into contact with. PCBs were not detected above the laboratory reporting limit of 1.0 μg/100cm^2 in all but one sample. Aroclor 1254 was detected at 12 μg/100cm^2 in the sample collected from a stairway tread on the Main Room to the Pump Room stairs. Complete results are detailed below in Table 8.

Table 8: Surface Wipe Results

Location	Sample No.	Aroclor 1254 (μg/100cm^2)
Main Room: Stairway to Pump Room: Handrail	120665	<1
Duplicate of 120665	120666	<1
Main Room: Stairway to Pump Room: Stair Tread	120667	12
Screen Room: Floor	120668	<1
Main Room: Desk	120669	<1
Field Blank	120670	<1

Additional surface wipe samples were collected by Geosphere in March 2012. Prior to the sample collection all traces of PCB-contaminated paint was removed from the surface to be sampled. The purpose of this sampling program was to determine the level of PCB contamination on representative concrete locations previously identified in Tables 1 through 7 as having PCB concentrations in paint above 50 mg/kg and in shallow concrete above 1 mg/kg. To evaluate the potential for exposure to PCBs on concrete after paint removal wipe tests on concrete having a range of PCB concentrations were conducted. In each room the shallow (0”-0.5” concrete data was divided into order-of-magnitude ranges of PCB concentrations. These ranges were 1 mg/kg to 10 mg/kg, 10mg to 100 mg/kg, and 100 mg/kg to 1,000 mg/kg. In general, one sample location from each applicable range from each room was selected for a wipe sample location. The only exception to this rule was at the Pump Room ceiling. Three samples had shallow concrete results of 8.1 mg/kg, 16 mg/kg, and 34 mg/kg. The 8.1 mg/kg sample location was selected for a wipe sample because this was the only location accessible without scaffolding.

PCBs were detected at concentrations ranging from 1 to 10 μg/100cm^2 in nine of the 12 samples. Three of the samples did not have detectable concentrations of PCBs. The results show generally low exposure potential for all concrete surfaces tested, regardless of concentration, with some increase in wipe test results noted at the highest concentrations. Table 9 below presents these results.

Table 9: Porous Surface Wipe Test Results						
				Aroclor 1254 Results		
Room	Location	Paint Color	Sample No.	Paint (mg/kg)	Shallow Concrete 0-0.5" (mg/kg)	Shallow Concrete Wipe Sample (µg/100cm^2)
Main Room	Stairway Treads	Gray	MR2022	7,810	13	1
	Stairway Walls	Light Blue	MR1009	5,400	6.7	4
Pump Room	Ceiling	White	PR1002	18,500	8.1	4
	Walls	Blue w/ White Beneath	PR1001	7,010	3.8	3
			Duplicate	--	--	6
Store Room	Walls	White	SR2007	110/160	26	<1
	Floor	Blue & White	SR1003	612	20	2
	Column	Blue	SR1004	1,480	25	<1
Screen Room	Floor	Gray	SC3021	92	14	<1
	Lower Walls	Blue	SC2012	1,700	62	10
	Lower Walls	Blue	SC2013	1,100	540	7
Gen. Room Entrance Hallway	Hallway Ceiling	White	GR3009	11,000	46	1
	Hallway Floor/Stairs	Dark Gray	GR1001	356/193	3.2	1

2.2.5 Indoor Air

As part of the December 2010 EH&E sampling program seven indoor air samples were collected from locations throughout the facility thought to be representative of areas where workers would spend time. The samples were 24-hour time-integrated at a flow rate of one liter per minute. Two of the seven samples yielded results above the laboratory quantitation limit of 0.03 to 0.05 µg/m^3. Aroclor 1254 was detected at 0.094 µg/m^3 in a sample collected from Pump Room adjacent to the stairway and at 0.04 µg/m^3 from the west-central area of the Main Room. Note that this sampling program was designed as a preliminary assessment of short term risk to facility workers. As such the sampling and analysis method used was NIOSH 5503 rather than the more rigorous EPA Method TO-4A or TO-10A typically used to assess risk. Results are detailed below in Table 10.

Table 10: Indoor Air Samples Results		
Location	Sample No.	Aroclor 1254 (µg/m^3)
Pump Room: by stairway	120656	0.094
Main Room: west-center	120657	0.04
Duplicate of 120657	120658	<0.04
Main Room: office	120659	<0.04
Outdoors: by Screen Room entry door	120660	<0.03
Screen Room: center	120661	<0.03
Boiler Room: west	120662	<0.05
Generator Room: north center	120663	<0.04
Field Blank	120664	ND

2.2.6 Site Characterization Summary

The results of the characterization sampling indicate that a majority of the paint on porous (generally concrete) and non-porous (generally steel) surfaces contain PCBs above 50 mg/kg TSCA limit over which use of the materials is not authorized under 40 CFR 761. The following is a brief summary of the findings.

- Of the 24 different types of painted porous interior building surfaces 19 contained PCBs above 50 mg/kg. Of the samples containing less than 50 mg/kg all were located in the Boiler and Generator Rooms, and the Main Room Hallway. PCBs were detected at concentrations up to 21,000 mg/kg.
- Of the 4 different types of painted porous outdoor surfaces none contained PCBs above 50 mg/kg. The highest concentration was 1.4 mg/kg.
- Of the 3 different painted porous articles 2 contained PCBs in paint above 50 mg/kg. These include painted insulation in the Main Room and a painted work bench in the Screen Room. Bulk samples of the insulation contained PCBs at 27.0 and 25.0 mg/kg.
- Of the 30 different types of painted non-porous interior building and equipment surfaces all but one contained PCBs above the 50 mg/kg standard. The highest concentration was 7,440 mg/kg.
- Of the 10 different types of painted non-porous outdoor surfaces four contained PCBs above 50 mg/kg. The highest concentration was 635 mg/kg.

Sampling of concrete was conducted on all surfaces with PCBs in paint above 50 mg/kg and in several locations where the concentration was less than 50 mg/kg. At most locations a sample of the shallow concrete (0 to 0.5 inches) and a deeper sample (0.5 to 1.0 inches) were collected. Of the 19 interior painted concrete and brick surfaces with PCB concentrations in paint above 50 mg/kg all but three had PCBs in the shallow concrete or brick above the unrestricted use cleanup level of 1 mg/kg. In general PCB concentrations in the shallow concrete were relatively higher at the locations where the PCB concentrations in paint were higher. With the exception of the Screen Room walls the PCB content in the shallow concrete sample ranged from less than detection limits to 46 mg/kg. Concentrations in the deeper concrete were generally one to two orders of magnitude less than the corresponding shallow concrete sample.

In the Screen Room four samples of the painted lower wall were collected. Paint concentrations ranged from 1,100 to 3,160 mg/kg. Corresponding shallow concrete samples ranged from 62 to 540 mg/kg with deep concrete samples ranging from less than 0.1 up to 11 mg/kg. It is hypothesized that the somewhat corrosive atmosphere of the Screen Room caused deterioration of the concrete and greater leaching into the concrete surface. In the samples from the floor in this room paint samples had PCBs between 12 to 92 mg/kg with shallow concrete results between 6.7 and 14 mg/kg, less than an order of magnitude decrease in concentration.

Results of the wipe testing on surfaces that site workers come into contact with on a day to day basis were all less than 0.1 $\mu g/100cm^2$ with the exception of one stairway tread sample of 12 $\mu g/100cm^2$, slightly higher than the unrestricted high-occupancy level of 10 $\mu g/100cm^2$. Concrete surfaces having a range of PCB concentrations in paint from 92 to 11,000 mg/kg and corresponding shallow concrete concentrations from 3.2 to 540 mg/kg were wipe tested after

paint removal and did not have results over this standard of 10 μg/100cm^2. Although this standard is intended for non-porous surfaces it provides a useful tool for comparison purposes.

Another useful standard that was used for comparison purposes for the wipe samples is the standard in the continued use authorization in 40 CFR 761.30(p) for liquid PCB spills to porous surfaces. This authorization allows continued use of a porous surface contaminated by a liquid PCB spill of greater than 50 mg/kg if the porous surface is less than 10 μg/100cm^2. Only one of the porous surface wipe samples was equal to this standard, none exceeded it.

Concentrations of PCBs in indoor air were 0.040 and 0.094 μg/m^3 with four samples not having detectable PCBs. EPA's September 2009 guidance for indoor air levels for schools has a standard of 0.45 μg/m^3 for a 19+ year old full time adult. The highest sample detection was considerably less than this standard. Although this specific standard was meant for teachers and adult students in an 8-hour school day it is a useful standard for full-time MWRA workers and contractors.

Following the collection of the surface wipes and indoor air samples EH&E completed a human health risk characterization based on the collected data and the amount of time MWRA workers spend in the facility (up to 250 days per year for 4 hours per day).

Cancer risks and non-cancer hazards for workers at the facility were estimated based on EPA guidance based on average calculated and maximum detected exposure point concentrations in the surface wipe and indoor air samples. The ELCR based on the average and maximum detected values were 1.8 E-6 and 7.0 E-6 respectively, slightly above EPAs most conservative recommended standard of 1 E-6 and less than Massachusetts DEP's recommended standard of 1 E-5. The non-cancer risk hazard indices based on the average and maximum detected values were 0.6 and 2.4 respectively. Adverse health effects are not expected for hazard index values less than 1 and for short term (less than 5 years) duration exposures at values less than 10.

Based on these characterization results, an abatement plan has been developed to address the PCB concentrations detected in the paint throughout the facility and in the impacted concrete.

2.3 ABATEMENT PLAN CONCEPTUAL DEVELOPMENT

The approximate area of painted porous building surfaces in the facility, including the hallway and restroom area constructed in 1996 is 12,250 square feet. As noted above the paint sampling program identified 24 different interior surfaces based on paint color and type of surface. The painted surfaces in the Main Room Hallway, Boiler and Generator Rooms did not contain PCBs above 50 mg/kg, however they will be included in the abatement program nonetheless by receiving a encapsulating covering with commercial grade paint.

Of the painted porous building surfaces requiring paint abatement that had paint concentrations greater than or equal to 50 mg/kg all but three relatively small surfaces had PCBs in shallow concrete above the unrestricted use standard of 1 mg/kg. The approximate surface area of painted porous building surfaces requiring abatement of shallow concrete is 10,820 square feet or approximately 88 percent of the interior porous building surface area.

EPA regulations allow two potential abatement approaches for the facility. The first is a self-implemented cleanup under 40 CFR 761.61(a). Available cleanup standards are dependent on whether the facility has high or low occupancy levels of usage. The standards for porous media are 1 mg/kg and 25 mg/kg respectively. Although the MWRA does not staff the facility on a full-time basis periodic maintenance activities by MWRA as well as contract workers would require MWRA to utilize the high occupancy cleanup standards for porous media. A large proportion of the interior building surface area would require scarification of concrete to achieve the 1 mg/kg unrestricted high occupancy standard. Much of this surface area is relatively inaccessible to workers due to high ceilings and walls, and the residual PCBs in concrete are at low levels. Given the low exposure potential of the concrete once paint is removed, MWRA has determined that a risk based approach will be protective of human health.

Based on these considerations a second available abatement approach is the risk-based approach in 40 CFR 761.61(c). Based on the relatively low levels of PCBs identified in the surface wipe samples and indoor air samples a risk-based abatement approach composed primarily of encapsulation of the impacted porous surfaces following paint removal will effectively mitigate the potential risk of direct contact exposure to site workers. The specific type of encapsulant will be dependent on the type of surface and is discussed in Section 3 of this plan. A monitoring and O&M plan will be developed to ensure the long term effectiveness of the encapsulant.

Regarding the non-porous building and equipment surfaces, removal of paint containing greater than 50 mg/kg is a requirement of 40 CFR 761. MWRA will utilize the unrestricted standard of 10 $\mu g/100cm^2$ as a cleanup standard for these surfaces. Although it is currently not anticipated, during the abatement situations may arise when it is determined that it is not technically feasible to remove all the paint from or achieve the above standard on a certain area of structural steel and/or permanently-mounted equipment. In such cases the applicable surface will be encapsulated.

Section 3 which follows provides the necessary details of the planned abatement.

3.0 ABATEMENT PLAN

This abatement plan is presented in two sections. Section 3.1 contains a general overview of activities. Section 3.2 contains a description of the abatement plan for each applicable media. The written certification by the MWRA as the owner and operator of the facility is provided in Attachment 7.

The work at the Alewife Brook Pump Station consists of the following general elements:

- Site isolation and protection.
- Source containment and removal.
- Encapsulation of building surfaces
- Decontamination and/or removal of PCB residues.
- Acceptance testing and verification.

3.1 OVERVIEW OF PROPOSED ABATEMENT

Based on the site characterization data collected and described in the above section an abatement plan has been developed to mitigate the potential risks posed by the presence of the PCBs. In summary, this abatement plan is composed of several approaches based on the type of substrate material impacted and the level of PCBs present, as follows:

- Paint containing PCBs equal to or greater than 50 mg/kg on any surface remaining on-site throughout the facility will be removed and the removed paint disposed of as bulk product waste.
- Paint containing PCBs greater than 1 mg/kg and less than 50 mg/kg on any surface remaining on-site throughout the facility will be over coated with an encapsulation of commercial-grade paint.
- Non-porous equipment scheduled to be replaced containing PCB paint equal to or greater than 50 mg/kg will be disposed of as PCB bulk product waste, and if less than 50 mg/kg will be disposed as PCB remediation waste.
- Non-porous equipment not scheduled to be replaced that contains PCB paint at or above 50 mg/kg will be abated onsite.
- Porous building surfaces impacted by PCB paint and containing PCBs greater than 1 mg/kg and less than 50 mg/kg in shallow concrete (0-0.5 inches) will be encapsulated and will be subject to long term monitoring, with the exception of the Pump Room floor, which will not require encapsulation following paint removal.
- Porous building surfaces impacted by PCB paint and containing PCBs equal to or greater than 50 mg/kg in shallow concrete (0-0.5 inches) will be scarified to a depth of 0.5 inches and encapsulated with a half inch layer of new concrete followed by paint.
- Non-structural porous articles and materials scheduled to be replaced and impacted by PCB paint will be managed as PCB remediation waste.

Figures 8 through 12 in Attachment 3 identify the locations and equipment within the pump station requiring abatement.

The MWRA person who will be responsible for this project is John Nelson. Contact information is provided below:

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Massachusetts Water Resources Authority
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3.2 ABATEMENT METHODS

The following sections provide details of the type of abatement methods that will be employed based on the characteristics of the impacted material.

3.2.1 Paint Removal

The painted surfaces and equipment identified in Tables 1 through 7, and summarized below in Tables 11 and 12 that have PCB concentrations in paint greater than or equal to 50 mg/kg will either be abated onsite to remove all traces of the contaminated paint or will be disposed of offsite. The abatement method will be at the Contractor's discretion and may include chemical removal, high-pressure hydraulic, sand blasting, blasting with dry ice (CO_2) or other mechanical means. The specific procedures for the selected method will be summarized in the Contractor's Work Plan referenced above. All removed paint with abrasive removal media including sand blast grit will be transported off site and disposed of in accordance with 40 CFR 761.62 as PCB bulk product waste. Any liquid and sludge generated during the paint and/or concrete abatement will be managed as PCB remediation waste in accordance with 40 CFR 761.61.

It is expected that many painted surfaces will require two rounds of abatement to address all areas. It is expected that the abatement will be one of the initial steps in the facility rehabilitation process. The first abatement round will be to remove the bulk of the paint not obstructed with pipe or other equipment. The small areas of paint obstructed by equipment will be abated later in the rehabilitation process after the equipment has been removed but before the replacement equipment has been installed as applicable.

3.2.1.1 Porous Surface Paint Abatement and Verification Testing

Remediation of PCB-impacted porous building materials and equipment will be conducted in accordance with 40 CFR 761.61(c) Risk Based Disposal. The abatement method of these building surfaces is dependent on the concentration of PCBs in the paint, as follows:

- Abatement of painted porous surfaces with PCB levels in paint greater than 1 mg/kg and less than 50 mg/kg will consist of encapsulation of the painted porous surface in accordance with Section 3.2.3. The areas requiring this form of abatement are identified in Table 11 and total approximately 1,430 square feet.

- Abatement of painted porous surfaces with PCBs levels in paint greater than or equal to 50 mg/kg will consist of onsite removal of the paint and off-site disposal of the paint waste as PCB bulk product waste. Specific abatement methods will be at the discretion of the Contractor as described above in Section 3.2.1 and will include complete removal of the paint to a clean concrete surface. The areas requiring this form of abatement are identified in Table 11 and total approximately 10,850 square feet.

Upon the completion of the initial paint removal process the applicable surface will be visually inspected for the presence of any residual paint. If residual paint is observed, a second round of removal will be required to remove the residual paint to the maximum extent possible.

Following the removal of the paint but prior to the application of the encapsulant verification concrete sampling will be conducted to document the complete removal of the paint with PCBs greater or equal than 50 mg/kg. In the case of the Screen Room wall where one half inch of concrete will be scarified in addition to removal of the paint verification sampling will be conducted on the post-scarification surface. The purpose of this sampling is to provide a baseline level of information of PCB concentrations left in place in the deeper portion of the concrete wall. The sampling will be conducted in accordance with the May 2011 *Standard Operating Procedure for Sampling Porous Surfaces for Polychlorinated biphenyls (PCBs).* Sampling frequency will generally follow the minimum requirements cited in Subpart O of 40 CFR 761, as described below.

- Less than 100 square feet: One shallow concrete sample (0-0.5 inches deep) will be collected for smaller structures such as concrete columns.
- Greater than 100 square feet and less than 350 square feet: three shallow concrete samples will be collected per surface type. For example, in a room with four walls, floor and ceiling, three samples will be collected in total for the walls, three samples from the floor, and three samples from the ceiling.
- Greater than 350 square feet: one shallow concrete sample will be collected per 250 square feet of surface area. Existing shallow concrete samples from these areas will be used to supplement the proposed sampling data in order to achieve this frequency. However, at a minimum three new samples will be collected from each applicable surface in order to confirm the effectiveness of the Contractors paint removal procedure. For example, three samples have already been collected from the Screen Room Floor. Three additional samples will be collected to confirm the effectiveness of the paint removal.
- A different sampling scheme is proposed where PCB concentrations in existing shallow concrete are 1 mg/kg or less. A sampling frequency of one sample per 50 square feet is proposed. The goal of this verification sampling scheme is to provide sufficient sampling coverage for the surfaces having a significant chance of not having any concrete verification sample results greater than 1 mg/kg and that therefore will not be subject to the Long Term Maintenance and Monitoring Plan. The surfaces proposed to receive the higher sampling frequency include the following:
    - Store Room Ceiling, 200 square feet, 0.8 mg/kg: one sample per 50 square foot for a total of 5 samples.
    - Main Room Back Corner Wall, 120 square feet: one sample per 50 square feet from both brick and mortar for a total of 3 samples each.

- *The Screen Room wall (including the adjacent stairs and landing), which will require concrete scarification, will be sampled at a frequency of three samples per wall plus one sample each from the stairs and landing for a total of 14 samples.*

Within the Pump Room the entire concrete floor will be considered as containing paint with PCBs greater than 50 mg/kg and will be subjected to paint removal and confirmatory sampling as described above. Section 3.2.3 and 3.2.4 discuss encapsulation requirements for this and all other abated porous surfaces.

Porous surfaces will be abated onsite to an acceptance criterion of less than 50 mg/kg.

3.2.1.2 Non-Porous Surface Abatement and Verification Testing

Abatement of non-porous equipment and structural surfaces containing detectable levels of PCBs will also take place. Specific abatement methods and type of disposal is dependent on the type of equipment or surface and the level of PCBs detected. Table 12 identifies the various non-porous surfaces requiring abatement and lists the abatement method to be employed.

- Non-structural steel and equipment such as piping, pump motors and ductwork will be disposed off-site as PCB bulk product waste or remediation waste as indicated in Table 12.
- Structural steel surfaces that are contaminated with PCB paint equal to or greater than 50 mg/kg will be abated in place to the unrestricted use acceptance criterion of 10 $\mu g/100cm^2$. The abatement will consist of the complete removal of the existing paint down to bare metal.
- The only exceptions to the offsite disposal of non-structural equipment include the overhead cranes in the Main Room and Screen Room, Pump No. 4 discharge piping, and small "expander" sections of the Pump No. 1, 2, and 3 discharge piping. The expander sections are the short conical-shaped sections of pipe that penetrate the building foundation wall. These items will be abated onsite to an acceptance criterion of 10 $\mu g/100cm^2$. Note that the primary discharge piping for pumps 1, 2, and 3 will be disposed of offsite as bulk product waste.

Upon the completion of the initial paint removal process the applicable surface will be visually inspected for the presence of any residual paint. If residual paint is observed, a second round of removal will be required to remove the residual paint to the maximum extent possible.

Following the completion of the paint removal, surface wipe verification sampling will be conducted. The surface wipe samples will be collected in accordance with the standard wipe test method described in 40 CFR 761.123. Wipe samples analytical methods will be extraction by USEPA Method 3540C (Soxhlet Extraction) and analysis by USEPA Method 8082. The following sampling frequency will be utilized:

- Structural steel and crane rails will be tested at a frequency of one wipe sample per 25 linear feet of I beam or at minimum of one sample per I beam section. Each crane mechanism will require 1 sample.

- Pump No. 4 discharge piping will be tested at a frequency of one sample for each of the two different pipe sizes (approx. 60 square feet each).
- Pump No. 1, 2, and 3 discharge piping expander sections will be tested at a frequency of one sample for each (approx. 25 square feet each).

Analytical results from the verification wipe samples will be evaluated to determine whether additional paint removal is required.

- Analytical results less than or equal to 10 $\mu g/100cm^2$: abatement complete.
- Analytical results greater than 10 $\mu g/100cm^2$ will require additional paint removal.
- If in the opinion of the MWRA and resident engineering staff it is determined that all of the paint cannot be removed from a particular non-porous surface the exact area in question will be noted in project records and will be encapsulated in accordance with Section 3.3.4 below.

As part of the verification sampling program sufficient QA/QC samples including field duplicates, equipment blanks, laboratory blanks and MS/MSD samples and analyses will be completed. Upon receipt of each data package data validation will be conducted to determine the usability of the data.

Table 12 below summarizes the abatement requirements for the non-porous surfaces throughout the facility. Electrical conduit and other small-diameter pipe located on the ceilings, upper walls, and/or imbedded with the crane rails in the Main Room, Pump Room, and the Screen Room are generally the same color as the ceilings, ceiling beams, upper walls, and the crane rails in these rooms. Although the paint on this piping was not sampled, it is assumed to be identical to the associated surrounding paint. In addition to the Boiler Room door, the door to the Generator Room and the exterior door leading to the Boiler Room/Generator Room entry hallway are also included in the following abatement list as they date back to the 1950 building construction. The remaining doors and the windows in the facility date to the 1996 facility upgrade and therefore would not contain PCB paint. The Screen Room metal floor plates are painted the same color as the concrete floor. As the paint over the concrete contained PCBs at up to 92 mg/kg the paint on the floor plates is assumes to contain PCBs at or over 50 mg/kg and will be included in the abatement.

Table 11: Porous Surface Abatement								
Room	**Location**	**Paint Color**	**Type of Abatement Required**	**Encapsulation Type or Disposal Category**	**Approximate Area (square feet)**	**Existing No. of Concrete Samples**	**Concrete Verification Sampling Frequency***	**Total No. of Concrete Samples**
Main Room	Ceiling	White	Paint Removal & Encapsulation	Spray-On Insulation & Ceiling Panels	2500	2	(8) 0-1/2" concrete samples	10
	Walls	Unpainted Masonry	None	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Back Corner Wall	Blue & White on Brick	*Paint Removal*	Not required (substrate less than 1 mg/kg PCB)	120	1 brick, 1 mortar	(3) 0-1/2" brick samples, (3) mortar samples, *see Note 2*	4 brick, 4 mortar
	Floor	Unpainted Tile	None	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Wet Well Foundation	Blue	Off-site Disposal	BPW	Not applicable	Not applicable	Not applicable	Not applicable
	Stairway Treads & Landings	Gray	Paint Removal & Encapsulation	Elastomeric Acrylic	280	2	(3) 0-1/2" concrete samples	5
	Stairway Walls	Light Blue	Paint Removal & Encapsulation	Commercial Paint	Included with Pump Room Walls	Included with Pump Room Walls	See Pump Room Walls	See Pump Room Walls
	Water Pipe Insulation	Light Blue	Off-site Disposal	BPW	Not applicable	Not applicable	Not applicable	Not applicable
	HVAC Intake Duct Insulation	Light Gray	Off-site Disposal	BPW	Not applicable	Not applicable	Not applicable	Not applicable
Hallway & Restrooms	Ceiling	White	Encapsulate Existing Paint	Commercial Paint	500	1	Not applicable	Not applicable
	Walls	Unpainted Masonry	None	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Floor	Unpainted Tile	None	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Notes:

(1) All substrates are concrete unless otherwise noted. Disposal: RW means disposal as a PCB remediation waste

(2) The listed concrete verification sampling frequency for the Main Room back corner wall and the Store Room ceiling is intended to support a determination that no long term maintenance or monitoring will be required. Concrete verification sample frequencies at all other locations are intended to support the effectiveness of the paint removal.

Table 11: Porous Surface Abatement								
Room	**Location**	**Paint Color**	**Type of Abatement Required**	**Encapsulation Type or Disposal Category**	**Approximate Area (square feet)**	**Existing No. of Concrete Samples**	**Concrete Verification Sampling Frequency***	**Total No. of Concrete Samples**
Pump Room	Ceiling	White	Paint Removal & Encapsulation	Commercial Paint	1400	3	(3) 0-1/2" concrete samples	6
	Walls	Blue & White	Paint Removal & Encapsulation	Commercial Paint	3400	6	(8) 0-1/2" concrete samples	14
	Floor	*Blue-Gray overspray*	*Paint Removal & Encapsulation*	*Elastomeric Acrylic*	*1,400*	*6*	*(6) 0-1/2" concrete samples*	*12*
	Concrete Pipe Supports	Gray	Off-site Disposal	BPW	Not applicable	Not applicable	Not applicable	Not applicable
Screen Room	Ceiling	Gray	Paint Removal & Encapsulation	Spray-On Insulation & Ceiling Panels	1100	3	(3) 0-1/2" concrete samples	6
	Upper Walls	Unpainted Masonry	None	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Lower Walls (including adjacent stairs and landing east of screens)	*Blue*	*Scarification to 0.5" & Encapsulation*	*0.5" of New Concrete & Commercial Paint on walls and Elastomeric Acrylic on Stairs and Landing*	*380*	*4*	*(14) 0-1/2" concrete samples, 3 per wall plus 1 each from stairs and landing*	*18*
	Floor excluding metal plates	Gray	Paint Removal & Encapsulation	Elastomeric Acrylic	750	3	(3) 0-1/2" concrete samples	6
	Roof Access Platform	Light Blue	Off-site Disposal	BPW	Not applicable	2	Not applicable	Not applicable
	Wood Work Bench	Gray	Off-site Disposal	BPW	Not applicable	Not applicable	Not applicable	Not applicable
	HVAC exhaust filter	Not applicable	Off-site Disposal	RW	Not applicable	Not applicable	Not applicable	Not applicable

Table 11: Porous Surface Abatement								
Room	**Location**	**Paint Color**	**Type of Abatement Required**	**Encapsulation Type or Disposal Category**	**Approximate Area (square feet)**	**Existing No. of Concrete Samples**	**Concrete Verification Sampling Frequency***	**Total No. of Concrete Samples**
Store Room	Ceiling*	White	Paint Removal & Encapsulation	Commercial Paint	200	1	(4) 0-1/2" concrete samples, *see Note 2*	5
	Upper Walls	Unpainted Masonry	None	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Lower Walls	Dark Gray	Paint Removal & Encapsulation	Commercial Paint	180	2	(3) 0-1/2" concrete samples	5
	Floor	Dark Gray	Paint Removal & Encapsulation	Elastomeric Acrylic	170	2	(3) 0-1/2" concrete sample	5
	Column	Blue	Paint Removal & Encapsulation	Commercial Paint	30	1	(1) 0-1/2" concrete sample	2
Generator Room	Ceiling	White	Encapsulate Existing Paint	Commercial Paint	310	1	Not applicable	Not applicable
	Walls	Unpainted Masonry	None	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Column	Blue	*Encapsulate Existing Paint*	Commercial Paint	30	1	*Not applicable*	*Not applicable*
	Floor	Unpainted Concrete	None	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Generator Room Entrance Hallway	Ceiling	White	Paint Removal & Encapsulation	Commercial Paint	80	1	(1) 0-1/2" concrete sample	2
	Lower Walls	Dark Gray	Paint Removal & Encapsulation	Commercial Paint	60	1	(1) 0-1/2" concrete sample	2
	Floor/Stairs	Dark Gray	Paint Removal & Encapsulation	Elastomeric Acrylic	70	1	(1) 0-1/2" concrete sample	2
Boiler Room	Ceiling	White	Encapsulate Existing Paint	Commercial Paint	170	1	Not applicable	Not applicable
	Walls	White	Encapsulate Existing Paint	Commercial Paint	450	1	Not applicable	Not applicable
	Floor	Unpainted Concrete	No	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Outdoors	Concrete Hatch Bases (5)	Gray	Encapsulate Existing Paint	Commercial Paint	50	2	Not applicable	Not applicable

**Includes concrete ceiling beam and upper wall strip above entry door.*

Table 12: Non-Porous Surface Paint Abatement						
Room	**Location**	**Paint Color**	**Type of Structure or Equipment**	**Type of Abatement Required**	**Approximate Dimensions**	**Verification Wipe Sampling Frequency**
Main Room	Stair Rails	Orange	Architectural Item - replace	Disposal: BPW	2” pipe: 210’	Not applicable
	Crane Rails and cross beam		Equipment – to remain	Onsite abatement	I-Beam: 170’	1 per 25 l.f.
	Crane Mechanism		Equipment - to remain	Onsite abatement	~ 30 s.f.	1
	Crane Rail Conduit and Pipe		Equipment –to be replaced	Disposal: BPW	1” Conduit: 150’ 1” Water Pipe: 150’	Not Applicable
	Pump Motors (Nos. 1, 2, & 3)	Gray & Lt. Gray	Equipment – to be replaced	Disposal: BPW	~20 s.f. irregular	Not applicable
	Pump No. 4 Discharge Pipe (gooseneck) and floor plate	Dark Gray	Equipment – to remain	Onsite abatement	24” pipe: 6’	1
	Water Pipes – Not Insulated	Lt. & Dk. Blue	Copper – to be replaced	Disposal: BPW	4-1” pipe: 12’ each	Not applicable.
	Rain Leader Pipe	Dk. Blue & White	Cast Iron – to be replaced	Disposal: BPW	3.5” pipe: 100’ *2” pipe: 30’*	Not applicable
	Heat Loop Pipe	Lt. Blue & yellow	Copper – to remain	No: PCBs not detected	Not applicable	Not applicable
	Pump Room Exhaust Duct	Dk. Blue	Equipment – to be replaced	Disposal: BPW	72 s.f.	Not applicable
	Ceiling Beams *(includes tie rods)*	White	Structural Steel	Onsite abatement	I-Beam: ~600’	1 per 25 l.f.
	Ceiling Level Conduit	*White*	*Steel – to be replaced*	*Disposal: BPW*	*1” conduit: ~100’*	*Not applicable*
	Columns	Blue & White	Structural Steel	Onsite abatement	12 I-Beams: 18’ each	1 per I-Beam
	Electrical Control Panels	Gray	Equipment – to be replaced	No: post 1996	Not applicable	Not applicable
	Doors	Various	Equipment – to remain	No: post 1996	Not applicable	Not applicable
	Windows (throughout facility)	Various	Equipment – most to remain, some to be removed (see project specifications)	No: post 1996	Not applicable	Not applicable
	Supply Air Fans No. 1 & 2	*Red Primer*	*Equipment – to be replaced*	*No: post 1996*	*Not applicable*	*Not applicable*

Disposal: BPW means disposal as a PCB bulk product waste
Disposal: RW means disposal as a PCB remediation waste

Table 12 Continued: Non-Porous Surface Paint Abatement						
Room	**Location**	**Paint Color**	**Type of Structure or Equipment**	**Type of Abatement Required**	**Approximate Dimensions**	**Verification Wipe Sampling Frequency**
Pump Room	Duct Work-Exhaust Fan	Dark Blue	Equipment – to be replaced	Disposal: BPW	~10 s.f. irregular	Not applicable
	Duct Work		Equipment – to be replaced	Disposal: BPW	100 s.f.	Not applicable
	Exhaust Fan Stand	Dark Gray	Equipment – to be replaced	Disposal: BPW	I-Beam: 80’	Not applicable
	Pumps (Nos. 1, 2, & 3)	Dark & Lt. Gray	Equipment – to be replaced	Disposal: BPW	~ 80 s.f. irregular	*Not applicable*
	Pump No. 1, 2, & 3 Discharge Pipe		Equipment – to be replaced	Disposal: BPW	30” pipe: 90’ 12” pipe: 36’	Not Applicable
	Pump No. 1, 2, & 3 Expander Sections		Equipment – to remain	Onsite abatement	(3) 30” to 42” expanders: 3’ each	1 per each expander
	Pump No. 4	Gray	Equipment – to remain	No: post 1996	Not applicable	Not applicable
	Pump No. 4 Discharge Pipe (vertical section)	Gray	Equipment – to remain	No: post 1996	Not applicable	Not applicable
	Pump No. 4 Discharge Pipe on ceiling	Dark Gray	Equipment – to remain	Onsite abatement	24” pipe: 10’ 12” pipe: 20’	1 per each size of pipe
	Pump Drive Shafts & Ladders	Orange	Equipment – to be replaced	Disposal: BPW	4.5” pipe: 24’ 1.25’ ladder: 85’	Not applicable
	Drive Shaft Brackets	Blue & Gray	Equipment – to be replaced	Disposal: BPW	3” angle iron: 60’	Not applicable
	Electrical Conduit	Lt. Blue on Walls & White on Ceiling	Galvanized Steel – to be replaced	Disposal: BPW	1” pipe: ~200’ 4” pipe: ~50’	Not applicable
	Water Pipe	Lt. Blue	Copper – to be replaced	Disposal: BPW	2-1” pipes: 12’ each	Not applicable
Store Room	Water Pipes *& Floor Sump Plate*	*Light Blue & Gray*	Metal – to be replaced	Disposal: BPW	1” pipe: 20’ 2” pipe: 30’ 4” pipe: 24’	Not applicable
	Electrical Conduit	White	Galvanized Steel - to be replaced	Disposal: RW	Not applicable	Not applicable
	Door/Frame	Gray	Architectural Item – to remain	No: post 1996	Not applicable	Not applicable

Disposal: BPW means disposal as a PCB bulk product waste
Disposal: RW means disposal as a PCB remediation waste

Table 12 Continued: Non-Porous Surface Paint Abatement						
Room	**Location**	**Paint Color**	**Type of Structure or Equipment**	**Type of Abatement Required**	**Approximate Dimensions**	**Verification Wipe Sampling Frequency**
Screen Room	HVAC Equipment: ducts and fan	White	Equipment – to be replaced	Disposal: RW	Not applicable	Not applicable
	Columns	Blue & Gray	Structural Steel	Onsite abatement	9 I-Beams: 18' each	1 per I-Beam
	Ceiling Beams *& Tie Rods*	Gray	Structural Steel	Onsite abatement	I-Beams: ~280'	1 per 25 l.f.
	Painted Floor Plates	Gray	Equipment – to be replaced	Disposal: BPW	140 s.f.	Not applicable
	Crane Rails	Orange	Structural Steel	Onsite abatement	I-Beams: 100'	1 per 25 l.f.
	Crane Mechanism		Equipment - to remain	Onsite abatement	~ 20 s.f. irregular	1
	Screen Equipment	Various	Equipment – to be replaced	No: post 1996	Not applicable	Not applicable
	Sluice Gate Operators & Motors	Gray	Equipment – to be replaced	No: post 1996	Not applicable	Not applicable
	Uninsulated Water Pipes	Light Blue	Copper & Iron	Disposal: RW	1" pipe: 50' 2" pipe: 16'	Not applicable
	Stair Railing	Gray	Steel – to be replaced	Disposal: BPW	2" pipe: 14'	Not applicable
	Door/Frame & Windows	Various	Architectural Item – to remain	No: post 1996	Not applicable	Not applicable
Boiler Room	Door/Frame	Gray	Architectural Item - to be replaced	Disposal: BPW	1 door and frame	Not applicable
	Boiler Equipment	Various	Equipment – to be replaced	No: post 1996	Not applicable	Not applicable
Generator Room & Entrance Hallway	Door/Frame	Gray	Architectural Item - to be replaced	Disposal: BPW	1 door and frame	Not applicable
	Louver Frames	Dark Gray	Equipment – to be replaced	Disposal: BPW	10 s.f.	Not applicable
	Generator & Appurtenances	Yellow	Equipment – to be replaced	No: post 1996	Not applicable	Not applicable
	Entrance Hallway Door	Gray	Architectural Item - to be replaced	Disposal: BPW	1 door and frame	Not applicable
	Entrance Hallway Conduit	Lt. Blue/White	Equipment – to be replaced	Disposal: RW	1" pipe: ~10 ft.	Not applicable
	Entrance Hallway Water Pipe	White	Equipment – to be replaced	Disposal: BPW	1" pipe: ~10 ft	Not applicable

Disposal: BPW means disposal as a PCB bulk product waste
Disposal: RW means disposal as a PCB remediation waste

Table 12 Continued: Non-Porous Surface Paint Abatement						
Room	**Location**	**Paint Color**	**Type of Structure or Equipment**	**Type of Abatement Required**	**Approximate Dimensions**	**Verification Wipe Sampling Frequency**
Outdoors	Generator Room Louvers	Gray	Architectural Item - to be replaced	*Disposal: BPW*	Not applicable	Not applicable
	Screen over air intake to Main Room *& Store Room*	Blue & Gray	Equipment – to be replaced	Disposal: BPW	2: 4 s.f.	Not applicable
	Catch Basin & UST Covers	Blue	Equipment - to remain	No: <50 mg/kg	Not applicable	Not applicable
	Fence	Black	Equipment-Steel – to remain	No	Not applicable	Not applicable
	Wet Well Hatch (1)	Light Gray	Equipment – to be replaced	Disposal: BPW	25 s.f.	Not applicable
	Hatches – North Side (4)	Light Gray	Equipment – to be replaced	Disposal: BPW	4: 25 s.f.	Not applicable
	Gate Valve Stem and Motor	Gray	Equipment – to be replaced	Disposal: RW	Not applicable	Not applicable
	Rain Leader Pipe	Gray	Cast Iron	No: <50 mg/kg	Not applicable	Not applicable

Disposal: BPW means disposal as a PCB bulk product waste
Disposal: RW means disposal as a PCB remediation waste

3.2.2 Porous and Non-Porous Materials to be Removed for Disposal

Disposal of porous and non-porous materials are listed in Tables 11 and 12 and are detailed below.

3.2.2.1 Porous Materials to be Removed for Disposal

Several porous painted surfaces were identified as having paint with PCBs greater than or equal to 50 mg/kg. These items described below will not be abated onsite but rather disposed of in bulk. The current regulatory requirement is that the paint containing PCBs equal to or greater than 50 mg/kg is a bulk product waste in accordance with 40 CFR 761.62. EPA's October 24, 2012 regulatory reinterpretation of this regulation "*allows building materials (i.e., substrate) "coated or serviced" with PCB bulk product waste (e.g, caulk, paint, mastics, sealants) at the time of designation for disposal to be managed as a PCB bulk product waste, even if the PCBs have migrated from the overlying bulk product waste into the substrate, provided there is no other source of PCB contamination on or in the substrate.*".[1] As such the following porous materials to be removed for disposal will be managed as PCB bulk product waste in accordance with 40 CFR 761.62. These include the following.

- In the Main Room blue painted water pipe insulation (approx. 100 feet) and HVAC intake duct insulation (approx. 180 s.f.) were identified as having paint with PCB concentrations very near (48 mg/kg) or greater than 50 mg/kg. These insulation materials will be removed in their entirety and disposed of as *PCB bulk product waste*.
- In the Screen Room a 8' by 2.5' wooden work bench with a 30 s.f. backboard has gray paint with PCBs at 2,300 mg/kg. This item will be disposed of in its entirety as *PCB bulk product waste*.
- In the Screen Room a small 3 by 3-foot concrete platform provides access to the facility roof. This structure contains paint with PCBs at 72 mg/kg and at 190 mg/kg in shallow concrete. This structure will be dismantled and disposed of in its entirety as *PCB bulk product waste*.
- Also in the Pump Room three pipe discharge concrete supports contain paint with PCBs at 600 mg/kg and at 0.71 mg/kg in shallow concrete. Due to limited sampling of the concrete, these structures will be removed and disposed of in its entirety as *PCB bulk product waste*.
- In the Main Room the Wet Well Foundation contains paint with PCBs at 156 mg/kg and at 14 mg/kg in the shallow concrete. During the facility rehabilitation this structure will be demolished and the resulting debris disposed of as *PCB bulk product waste*.

3.2.2.2 Non-Porous Materials to be Removed for Disposal

Table 12 lists the numerous non-porous pieces of equipment that have paint with detectable levels of PCBs. With the exception of the pieces of equipment noted above in Section 3.2.1.2 all

[1] US Environmental Protection Agency, Memorandum from Suzanne Rudzinski, Director, Office of Resource Conservation and Recovery to Regional TSCA and RCRA Division Directors, EPA Regions 1-10, Subject: PCB Bulk Product Waste Reinterpretation, October 24, 2012.

this equipment will be removed and disposed of offsite as indicated below. Non-structural equipment that is contaminated with PCB paint at or over 50 mg/kg will not be abated on site but rather removed from the facility and managed as PCB bulk product waste.

Non-structural equipment that is contaminated with PCB paint under 50 mg/kg and that is being removed or replaced during the facility rehabilitation will be managed as a PCB remediation waste.

3.2.3 Porous Building Surfaces to be Encapsulated

Table 11 above identifies the all the various porous building surfaces in the facility. Based on the data in Tables 1 through 7 it identifies the surfaces that contain PCBs in paint at or above 50 mg/kg. Of those surfaces requiring paint abatement all but four surfaces contain PCBs in shallow (0-0.5 inches in depth) concrete or brick and mortar samples above the unrestricted use standard of 1 mg/kg. The four surfaces not containing PCBs above 1 mg/kg include the painted masonry in the Main Room, the Store Room ceiling, the Screen Room ceiling, and the Outdoor concrete hatch bases.

With the exception of the Screen Room lower wall including the adjacent stair sand landing, the levels of PCBs in all the porous building surfaces were below 50 mg/kg in shallow concrete (0-0.5”). For these surfaces identified in Table 11 MWRA proposes to apply an encapsulant to the concrete. This encapsulation will eliminate the direct exposure pathway of site workers to residual levels of PCBs in the concrete. It will also mitigate the leaching transport pathway from residual PCBs in these building materials. With the encapsulation there will be no resultant exposure to site workers to residual levels of PCBs in the contained concrete.

An encapsulant will also be applied to the painted porous surfaces noted below that contained PCBs in paint below 50 mg/kg. The paint on these surfaces will be encapsulated as described below. Any existing paint determined to be in poor condition and requiring removal will be managed as a PCB remediation waste in accordance with 40 CFR 761.61.

- Main Room Hallway and Restrooms: ceiling
- Boiler Room: ceiling and walls
- Generator Room: ceiling and single wall column
- Outdoors: hatch bases

A long term maintenance and monitoring plan will be required to ensure that the encapsulation is maintained in an effective condition. It will consist of periodic surface wipe testing of representative surfaces and well as detailed instruction to site workers of preventative measures to take when maintenance activities require penetration of the encapsulated concrete. This plan is presented in Section 3.4.

The specific type of encapsulant is dependent on the type of surface requiring encapsulation. For ceilings (except the Main and Screen Rooms), walls, and columns MWRA proposes to utilize paint as specified by the design consultant for wastewater facility service. To comply with building code requirements MWRA proposes to apply a spray-on cellulose or closed-cell foam insulation to the concrete ceiling panels and associated structural steel followed by

fiberglass-reinforced plastic ceiling panels affixed to the underside of the ceiling structural steel. This structure will totally enclose the PCB-containing concrete. For higher wearing surfaces including floors and stairs MWRA proposes to utilize a stronger wearing elastomeric acrylic based coating such as Sikagard 550W or equivalent. Two contrasting color coats of this stronger wearing paint will be applied. Part of the long term monitoring plan will be to inspect the surfaces for wear of the upper coat of paint and in the case of the Main and Screen Room ceilings, to determine that the new ceiling structure remains intact. During the application of the coatings all manufacturers' guidelines will be followed to ensure the effectiveness and durability of the coating.

Following the removal of the paint but prior to the application of the encapsulant verification concrete sampling will be conducted as described above in Section 3.2.1.1. If the verification sampling conducted on the Main Room masonry wall and Store Room ceiling determines that PCBs concentrations in shallow concrete are all below 1 mg/kg the abated surface will be restored with paint specified for wastewater facility service as described above but will not be subject to the long term maintenance and monitoring plan as discussed in Section 3.4.4.

3.2.4 Porous Building Surfaces to be Scarified and Encapsulated

The lower painted wall of the Screen Room *including the adjacent stairs and landing* contains PCBs in shallow (0-0.5 inch) concrete at concentrations up to 540 mg/kg. The Contractor will employ a mechanical method to scarify one half inch of concrete from this approximately 3 foot high 350 square foot wall surface and the approximately 30 square foot stair and landing structure.

- The scarification method will be at the discretion of the contractor. The method and the required containment will be fully described in the Contractor's Work Plan.
- The concrete and scarification media, if applicable, generated during the scarification will be managed as a PCB remediation waste in accordance with 40 CFR 761.61.
- Following removal of the required thickness of concrete the underlying concrete surface will be sampled to a depth of one half inch in accordance with the May 2011 *Standard Operating procedure for Sampling Porous Surfaces for Polychlorinated biphenyls (PCBs)*. Sampling frequency will be three sample locations per wall for a total of twelve samples. Acceptance criterion is less than 50 mg/kg PCBs.
- Following completion of the sampling the surface will be restored with one half inch of new concrete followed by standard commercial paint. Verification wipe sampling of the new paint will follow the requirements outlined in Section 3.2.3 above.

3.2.5 Post-Encapsulation Verification Wipe Sampling

Following the application of the encapsulant on applicable porous surfaces identified in Table 11, surface wipe verification sampling of the newly painted surfaces will be conducted. The following sampling frequency plan will be utilized based on surface area as listed in Table 11.

- Surfaces less than 100 square feet will have one surface wipe sample.
- Surfaces between 100 and 1000 square feet will have two surface wipe samples.
- Surfaces larger than 1000 square feet will have three surface wipe samples.

Analytical results from the baseline wipe samples of the encapsulated surfaces will be evaluated to determine whether additional applications of encapsulant are required.

- Analytical results less than or equal to 1 $\mu g/100cm^2$: abatement complete.
- Analytical results greater than 1 $\mu g/100cm^2$ will require the application of an additional coat of encapsulant followed by retesting at the above frequencies.

3.3 CONTRACTORS WORK PLAN AND HEALTH AND SAFETY PLAN

The Contractor will supply all labor, materials, and equipment necessary to carry out the scope of work detailed in this PCB Abatement Plan in a professional, workman-like manner. Final acceptance of the work is predicated on obtaining successful testing and inspection results. In addition, the abatement contractor shall be required to submit a Work Plan to MWRA detailing its planned abatement activities. The requirements for this plan are detailed below and will be subject to review and approval by MWRA prior to initiation of work.

MWRA will require that the Contractor prepare a written Work Plan and a Health and Safety Plan (HASP) for abatement work to be performed. The plans must ensure protection of workers, visitors, and employees from PCB exposure and must prevent the release of PCBs or PCB-laden dust into the environment. The work plan will provide the following details:

- *Procedures for each abatement method to be utilized for the various types of abatement required by this Plan including:*
    - *Paint removal*
    - *Porous Surface Paint Abatement*
    - *Non-Porous Surface Paint Abatement*
    - *Porous and Non-Porous Materials to be Removed for Disposal*
    - *Porous Surfaces to be Encapsulated*
    - *Porous Surfaces to be Scarified and Encapsulated*
- A detailed description of the means and methods of establishing and verifying engineering controls and work practices to minimize the generation or release of airborne or waterborne contamination into the work area and to prevent the spread of such contamination outside the work area. The controls and practices to be instituted during abatement activities must keep workers' exposures to PCBs below the permissible exposure limit and ensure no release of PCBs from the work area to the surrounding area, in particular the surrounding residential neighborhood.
- Procedures for the onsite decontamination of tools, containers, and other equipment.
- A detailed project schedule.
- A description of the procedures to be followed for the handling, storage, transport, and disposal of all appropriately classified PCB waste in a manner that minimizes exposure and that complies with federal, state, and local regulations regarding PCBs.
- Identification of primary and alternate disposal sites for the TSCA designated PCB waste.
- Contingency plans to address the potential for accidental spills and/or contamination in the work area or outside the work area.

All personnel performing abatement activities at the site will be required to have had training, medical examinations, and respirator fit testing (if required) as specified by OSHA. The Contractor will be required to have a competent manager at the job site at all times that work is ongoing. Site-specific hazards and hazards associated with the handling and disposal of PCB products must be effectively communicated to all workers to minimize potential exposures. Completion of a Hazard Communication program in conformance with the elements of 26 CFR 1926.59 is required. In addition, the Contractor must provide proper training and equipment for all safety-related issues. Additional health and safety requirements are presented in Section 6.

The Contractor will be required to submit a qualifications submittal to demonstrate the following minimum requirements and competencies.

- Experience in PCB abatement including contaminated material removal within containment, or relevant similar work.
- In the absence of specific PCB qualifications, experience in the abatement and disposal of lead paint or asbestos-containing materials for exterior facades will be considered given the similarity of procedures and work practices.

The Contractor will be required to submit a written health and safety plan (HASP) that details engineering controls, practices and procedures, protective equipment, and training that will be used to control and minimize exposures. In addition, the plan will include provisions for all relevant health and safety issues.

The HASP shall include copies of training materials and training records for those who will be working on-site at any time during the abatement project. If new employees are hired during the course of the work, they must receive training prior to beginning work and evidence of this training must be provided to the project team.

All applicable federal and state OSHA standards and regulations to insure worker safety will be in effect during the abatement process. The following list represents some, but not necessarily all, of the programs that must be addressed in the Contractor's health and safety plan. The Contractor is responsible for determining which programs apply and how best to implement the required programs.

- Respiratory Protection
- Fall Protection
- Personal Protective Equipment
- Lockout/Tagout
- Machine Safety
- Ladder/Scaffolding Safety
- Electrical Safety
- Housekeeping (slips, trips, falls)
- Injury Reporting
- First Aid
- Fire Safety

The abatement work for this project will be near a residential neighborhood. The Contractor will be required to demonstrate how his proposed Work Plan and containment will ensure public safety during all phases of the abatement work. Proper control, hygiene, and decontamination procedures must be followed to limit the potential for transferring PCB remediation waste outside the work area.

During the abatement work, MWRA's consultant will conduct visual assessments to verify the effectiveness of the containment controls of the abatement contractor. If observations indicate that additional containment or engineering controls are required to prevent the release of PCB-laden dust, the Contractor will be responsible for making the necessary adjustments to engineering controls and work practices to minimize fugitive emissions. In addition, if there is evidence of any potential for PCB or remediation waste emission or migration from the immediate work areas, the Contractor will be responsible for modifying controls and procedures to prevent a potential release.

The HASP will discuss air and dust monitoring will be employed outside the containment area during active removal of paint and concrete. To reduce potential exposure of PCB-laden dust and or mist a combination of engineering controls, equipment equipped with HEPA filters and/or dust controls, and personal protective equipment will be employed.

3.4 GENERAL PROJECT REQUIREMENTS

The following sections provide details of the abatement plan pertaining to storage and disposal, engineering oversight, and long term monitoring.

3.4.1 PCB Material Management

PCB contaminated paint and concrete, and other debris associated with the abatement will be removed in a manner that will minimize the generation of dust. Appropriate HEPA filter equipped vacuums will be utilized as applicable during the abatement to collect dust and debris at the point of removal. All abatement debris will be immediately placed in lined temporary containers for later transfer into the applicable disposal container. In the event of liquid based abatement techniques, appropriate containment measures will be employed to contain all liquids used and generated in the abatement process.

All PCB bulk product and remediation waste items shall be stored for disposal in accordance with 40 CFR 761.65. Containers will be labeled with PCB waste markings meeting the requirements of 40 CFR 761.40 and 761.45. Container location will be subject to approval by MWRA. The storage location will be at the discretion of the contractor with approval by the MWRA. It will be secured in such a manner to prevent unauthorized access.

Paint containing PCBs greater than or equal to 50 mg/kg together with applicable abrasive paint-contaminated removal media will be classified as a PCB bulk product waste in accordance with 40 CFR 761.62. Porous articles specifically identified in Section 3.2.2.1 that contain paint greater than or equal to 50 mg/kg will be disposed of in bulk as *PCB bulk product waste*. Non-porous equipment not being abated onsite will be disposed of as either PCB bulk product waste

or remediation waste depending upon the PCB concentration in their paint. PCB remediation waste including impacted building materials and disposable materials required to perform the work including liquid and/or sludge generated during the paint and/or concrete removal, PPE, containment materials, HEPA filters, etc. will be segregated from the PCB bulk product waste. Such material will be managed in accordance with 40 CFR 761.61. It is anticipated that roll-off containers and 55-gallon drums will be utilized for PCB waste storage and disposal.

3.4.2 PCB Waste Disposal

Disposal of all waste shall be in accordance with applicable state and federal regulations and sent to a licensed facility or facilities that will receive and retain PCB remediation waste and bulk product waste in accordance with EPA regulations under 40 CFR 761.61 and 761.62, respectively. It is anticipated that the waste will be transported under manifest offsite for disposal at TSCA-approved landfill such as Waste Management's Model City Landfill in Youngstown, New York or EQ's Wayne Disposal Landfill in Belleville, Michigan or equivalent. The name of the selected facility(s), along with appropriate documentation to verify that it is capable of accepting PCB waste in accordance with these requirements, will be submitted to the MWRA as part of the abatement Contractor's Work Plan.

John Nelson or his designee will be responsible for reviewing and signing all necessary shipping papers that designate MWRA as the waste generator. Copies of all bills of lading, waste shipment records, certificates of disposal, and other documentation will be provided by the abatement contractor to MWRA as proof of proper waste disposal. Copies of all manifests shall be provided to the EPA.

3.4.3 Engineering Oversight

The rehabilitation project will be completed with full-time oversight by a combination of resident engineering staff of the MWRA and the selected firm responsible for providing construction management and resident inspection services. In addition, the PCB abatement work will be overseen by a consulting firm retained by MWRA.

As discussed in Sections 3.2.1.1, 3.2.1.2, and 3.2.2, verification testing will be conducted at the end of the abatement. This sampling will be conducted by the contractor with a minimum of ten percent split with MWRA's consultant for independent analysis. Samples results will be required to available within five business days of sample delivery to the laboratory and will be reviewed immediately by MWRA's consultant to determine if additional abatement is required.

3.4.4 Long Term Maintenance and Monitoring Plan for Encapsulated Concrete Surfaces

Porous building materials throughout the facility have been determined to contain residual concentrations of PCBs. It is not structurally or financially feasible to abate all building surfaces to unrestricted use cleanup standards. Based on these considerations MWRA has proposed a risk-based remedial approach in accordance with 40 CFR 761.61(c).

This approach includes either the removal or encapsulation of PCB-contaminated paint to eliminate the direct exposure pathway and the migration of PCBs to additional building materials. The physical barrier will consist of the application of new coating/paint over the surfaces. On one specific relatively small building surface one half inch of concrete with high concentrations of PCBs will be removed. In this case the physical barrier will consist of one half inch of new concrete followed by new paint. It is not currently anticipated that non-porous building materials or permanently mounted equipment will require encapsulation.

Following the completion of abatement activities, a long-term maintenance and monitoring plan (MMP) will be developed. The results of the verification testing and abatement inspection will be used to develop the plan. The plan will be submitted to EPA with the final summary report. The principal components of the plan include the following:

- Periodic Visual Inspections - At the frequency described in the plan visual inspections of each applicable area of the facility will be conducted. The inspections will focus on the exposed encapsulated surfaces and will look for wear, cracking, or delamination.
- Wipe Sampling – At the frequency described in the plan surface wipe samples will be collected from selected encapsulated surfaces in each applicable area of the facility. Wipe sampling will be conducted following standard surface wipe test procedures described in 40 CFR 761.123.
- Indoor Air Sampling – At the frequency described in the plan indoor air samples will be collected from selected areas within the facility where encapsulated surfaces are present. Air samples will be collected and analyzed in accordance with either Method TO-4A or Method TO-10A with homologue or congener analysis.
- Annual Reporting – A report documenting the findings of the visual inspections any applicable surface wipe and indoor air sampling will be prepared and submitted to the EPA. The monitoring results from each inspection and monitoring event will be evaluated and a frequency for future monitoring will be proposed for the upcoming year(s).
- Corrective Actions – If based on the results of the visual inspection it is apparent that excessive wear of an encapsulated surface is taking place and/or results of sampling and analysis indicate the presence of PCB levels above site-specific action levels to be developed in the plan corrective actions will be undertaken. These actions will likely include the repair of the applicable encapsulated surface or application of additional coatings.
- Long Term Maintenance Procedures – Periodic future maintenance activities will likely require the penetration of encapsulated surfaces and exposure of MWRA and contract workers to PCBs. The plan will contain procedures in the form of an MWRA Standard Operating Procedure (SOP) to minimize the risk of exposure to the workers and repair procedures following the penetration. The SOP will also include communication procedures, worker protection requirements, and worker training requirements.

4.0 SCHEDULE

Abatement activities will be conducted in conjunction with the overall facility rehabilitation project currently in final design. Applicable specification sections and drawings pertaining to the abatement will be part of the bid package. The approved final version of this abatement plan as well as relevant EPA communications will be included as attachments to the bid package. Public bidding of this contract is scheduled to take place in spring of 2013. Construction is currently anticipated to commence in July 2013 and is scheduled to last for 27 months.

It is expected that most of the abatement of the porous and non-porous surfaces will be completed during the first phase of work, but certain surfaces may require follow-up abatement after removal of equipment that currently blocks some areas of paint. The abatement summary report and the MMP will be prepared and submitted to the EPA following completion of the work and receipt of all disposal documentation. These reports are currently anticipated to be completed by the end of 2015.

ATTACHMENT 1

SITE LOCATION MAP

Figure 1: Site Location Map
Alewife Brook Pump Station: Somerville, MA

ATTACHMENT 2

SAMPLE LOCATION FIGURES

Figure 2: Alewife Brook Pump Station: Sampling Plan of Main Room & Hallway

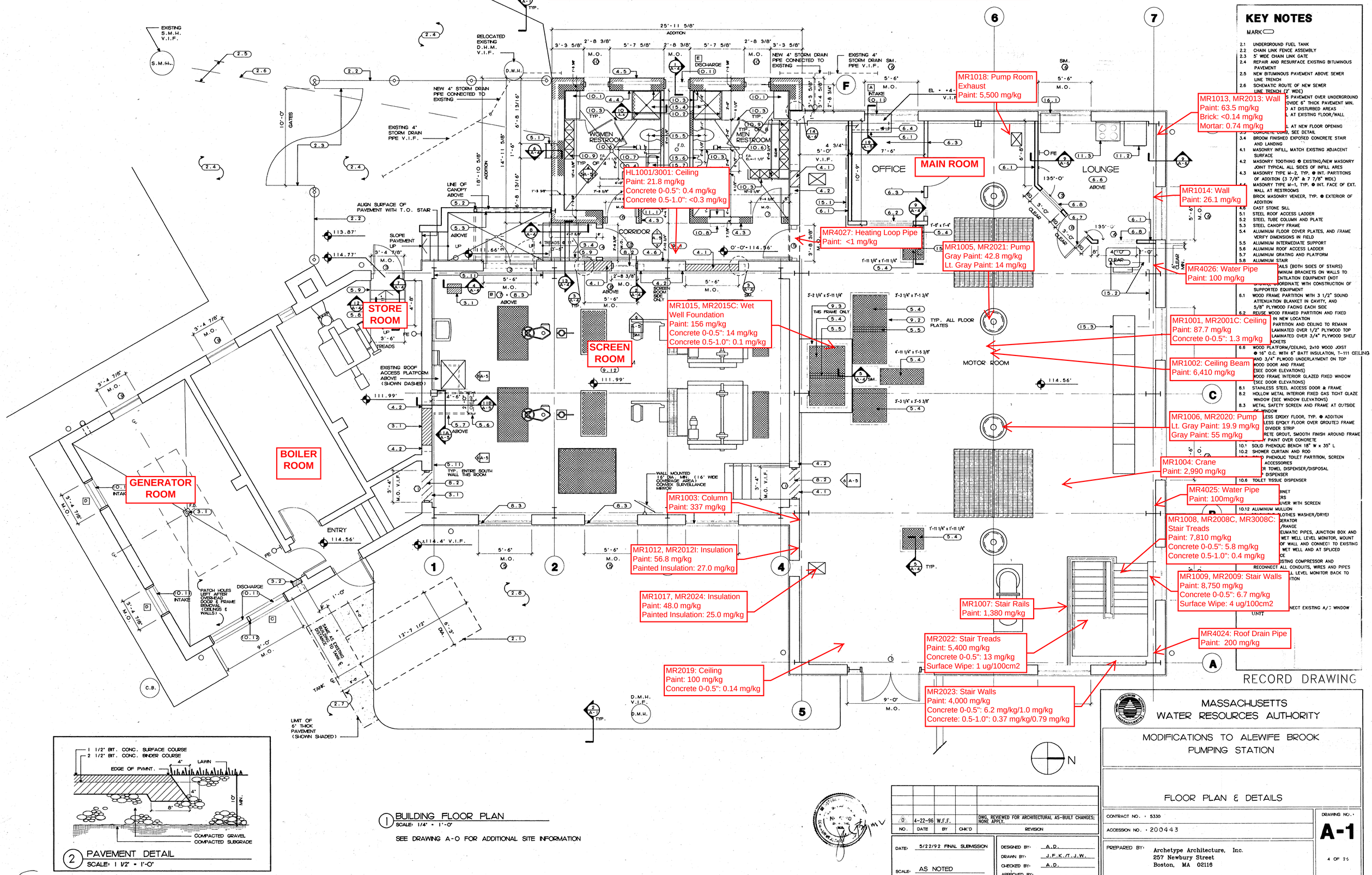
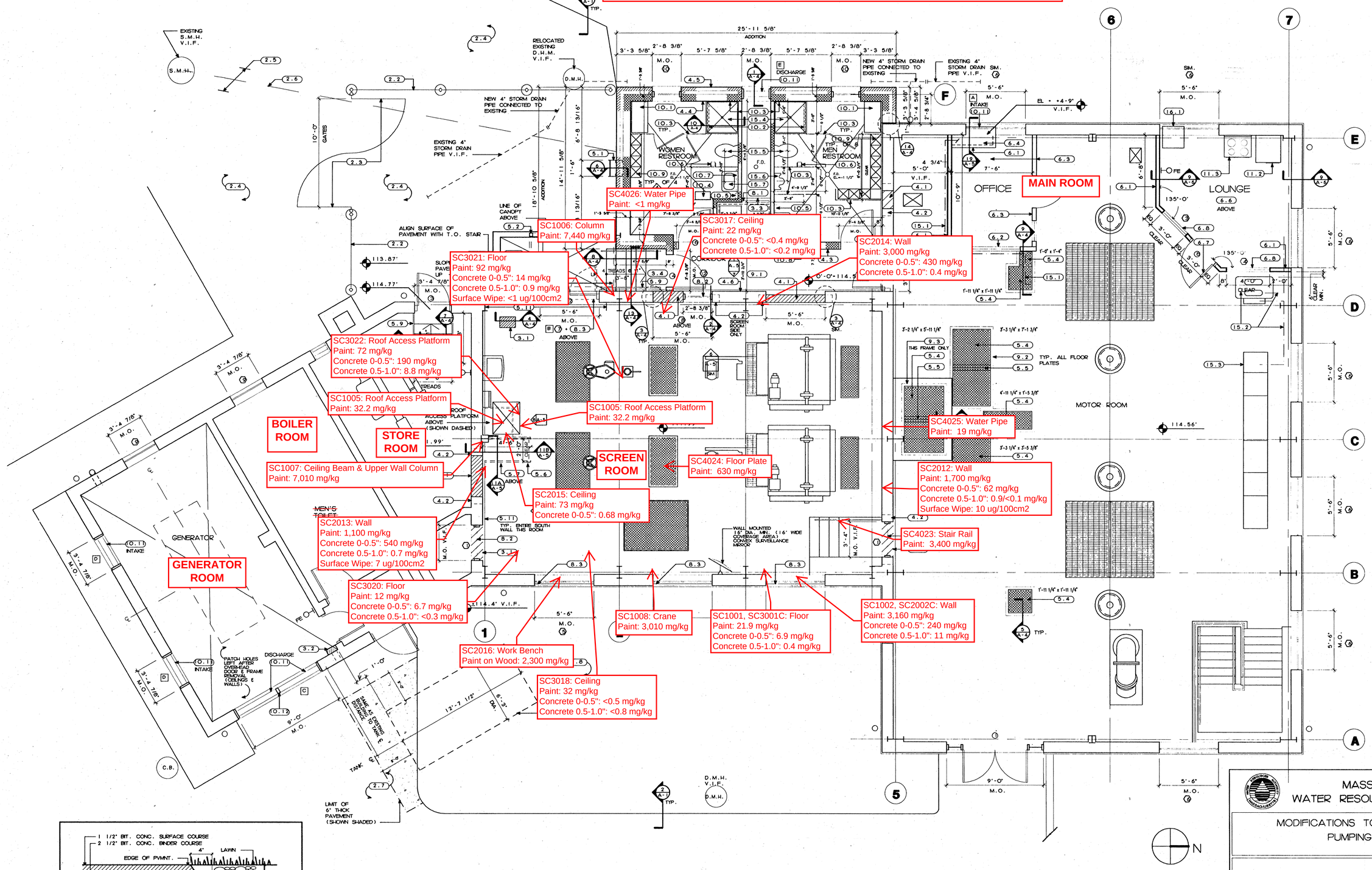


Figure 3: Alewife Brook Pump Station: Sampling Plan of Screen Room



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- 2.5 NEW BITUMINOUS PAVEMENT ABOVE SEWER LINE TRENCH
- 2.6 SCHEMATIC ROUTE OF NEW SEWER LINE TRENCH (2' WIDE)
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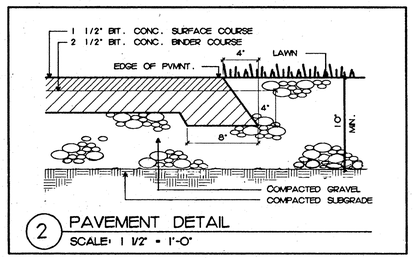
RECORD DRAWING



2 PAVEMENT DETAIL
SCALE: 1 1/2" = 1'-0"

1 BUILDING FLOOR PLAN
SCALE: 1/4" = 1'-0"

SEE DRAWING A-0 FOR ADDITIONAL SITE INFORMATION

NO.	DATE	BY	CHK'D	REVISION
0	4-22-96	W.F.F.		DWG. REVIEWED FOR ARCHITECTURAL AS-BUILT CHANGES; NONE APPLY.

DATE: 5/22/92 FINAL SUBMISSION
SCALE: AS NOTED
DESIGNED BY: A.D.
DRAWN BY: J.F.K./T.J.W.
CHECKED BY: A.D.
APPROVED BY:

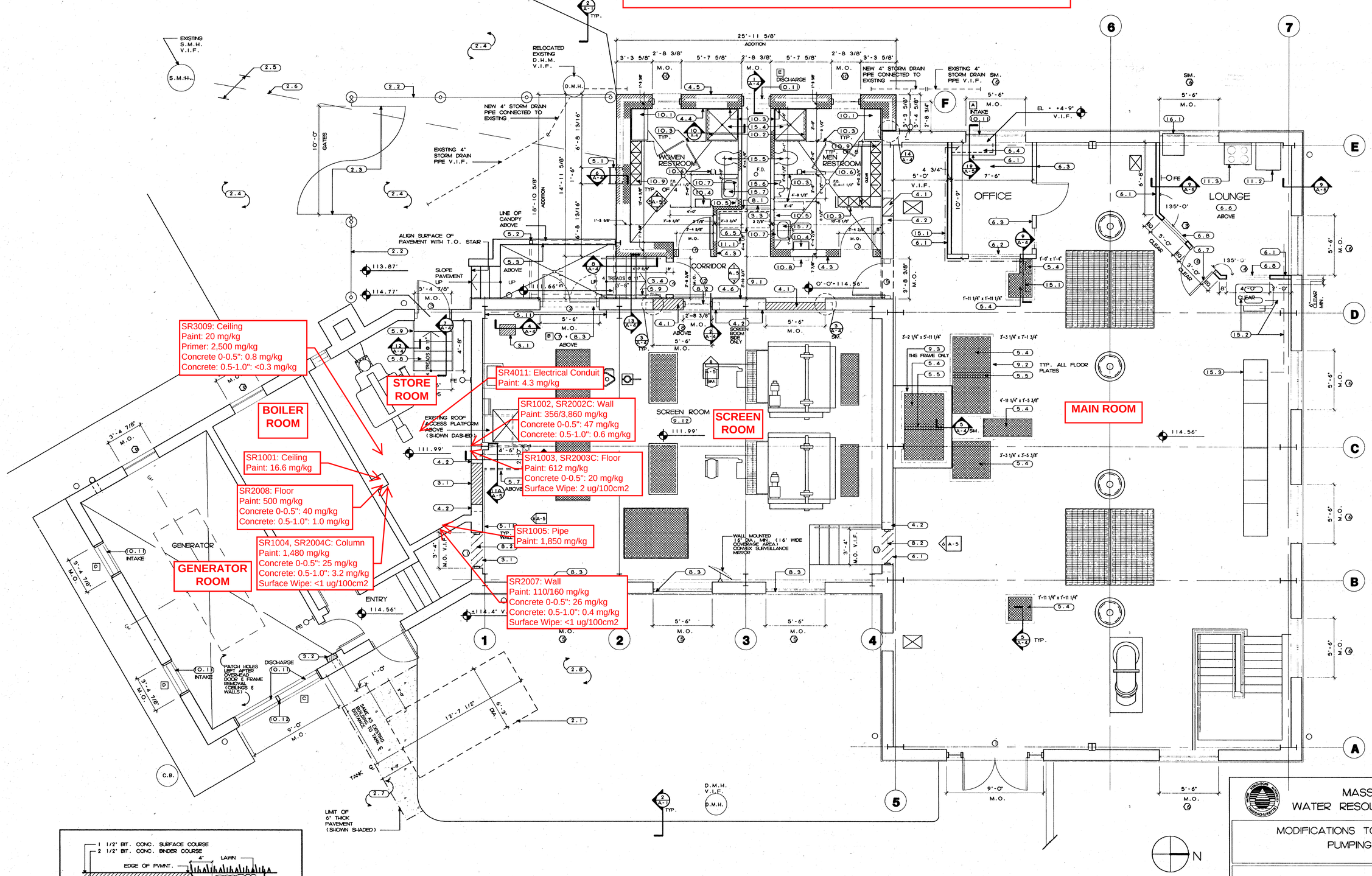
MASSACHUSETTS WATER RESOURCES AUTHORITY

MODIFICATIONS TO ALEWIFE BROOK PUMPING STATION

FLOOR PLAN & DETAILS

CONTRACT NO.: 5330
ACCESSION NO.: 200443
DRAWING NO.: A-1
PREPARED BY: Archetype Architecture, Inc.
257 Newbury Street
Boston, MA 02116

Figure 4: Alewife Brook Pump Station: Sampling Plan of Store Room



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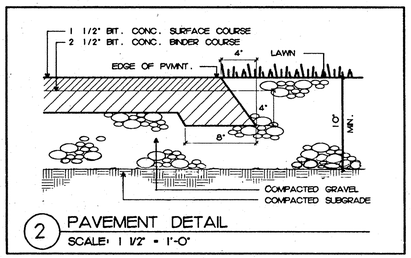

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FLOOR PLAN & DETAILS

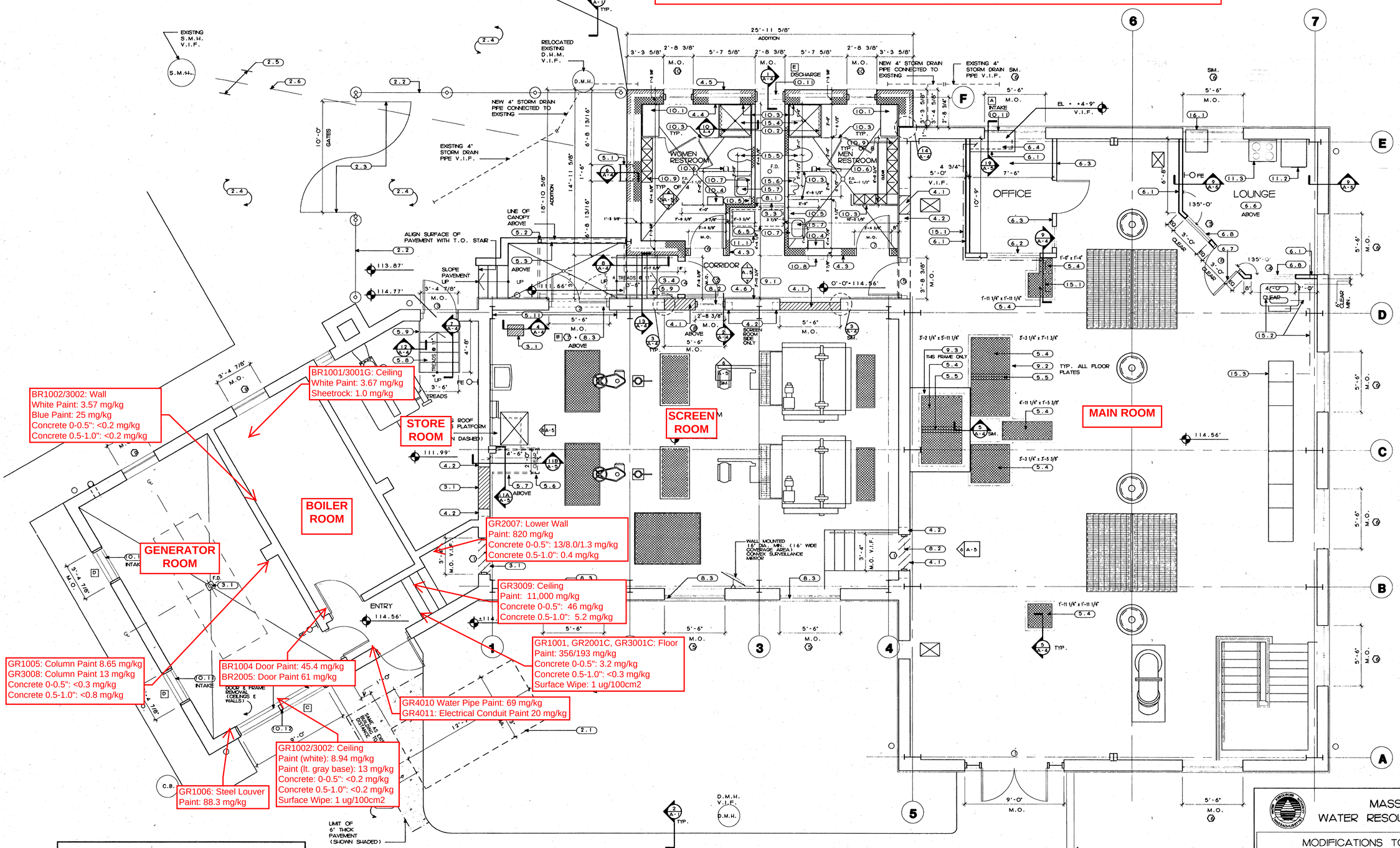
CONTRACT NO. : 5330
ACCESSION NO. : 200443

DRAWING NO.: A-1

PREPARED BY: Archetype Architecture, Inc.
257 Newbury Street
Boston, MA 02116

4 OF 26

Figure 5: Alewife Brook Pump Station: Sampling Plan of Boiler and Generator Rooms



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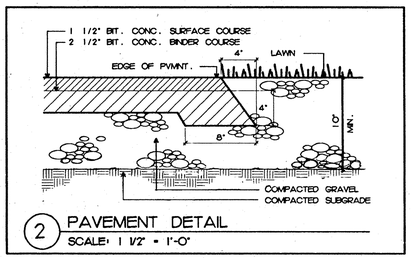
- 6.8 WOOD FRAME INTERIOR GLAZED FIXED WINDOW (SEE DOOR ELEVATIONS)
- 8.1 STAINLESS STEEL ACCESS DOOR & FRAME
- 8.2 HOLLOW METAL INTERIOR FIXED GAS TIGHT GLAZE WINDOW (SEE WINDOW ELEVATIONS)
- 8.3 METAL SAFETY SCREEN AND FRAME AT OUTSIDE OF WINDOW
- 9.1 SEAMLESS EPOXY FLOOR, TYP. ● ADDITION
- 9.2 SEAMLESS EPOXY FLOOR OVER GROUTED FRAME WITH DIVIDER STRIP
- 9.3 CONCRETE GROUT, SMOOTH FINISH AROUND FRAME
- 9.12 EPOXY PAINT OVER CONCRETE
- 10.1 SOLID PHENOLIC BENCH 18" W x 35" L
- 10.2 SHOWER CURTAIN AND ROD
- 10.3 SOLID PHENOLIC TOILET PARTITION, SCREEN AND ACCESSORIES
- 10.4 PAPER TOWEL DISPENSER/DISPOSAL
- 10.5 SOAP DISPENSER
- 10.6 TOILET TISSUE DISPENSER
- 10.7 MIRROR
- 10.8 MEDICINE CABINET
- 10.9 METAL LOCKERS
- 10.11 ALUMINUM LOUVER WITH SCREEN
- 10.12 ALUMINUM MULLION
- 11.1 STACKABLE CLOTHES WASHER/DRYER
- 11.2 REUSE REFRIGERATOR
- 11.3 REUSE STOVE/RANGE
- 15.1 RELOCATE PNEUMATIC PIPES, JUNCTION BOX AND CONDUIT OF WET WELL LEVEL MONITOR, MOUNT AT BOTTOM OF WALL AND CONNECT TO EXISTING CONTROL AT WET WELL AND AT SPLICED PIPE IN OFFICE
- 15.2 RELOCATE EXISTING COMPRESSOR AND RECONNECT ALL CONDUITS, WIRES AND PIPES
- 15.3 RESTORE WET WELL LEVEL MONITOR BACK TO OPERATING CONDITION
- 15.4 SHOWER BASIN
- 15.5 WATER CLOSET
- 15.6 URINAL
- 15.7 LAVATORY
- 16.1 INSTALL AND CONNECT EXISTING A/C WINDOW UNIT

RECORD DRAWING



2 PAVEMENT DETAIL
SCALE: 1 1/2" = 1'-0"

1 BUILDING FLOOR PLAN
SCALE: 1/4" = 1'-0"

SEE DRAWING A-0 FOR ADDITIONAL SITE INFORMATION

NO.	DATE	BY	CHK'D	REVISION
0	4-22-96	W.F.F.		DWG. REVIEWED FOR ARCHITECTURAL AS-BUILT CHANGES; NONE APPLY.

DATE: 5/22/92 FINAL SUBMISSION
SCALE: AS NOTED
DESIGNED BY: A.D.
DRAWN BY: J.F.K./T.J.W.
CHECKED BY: A.D.
APPROVED BY:

MASSACHUSETTS WATER RESOURCES AUTHORITY

MODIFICATIONS TO ALEWIFE BROOK PUMPING STATION

FLOOR PLAN & DETAILS

CONTRACT NO. : 5330
ACCESSION NO. : 200443
DRAWING NO.: A-1
4 OF 26

PREPARED BY: Archetype Architecture, Inc.
257 Newbury Street
Boston, MA 02116

Figure 6: Alewife Brook Pump Station: Sampling Plan of Pump Room

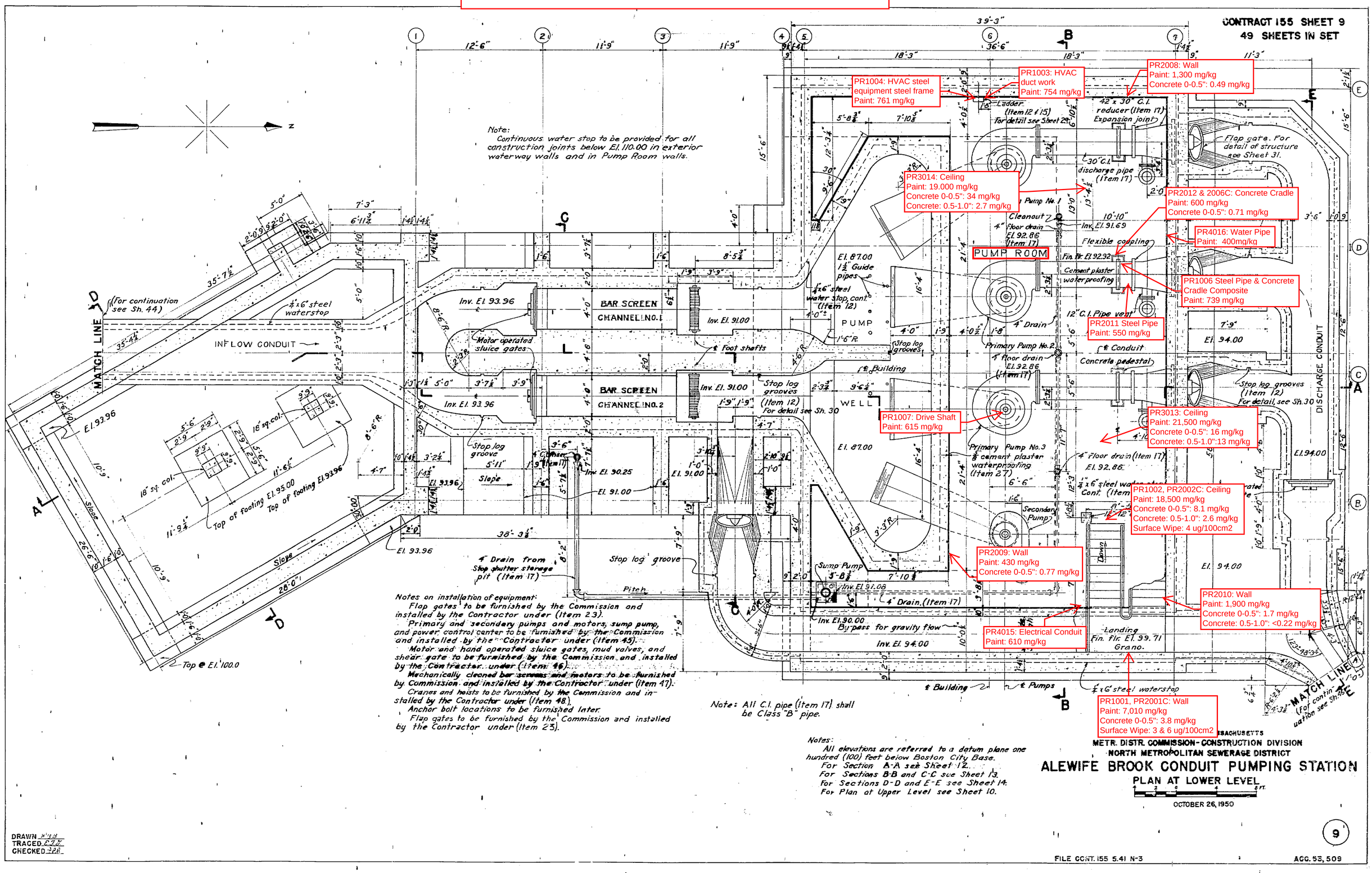


Figure 7: Outdoor Sampling Locations
Alewife Brook Pump Station: Somerville, MA

N

0 25 50 100 150 Feet

ATTACHMENT 3

ABATEMENT PLAN FIGURES

Figure 8: Alewife Brook Pump Station - Main Room Abatement

View of Main Room Facing West: Note Pump Equipment, Blue Columns, White Brick Wall in Right Rear Corner, and White Ceiling

View of South Side of Main Room Facing West: Note Crane and Support Rail, Blue Water Pipe, and Blue Columns

View of Stairway in Southeast Corner: Note Rain Leader in Corner and Water Line to Left of Window

Main Room Ceiling: Note Rain Leader and Electrical Conduit

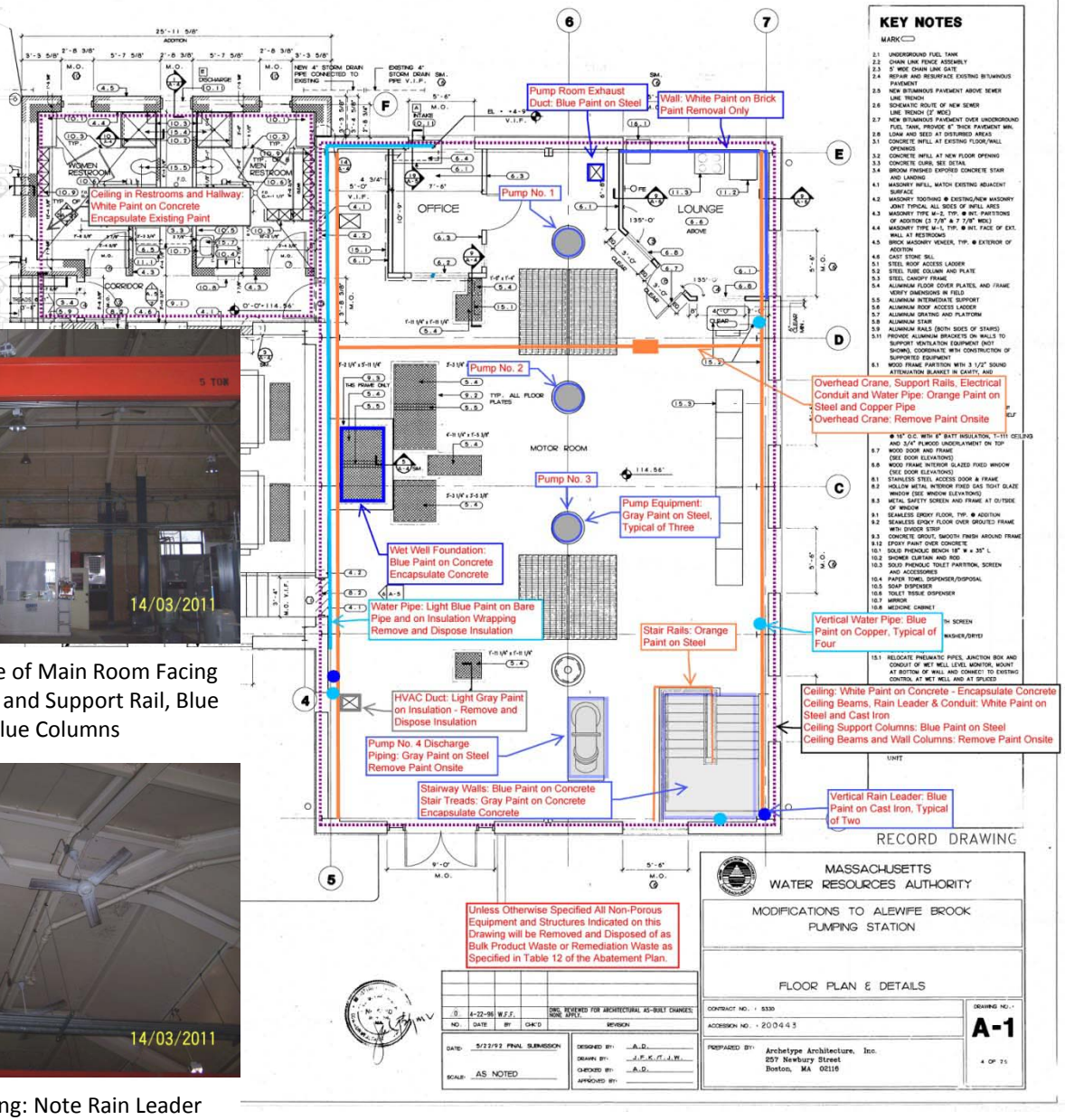
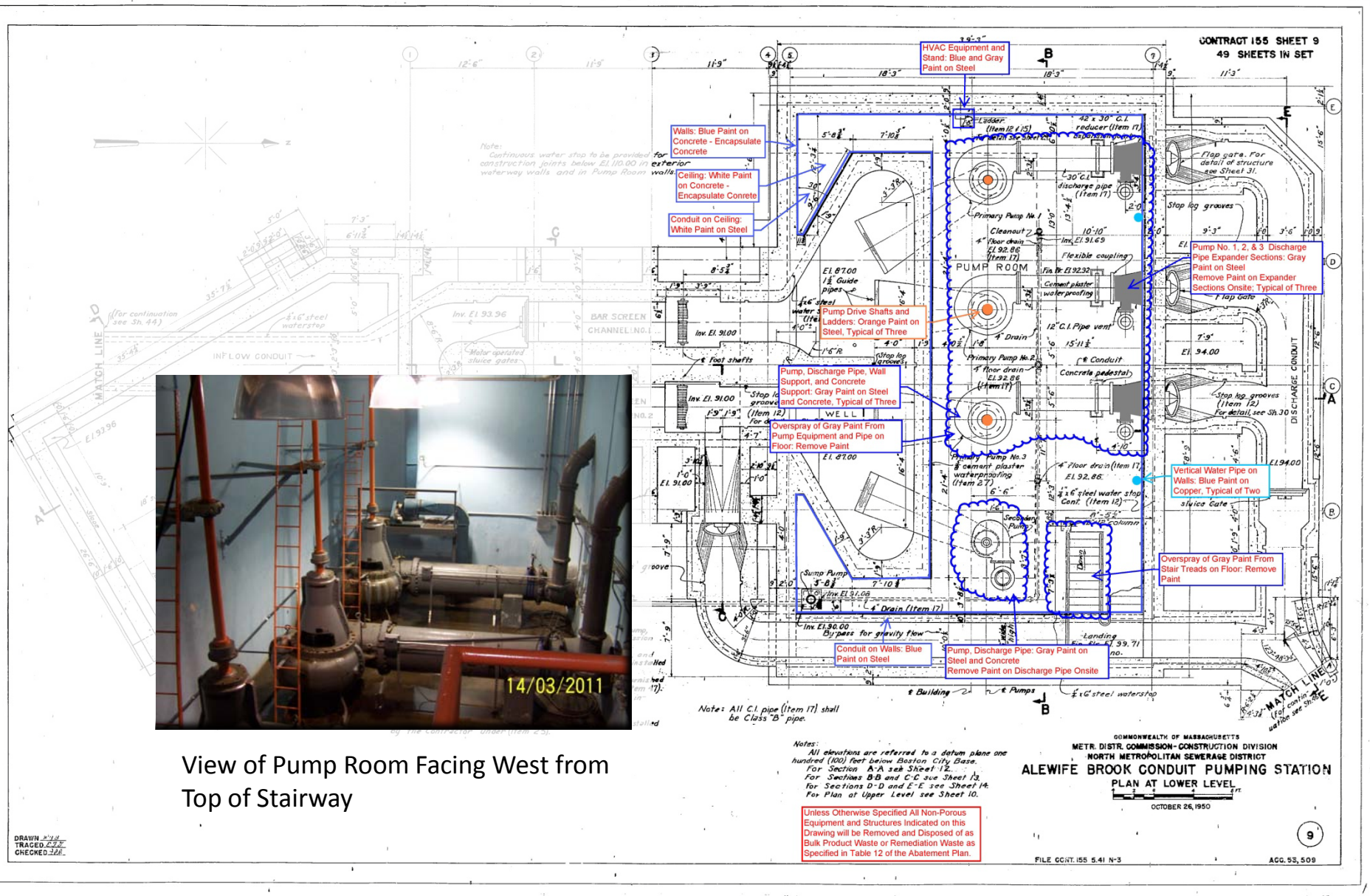
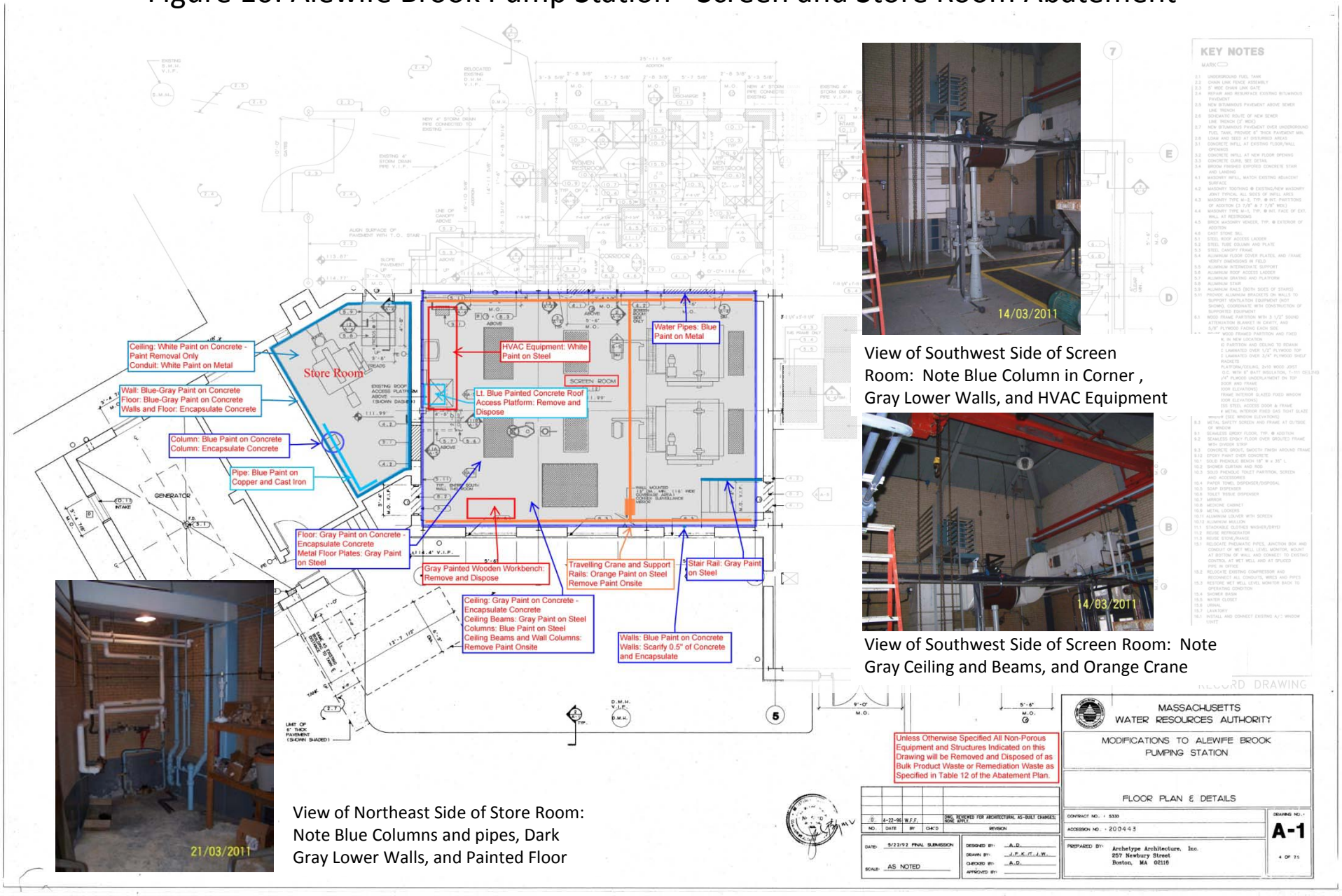


Figure 9: Alewife Brook Pump Station - Pump Room Abatement



View of Pump Room Facing West from Top of Stairway

Figure 10: Alewife Brook Pump Station - Screen and Store Room Abatement

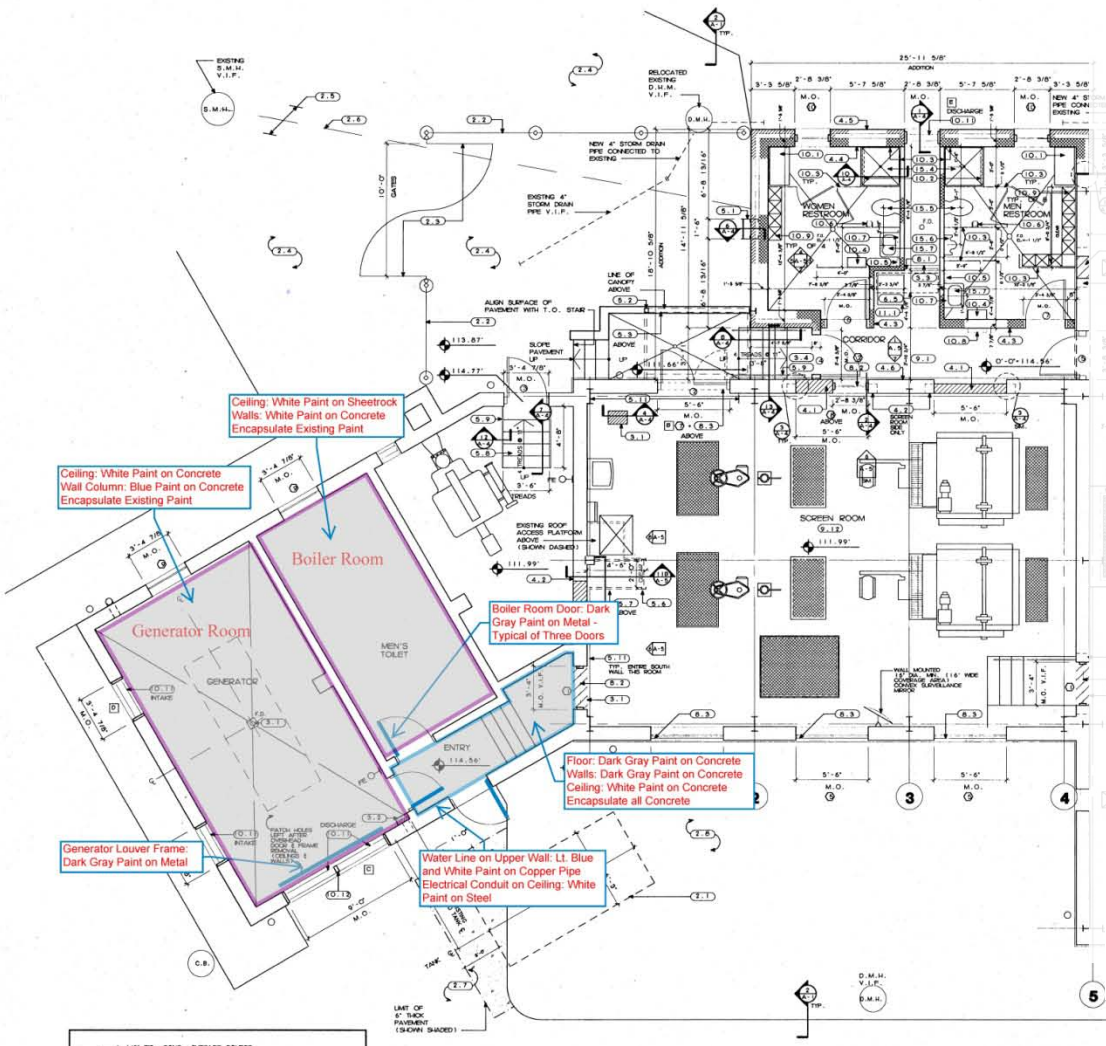


View of Southwest Side of Screen Room: Note Blue Column in Corner , Gray Lower Walls, and HVAC Equipment

View of Southwest Side of Screen Room: Note Gray Ceiling and Beams, and Orange Crane

View of Northeast Side of Store Room: Note Blue Columns and pipes, Dark Gray Lower Walls, and Painted Floor

Figure 11: Alewife Brook Pump Station - Boiler Room and Generator Room Abatement



View of Southeast Side of Generator Room: Arrow Points to Dark Gray Louver Frame

View of North End of Boiler Room Connecting Hallway: Note Dark Gray Lower Wall and Stairs

Photograph of Boiler Room Door

Figure 12: Alewife Brook Pump Station - Abatement of Outdoor Features (North View)

View Facing East of North Side of Building: Note Light Gray Hatch Covers and Concrete Bases

View Facing Northwest of Southeast Side of Building Front (Arrow Points in Direction of View): Note Blue Gray Vent Frame and Light Gray Hatch Cover and Concrete Base. Similar Vent at Rear of Store Room not Shown.

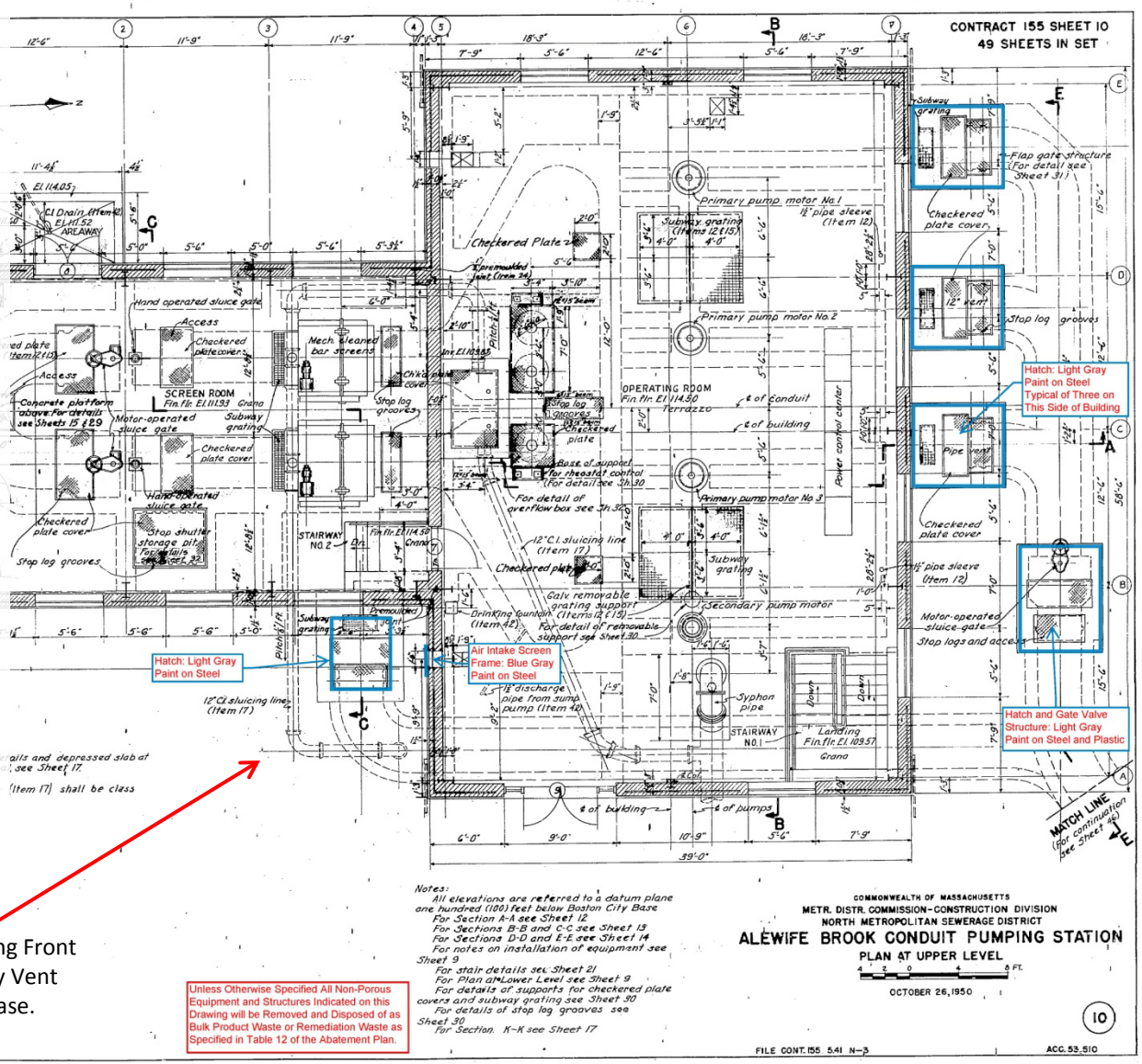
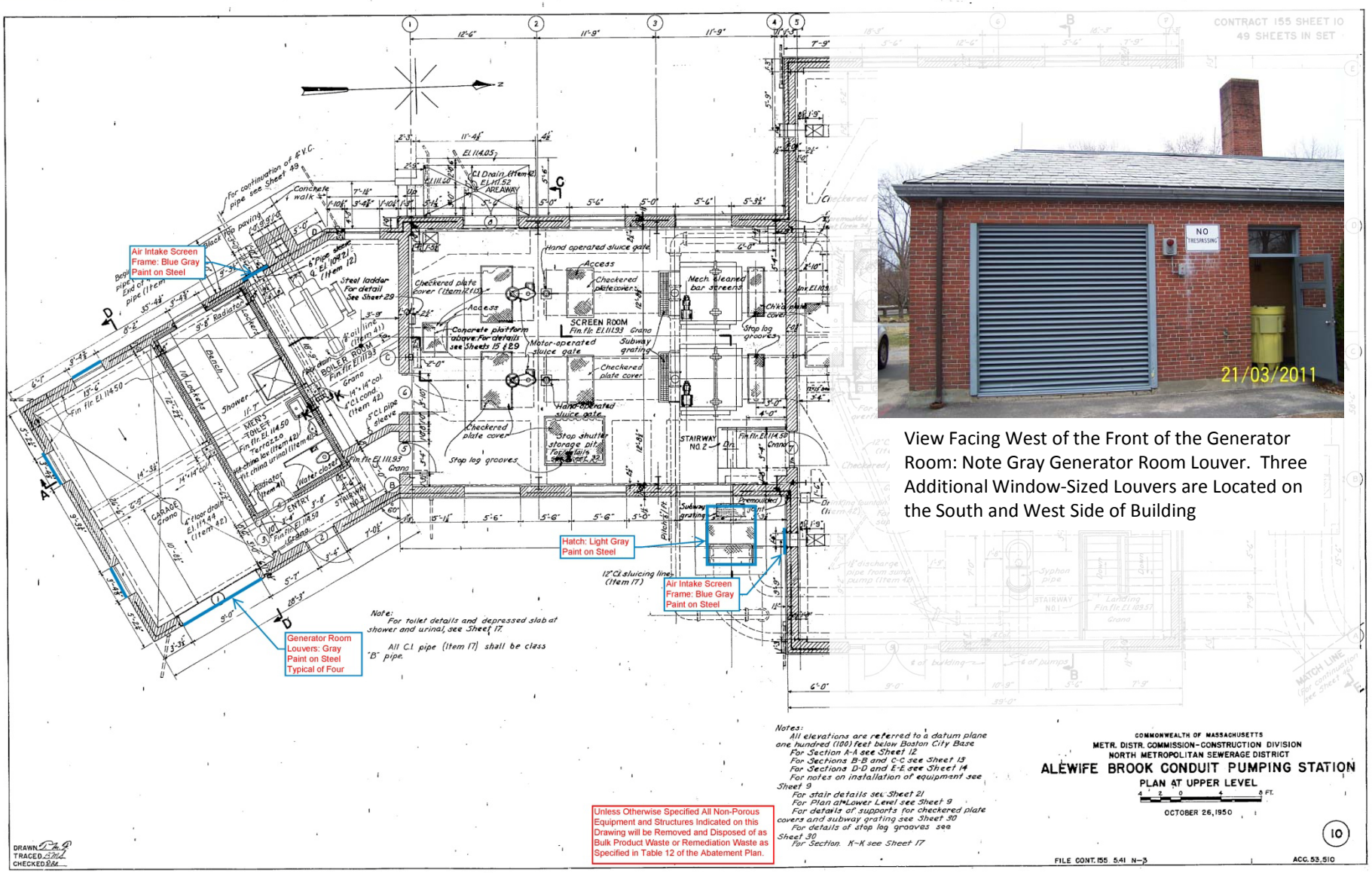


Figure 13: Alewife Brook Pump Station - Abatement of Outdoor Features (South View)



View Facing West of the Front of the Generator Room: Note Gray Generator Room Louver. Three Additional Window-Sized Louvers are Located on the South and West Side of Building

ATTACHMENT 4

ENVIROSENSE INC. ANALYTICAL LAB REPORTS

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May 7, 2012

Mr. John Nelson
Massachusetts Water Resources Authority
Charlestown Navy Yard, 100 First Avenue, Bldg. 39-1
Boston, MA 02129

RE: PCB Assessment
Alewife Pump Station
Somerville, MA
EnviroSense Project No. 07757-08/014

Dear Mr. Nelson;

EnviroSense, Inc. (EnviroSense), is pleased to submit this PCB Assessment report for the Massachusetts Water Resources Authority (MWRA) Alewife Pump Station, located at 392 Alewife Brook Parkway, Somerville, MA (the "Site" or "facility"). The purpose of this report is to summarize EnviroSense's activities and findings into the presence of polychlorinated biphenyls (PCBs) in paint, concrete, brick, mortar, and insulation samples collected throughout the Site. This PCB Assessment report and its attachments are subject to the Limitations provided in **Attachment A**.

FIELD ACTIVITIES

PCB assessment activities were conducted at the Site as two distinct and separate phases. Phase I, completed in January 2011, was designed to evaluate the concentration of PCBs in various paint samples collected throughout the facility. Phase II, completed in March 2011, was designed, based in part on analytical data from Phase I, to further assess PCB concentrations in paint, as well as evaluate the potential for PCBs to leach from the paint, and into underlying porous substrates. Please refer to **Table 1** for pertinent sample information such as general sample location, paint color, underlying substrate, and sample type. Please refer to **Table 2** for a description of each sample location and pertinent field observations.

Please note that sample identifications are organized with a two letter prefix to indicate the room the sample was collected in and a number following the two letter prefix to designate which sampling event Phase I (1) or Phase II (2) the sample was collected in, followed by a unique three digit number for each sample. Furthermore, substrate samples have a letter at the end of the three digit identification to indicate substrate type (e.g. C for concrete) and concrete samples are further identified with a lower case "a" for shallow samples and "b" for a deep sample, at those locations where both shallow and deep samples were collected.

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Phase I – Paint

On January 18th and 19th, 2011, EnviroSense visited the Site to collect the Phase I paint samples. During the January 18th Site visit, the MWRA provided a tour of the facility to better identify locations presented in the *MWRA Alewife Brook Pump Station: Paint Inventory by Room* (MWRA Paint Inventory). A copy of the MWRA Paint Inventory is included in **Attachment B**. The MWRA Paint Inventory originally identified 65 separate sampling locations; however, following the tour, the MWRA requested that 17 sample locations be removed from the sampling plan due to the age of the material (post-1992), resulting in 47 paint sample locations and one filter residue sample collected from the air-handler filter, located in the Screen Room.

In addition to the locations identified in the MWRA Paint Inventory, the following changes were made:

- Screen Room HVAC equipment (exhaust air), color red, was not sampled because it was identified that the paint had been applied by the manufacturer;
- Sample ID GR1006, generator room louvers, was added at the request of the MWRA;
- Sample ID MR1016, main room HVAC ducts, color blue, not present/duplicate of MR1018, and;
- Sample ID SC1007 originally requested to be collected from ceiling; however, difficulty in removing ceiling paint required moving the sample location to the steel column at the platform above the HVAC air-handling equipment. The paint color sampled at SC1007 was the same on the ceiling and steel beam.

Based on the changes noted above, the total number of Phase I paint sample locations is 46, plus one filter residue sample. EnviroSense also collected two field-duplicate samples for quality assurance/quality control purpose, bringing the total number of paint and filter residue samples collected to 49. General paint and filter residue sample locations and sample IDs are provided on **Table 1**. Field notes associated with each sampling location are provided in **Table 2**.

Phase I paint samples were generally collected by scraping paint until reaching the underlying substrate (e.g. steel beam), utilizing a dedicated razor blade. During sample collection, EnviroSense noted that for nearly all locations, several layers of paint were present on any given substrate and no effort was made to segregate paint layers, and therefore, paint samples represent a mix of all paint layers present. The filter residue sample was collected utilizing a dedicated razor blade to trim pieces of the filter media from the filter. Paint and filter residue samples were collected into laboratory-prepared glassware, placed on ice in a shipping cooler, and transported under chain-of-custody documentation to ESS Laboratory (ESS) of

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Cranston, Rhode Island. The samples were submitted to ESS for PCB analysis via United States Environmental Protection Agency (USEPA) Method 8082A, utilizing soxhlet extraction via USEPA Method 3540. The two field-duplicate samples (Field Dup 1 and Field Dup 2) were collected adjacent to sample IDs SR1002 and GR 1001, respectively.

Phase II – Paint and Underlying Substrates

Based on a preliminary assessment of the Phase I paint sample analytical data, the MWRA requested that additional paint and underlying substrate samples be collected at the Site. The purpose of the underlying substrate sampling was to identify the extent, if any, that PCBs may be leaching from the paint and into the porous substrate. Phase II sample locations and sample IDs are provided on **Table 1**.

On March 2nd – 4th, 2011, EnviroSense visited the Site to complete the Phase II sampling effort. Initially, the MWRA identified 21 separate paint sample locations and 29 underlying substrate sample locations. During a March 2, 2011 Site tour to verify sampling locations, the MWRA removed one paint sample and one underlying substrate sample from the Store Room, and added one paint sample (Screen Room workbench). Thus, a total of 21 paint sample locations and 28 underlying substrate sample locations were identified.

Phase II paint samples were collected following the same general protocol described in Phase I, utilizing dedicated razor blades. Paint samples were collected into laboratory-prepared glassware, placed on ice in a shipping cooler, and transported under chain-of-custody documentation, to Test-America Laboratories, Inc. (Test-America) of Westfield, Massachusetts. Paint samples were submitted to Test-America for PCB analysis via USEPA Method 8082A, utilizing soxhlet extraction via USEPA Method 3540. In addition, one paint field duplicate sample was collected from sample location SR2007. The paint field duplicate sample was collected adjacent to the primary sample SR2007.

Of the 28 underlying substrate samples, 25 are characterized as concrete and the remaining three are brick (Sample ID MR2013B), mortar (MR2013M), and insulation (MR2012I). In addition, the MWRA requested that four of the concrete sample locations (MR2023C, PR2010C, PR2002C, and SC2014C) have both shallow (zero - one-half inch) and deep (one-half to one inch) samples collected for laboratory analysis. In general, all concrete samples were co-located with a paint sample location collected during either Phase I or Phase II.

Concrete, brick, and mortar samples were collected in general accordance with the Region 1, EPA New England, *Standard Operating Procedure for Sampling Concrete in the Field* (Guidance Document). As outlined in the Guidance Document, concrete, brick, and mortar samples were collected by utilizing a rotary-hammer drill with a one-inch diameter drill bit. Prior to collecting the sample, the substrate was scraped with a wire brush to remove residual loose paint, and wiped down with a damp rag. The samples

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were collected by placing a dedicated aluminum foil pan beneath the drill bit and allowing the concrete, brick, or mortar pieces to fall onto the pan. For instances when the sample location was along a horizontal surface (e.g. ceiling), the drill bit was pushed through the center of the aluminum pan. The concrete, brick, and mortar samples were collected to a depth not exceeding one-half inch, which is considered a surface sample. For the four concrete locations requiring a deep sample, a one-half inch bit was advanced from the base within the annular space of the surface sample for one-half inch, resulting in deep samples being collected from a depth of one-half to one inch. Care was taken to prevent the drill-bit for the deep samples from touching the shallow sample sidewalls. Prior to collecting the deep samples, the shallow boring was washed with an Alconox™ solution and rinsed with de-ionized water, to remove any residual concrete dust. As with the shallow samples, dedicated aluminum foil pans were used to collect samples from the deep locations. The one insulation sample was collected as an entire cross-section including surface paint, paper backing, and insulation material.

Concrete, brick, mortar, and insulation samples were collected into laboratory-prepared glassware, placed on ice in a shipping cooler, and transported under chain-of-custody documentation to Test-America. The samples were submitted to Test-America for PCB analysis via USEPA Method 8082A, utilizing soxhlet extraction via USEPA Method 3540. In addition, three field duplicate concrete samples were also submitted for PCB analysis. Two of the field duplicates represent one sample location and include a shallow and deep concrete sample (MR2023Ca and MR2023Cb, respectively), while the third concrete field duplicate represents a shallow sample (GR2007C). The concrete field duplicate samples were collected adjacent to the primary sample location. A description of each sampling location is provided in **Table 2**.

Following collection of each concrete, brick, or mortar sample, the drill bit was decontaminated by rinsing the bit in a water and Alconox™ solution to remove gross contamination. The drill bit was then rinsed thoroughly with de-ionized water and dried with paper towels. To evaluate the effectiveness of decontamination procedures, EnviroSense collected an equipment blank at the end of each day. The equipment blank was generated by placing the drill bits into a bowl filled with de-ionized water, after completing the decontamination procedures. The drill bits were swirled in the bowl to ensure full contact across the bit surfaces and then the de-ionized water was transferred into laboratory-prepared glassware, placed on ice in a shipping cooler, and transported under chain-of-custody documentation to Test-America. The samples were submitted to Test-America for PCB analysis via USEPA Method 8082A, utilizing soxhlet extraction via USEPA Method 3540.

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ANALYTICAL RESULTS

Phase I

According to the laboratory report for the paint samples collected on January 18 and 19, 2011, Aroclor 1254 was detected in each sample, with the exception of sample ID OD1003. The remaining eight PCB Aroclors tested for were not reported at contractions exceeding laboratory detection limits. Reported concentrations of Aroclor 1254 in the Phase I paint samples ranged from 1.35 milligrams-per-kilogram (mg/kg) to a high of 18,500 mg/kg in sample PR1002. The reported Aroclor 1254 concentration in the filter residue sample was 3.48 mg/kg.

Analysis of field duplicate Field Dup 1, associated with sample ID SR1002, indicates a reported Aroclor 1254 concentration of 3,860 mg/kg, which was significantly higher than the reported Aroclor 1254 concentration of 356 mg/kg for sample SR1002. Analysis of field duplicate Field Dup 2, associated with sample ID GR1001, indicates a reported Aroclor 1254 concentration of 193 mg/kg, which is considered similar to the reported Aroclor 1254 concentration of 356 mg/kg for sample GR1001.

Analytical results are summarized on **Table 1** and copies of the complete laboratory reports and chains-of-custody, are included in **Attachment C**.

Phase II

According to the laboratory report for the paint samples collected on March 2nd – 4th, 2011, Aroclor 1254 was detected in each sample. The remaining eight PCB Aroclors tested for were not reported at concentrations exceeding laboratory detection limits. Reported concentrations of Aroclor 1254 observed in Phase II paint samples ranged from 14 mg/kg to a high of 5,400 mg/kg in sample MR2022. Analysis of paint field duplicate Field Dup 2, associated with Phase II sample ID SR2007, indicates a reported Aroclor 1254 concentration of 160 mg/kg, which is generally similar to the reported Aroclor 1254 concentration of 110 mg/kg for sample SR2007.

According to the laboratory report for the concrete samples collected on March 2nd – 4th, 2011, Aroclor 1254 was detected in each sample, with the exception of sample PR2010Cb. The remaining eight PCB Aroclors tested for were not reported at concentrations exceeding laboratory detection limits. Reported concentrations of Aroclor 1254 observed in shallow (zero to one-half inch) concrete samples ranged from 0.14 mg/kg to a high of 540 mg/kg in sample SC2013C. Reported concentrations of Aroclor 1254 observed in deep (one-half to one inch) concrete samples ranged from below laboratory detection limit to a high of 4.4 mg/kg in sample SC 2014Cb.

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Similar to the other sample types, Aroclor 1254, if detected, was the only PCB detected in the brick, mortar, and insulation samples, and observed concentrations were below laboratory detection limit (MR2013B), 0.74 mg/kg (MR2013M), and 27 mg/kg (MW2012I), respectively. Note that the insulation sample was a complete cross-section of the pipe-insulation and included paint, paper backing, and insulation material.

Analysis of concrete field duplicate Field Dup 1Ca, the shallow concrete field duplicate associated with sample ID MR2023Ca, indicates a reported Aroclor 1254 concentration of 1.0 mg/kg, which is similar to the reported Aroclor 1254 concentration of 6.2 mg/kg for sample MR2023Ca. Analysis of field duplicate Field Dup 1Cb, the deep concrete sample associated with ID MR2023Cb, indicates a reported Aroclor 1254 concentration of 0.79 mg/kg, which is considered similar to the reported Aroclor 1254 concentration of 0.37 mg/kg for sample MR2023Cb. Analysis of concrete field duplicate Field Dup 3, the shallow concrete sample associated with ID GR2007C, indicates a reported Aroclor 1254 concentration of 8.0 mg/kg, which is considered similar to the reported Aroclor 1254 concentration of 13 mg/kg for sample GR2007C.

According to the laboratory report for the equipment blank samples collected during Phase II, PCBs, if present, were not reported at concentrations exceeding laboratory detection limits.

Analytical results are summarized on **Table 1** and copies of the complete laboratory reports and chains-of-custody, are included in **Attachment C**.

DISCUSSION

The laboratory reports from the Phase I and Phase II samples (both paint and porous substrate) indicates that only one PCB congener, Aroclor 1254, was detected at the Site. The remaining eight Aroclors analyzed for, if present, where below laboratory detection limits.

Per the Toxic Substance Control Act (TSCA) and as defined in 40 CFR 761, bulk products such as paint and caulking containing PCBs equal to or greater than 50 mg/kg represents an unauthorized use of PCBs and are required to be removed, handled, and disposed of in accordance with cited regulation. As such, EnviroSense reviewed the observed concentrations (**Table 1**) and noted that 49 of the 68 paint samples (excluding field duplicates) had reported Aroclor 1254 concentrations greater than 50 mg/kg. Therefore, it appears that many of the painted surfaces throughout the facility must be abated.

Most of the 28 substrate samples contained detectable concentrations of Aroclor 1254. Per 40 CFR 761.61, contaminated porous substrates, such as concrete, have two cleanup standards, one for high occupancy areas (1 mg/kg) and one for low occupancy areas (25 mg/kg). These standards are dependent upon the number of hours per week that people occupy the site. Aroclor 1254 was reported at or above

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the 1 mg/kg high occupancy standard in 21 of the 28 porous substrate samples. Furthermore, Aroclor 1254 was reported at concentrations above the 25 mg/kg low occupancy standard in eight of the 28 samples, and only in the Screen and Store Rooms.

Based on analytical data indicating that the only PCB present in the facility is Aroclor 1254 and that observed concentrations in paint were generally higher than observed in porous substrate samples, it appears that Aroclor 1254 present in paint is leaching into underlying porous substrates, at varying rates. EnviroSense reviewed the analytical paint data and sample locations in an effort to determine if a correlation could be established between observed paint colors with sample results. Based on the review, there does not appear to be a clear correlation between observed paint color and PCB concentrations for the data set collected as part of this report and may suggest that the paint layer(s) containing PCBs may have been subsequently painted over. EnviroSense noted that for nearly each sampling location, several layers of paint were present. Thus, it may be possible that the layers of paint at any one location may have an effect on reported PCB concentrations, as samples consisted of all paint layers present on a given substrate. Furthermore, EnviroSense reviewed the analytical results from the shallow concrete samples and could not discern any particular correlation between reported PCB concentrations in paint samples and co-located shallow concrete samples. It is possible that the number of layers of paint separating the PCB-laden paint and underlying porous surface may influence the ability for PCBs in paint to leach into an underlying substrate. EnviroSense calculated the relative percent difference (RPD) for the two reported Aroclor 1254 concentrations from the shallow concrete sample MR2023a and the respective field duplicate Field Dup 1a (**Table 1**), and noted a 144 RPD between the two samples. The primary factor likely contributing to the high variability in the sample and field duplicate analyses is matrix interference associated with the concrete.

Although no correlation appeared to be present between the paint and concrete samples, EnviroSense did note a strong correlation of high PCB concentrations observed in concrete samples collected from the Screen Room (SC-series samples). Specifically, six concrete samples (five shallow and one deep) where collected from the Screen Room and four of the five shallow samples had reported Aroclor 1254 concentrations greater than the 25 mg/kg low occupancy TSCA standard (**Table 1**). The four shallow samples with the highest PCB concentrations where all collected from the walls of the Screen Room with a surface paint color of blue. The one shallow concrete sample with a low reported PCB concentration (SC2015C) was collected from the ceiling with a gray surface paint color. The one deep concrete sample (SC2014Cb) had a reported PCB concentration of 4.4 mg/kg. EnviroSense did note that the PCB concentrations in the blue wall paint samples in the Screen Room where all greater than 1,000 mg/kg, while the gray ceiling paint sample had a reported PCB concentration of 73 mg/kg. It is unclear why shallow concrete samples in the Screen Room where elevated when compared to other concrete samples from the facility, particularly from locations that had higher Aroclor 1254 concentrations in paint than in the Screen Room (e.g. MR2023 and MR2023Ca). However, one possible reason may be the indoor atmosphere of the Screen Room. The Screen Room is open to the combined sewer and water flow

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pumped through the facility, therefore gasses from the combined sewer may present a condition favorable for PCBs to leach from the paint and into porous substrates. Another possible reason may be that fewer layers of paint are present between the PCB-laden layer and the concrete.

In addition to the high concrete concentrations observed in the Screen Room, the concrete samples collected from the Store Room, adjacent to the Screen Room, had reported Aroclor 1254 concentrations ranging from 20 mg/kg to 47 mg/kg (**Table 1**). Both Store Room wall samples and one Store Room floor sample had Aroclor 1254 reported above the 25 mg/kg low occupancy standard. Note, the wall exhibiting the highest concrete Aroclor 1254 concentration in the Store Room (47 mg/kg) and the highest concrete Aroclor 1254 concentration from the Screen Room (540 mg/kg) are on opposite sides of the same common wall. It is possible that the condition leading to the elevated concrete PCB concentrations in the Screen Room are contributing to the somewhat elevated concrete PCB concentrations observed in the Store Room. EnviroSense did note that the paint samples from the Store Room walls had concentrations of Aroclor 1254 detected above 50 mg/kg. Please refer to **Table 2** to cross-reference sample locations.

EnviroSense noted that a significant difference in reported PCB concentrations existed between the sample ID SR1002 and associated field duplicate Field Dup 1. Specifically, the reported Aroclor 1254 concentration of 356 mg/kg observed at SR1002 was an order of magnitude less than the Aroclor 1254 concentration reported for Field Dup 1 of 3,860 mg/kg (**Table 1**). EnviroSense suspects that the difference in observed PCB concentrations at SR1002 and Field Dup 1 may be the result of sampling procedure. Rather than collecting enough sample volume for both samples and filling each sampling container, EnviroSense collected the SR1002 sample on January 19, 2011, at 0850 and returned to the same sample location on January 19, 2011, at 1219 to collect the Field Dup 1 sample. Thus, it is possible that the SR1002 and Field Dup 1 samples are not representative of the same paint sample. A similar sampling procedure error also exists for GR1001 and the associated Field Dup 2, with GR1001 sampled at 1014 and Field Dup 2 sampled at 1153, both on January 19, 2011. However, the difference in reported Aroclor 1254 concentrations between the GR1001 (356 mg/kg) and Field Dup 2 (193 mg/kg) samples were not as significant and may be due to the heterogeneity of the sample matrix.

Due to the high concentrations of Aroclor 1254 in several of the paint samples, the laboratory had to dilute some samples in order for the sample concentrations to fit within the operation range of the instrument. Dilution of samples results in higher detection limits, and therefore, of the 96 samples analyzed (excluding field duplicates), 33 were diluted enough to result in the method detection limit to raise above 50 mg/kg. Thus, it is possible that Aroclors other than Aroclor 1254 may be present in the samples at a concentration greater than 50 mg/kg, but still below laboratory detection limits. EnviroSense did note that for all samples that required dilution, the reported Aroclor 1254 concentration also exceeded the 50 mg/kg reference.

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The purpose of the additional 21 paint samples collected under Phase II was to either confirm data collected under Phase I or provide additional characterization of a specific location. Although paint sampling results between Phase I and Phase II were in general agreement for co-located samples, confirming previous analyses, EnviroSense noted three samples sets had inconclusive analytical results with respect to the 50 mg/kg regulatory threshold. For each of the three identified sample sets: MR1005 & MR2020, BR1004 & BR2005, and OD1002 & OD2008; one reported Aroclor 1254 concentration was above 50 mg/kg and the other was below 50 mg/kg, between each sampling round (**Table 1**). Please refer to **Table 2** to cross-reference sample locations. The difference in reported concentrations between the sample sets MR1005 & MR2020 and BR1004 & BR2005 are relatively minor and likely represent matrix interference associated with the heterogeneity of the paint samples, while the difference in reported concentrations for the sample set OD1002 & OD2008 appears to be significant and it is unclear what mechanism may be contributing to the high variance observed between the paint samples OD1002 & OD2008.

During Phase I, EnviroSense collected a sample of paint from pipe insulation present in the Main Room (sample ID MR1012), and noted a reported Aroclor 1254 concentration of 56.8 mg/kg. A confirmatory pipe insulation sample collected during Phase II consisted of the entire cross-section of the insulation, and the observed Aroclor 1254 concentration was 27 mg/kg. The lower reported concentration for the pipe insulation observed during Phase II is likely due to the full characterization of the material, as opposed to just the painted surface. EnviroSense also noted that Aroclor 1254, if present, in filter residue collected from the filter in the Screen Room air-exchange duct, and the brick and mortar samples collected in the Main Room during Phase II were well below 50 mg/kg (**Table 1**).

Based on the analytical data from the Phase II equipment blank samples collected following daily decontamination of equipment indicting PCBs were not present above laboratory detection limits, it appears decontamination procedures were effective.

EnviroSense reviewed the analytical data from the four co-located shallow (zero to one-half inch) and deep (one-half to one inch) concrete samples and noted that any correlation between PCB concentration and depth is loose as one of the co-located samples (PR2002Ca & PR2002Cb) had a relatively elevated PCB concentration in the deep sample while the shallow sample appeared to have a relatively low PCB concentration, when compared with other shallow and deep sampling results throughout the facility. Note that all reported PCB concentrations from deep samples were well below the 25 mg/kg low occupancy TSCA standard.

DATA USABILITY ASSESSMENT

EnviroSense completed a data usability assessment to evaluate the usability of the laboratory data for characterizing Site conditions for the presence of PCBs in paint and select underlying porous surfaces

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such as concrete in relation to the 50 mg/kg threshold discussed earlier. Laboratory results were validated by reviewing sample chain-of-custody, holding times, surrogates, method blanks, matrix/matrix spike duplicates, laboratory control samples, and laboratory data associated with field duplicates and equipment blanks. The assessment was performed in general accordance with the Region I, EPA – New England, *Data Validation Functional Guidelines For Evaluating Environmental Analyses, dated July 1996, and revised December 1996* (Data Validation Guidance).

The representativeness of the data set was evaluated by reviewing the sampling protocols, discussed earlier in the Field Activities section of this report. The sample collection locations and frequency were determined to adequately characterize site conditions for the purposes of determining which of the painted surfaces, and associated underlying porous substrates, contained PCB concentrations in excess of the 50 mg/kg threshold.

The usability of the data set was evaluated by reviewing the laboratory analytical data package, as discussed below, to evaluate the precision and accuracy of the analytical data and the suitability of the analytical data for use in determining which of the sampled materials contained PCB concentrations greater than the 50 mg/kg threshold and which of the sampled materials contained PCB concentrations less than the 50 mg/kg threshold.

All paint and substrate samples were collected following the protocols described in the **FIELD ACTIVITIES** section. The sampling protocol and laboratory analysis were consistent for samples collected during both the Phase I and Phase II. All samples were collected into laboratory-prepared glassware and submitted for PCB analysis via USEPA Method 8082A, utilizing soxhlet extraction via USEPA Method 3540. According to the laboratory reports, all samples were received by the laboratories preserved to Method criteria and analyzed within specified holding times. During Phase II, contamination of Aroclor 1254 was noted in one separate method blank in each laboratory report 360-32605-1 and 360-32606-1. Although Aroclor 1254 contamination was noted in the method blanks, the reported concentrations of affected samples were either significantly below or significantly above the action level of 50 mg/kg and therefore the method blank contamination did not appear significant enough to incorrectly skew reported concentrations above/below the 50 mg/kg threshold and so the data were deemed usable. The samples affected by the method blank contamination are identified in the laboratory data package Executive Summary.

The precision of the analytical method and resulting data were assessed by reviewing reported quality assessment/quality control data contained in the laboratory reports. During Phase I, a total of 46 separate paint samples were collected, including two field duplicates. The calculated RPD between the primary and duplicate sample indicated that both pairs were above the acceptance criteria of 50 percent. As noted earlier in this report, the difference for the SR1002 and Field Dup1 pair may be due to a sampling error in which Field Dup 1 was collected at SR1002 one day after collecting SR1002. The difference for the

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GR1001 and Field Dup 2 pair is likely associated with sample heterogeneity. The reported concentrations for both pairs were above the action level of 50 mg/kg and therefore, the discrepancy in precision is not considered to affect the usability of the data.

During Phase II, a total of 21 paint and 28 underlying substrate samples were collected. One field duplicate was collected for the paint samples and three field duplicates were collected for underlying substrate samples. The calculated RPD between the primary and duplicate paint sample were within the acceptance criteria of 50 percent. The calculated RPD for three underlying substrate pairs (MR2023Ca / Field Dup 1a, MR2023Cb / Field Dup 1b, and GR2007C / Field Dup 3) were all above the acceptance criteria of 50 percent. The discrepancy in the RPD between the three pairs is likely associated with matrix heterogeneity. The reported concentrations for the three pairs were significantly below the action level of 50 mg/kg and therefore, the discrepancy in precision is not considered to affect the usability of the data. Note that several of the paint samples collected in both Phase I and Phase II were generally co-located and EnviroSense calculated the RPD for several locations. For the calculated RPDs of the co-located paint samples between Phase I and Phase II, each met the 50 percent criteria, indicating limited matrix effect in most paint samples. In addition, one equipment blank was collected at the end of each day of underlying substrate sampling (three total samples) and PCBs were not reported above laboratory detection limits in the equipment blanks indicating that no significant interferences were introduced during field procedures to collect underlying substrate samples.

Accuracy of the analytical methods and resulting data was assessed by reviewing surrogate recoveries, and RPD of laboratory control samples and laboratory control sample duplicates. Several discrepancies were noted in all laboratory reports concerning surrogate recoveries. For the Phase I event, several of the samples had surrogate recoveries below acceptance criteria which would result in laboratory results which could potentially under-report actual sample concentrations. For the Phase II event, there were surrogate recoveries both below and above acceptance criteria which would result in laboratory results which could potentially under-report or over-report, respectively, actual sample concentrations.

For samples MR1017 and BR1004, the reported Aroclor 1254 concentrations were slightly below the action level of 50 mg/kg. Based on the low surrogate recoveries in these two samples, it is possible that the actual Aroclor 1254 concentrations for these two samples are above the 50 mg/kg action level.

For the remaining samples, the reported PCB concentrations were either so far above or so far below the 50 mg/kg threshold that the potential biases indicated by the surrogate recoveries associated with these samples would have not been significant enough to alter the reported concentrations' relationship to the 50 mg/kg threshold. In other words, despite the potential high or low biases indicated by the surrogate recovery data, confidence is high that those concentrations reported as above the 50 mg/kg threshold are truly above the 50 mg/kg threshold. Likewise, confidence is also high that those concentrations reported as below the 50 mg/kg threshold are truly below the 50 mg/kg threshold.

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With the exception of the PCB data associated with samples MR1017 and BR1004, the data set was determined to be suitable for the purposes of identifying which of the sampled materials contained PCB concentrations above the 50 mg/kg threshold and which of the sampled materials contained PCB concentrations below the 50 mg/kg threshold.

RECOMMENDATIONS

EnviroSense recommends that additional paint sampling should occur at locations similar to MR1005 & MR2020, MR 1017, BR1004 & BR2005, and OD1002 & OD2008, to further evaluate if PCBs are present at these locations above 50 mg/kg. Based on the high variability observed between concrete samples and associated field duplicates, EnviroSense also recommends additional porous substrate sampling in the Store Room, to evaluate if the reported PCB concentrations are representative of actual conditions.

Based on the analytical data from paint samples collected during both Phase I and Phase II, EnviroSense recommends that workers at the Site should limit activities that may potentially result in creating airborne paint or concrete dust, such as scraping or sanding of painted surfaces and associated porous substrates.

Note that per 40 CFR 761.30, bulk products (e.g. paint) containing PCBs at concentrations greater than 50 mg/kg is not an authorized use of PCB products and must be removed. Surrounding building materials, such as concrete, that may have been contaminated by PCB bulk products, such as paint, containing greater than 50 mg/kg PCBs must also be removed and disposed of as remediation waste, even if the concrete is contaminated at levels less than 50 mg/kg. As referenced above, the TSCA regulations (40 CFR 761.61) have cleanup standards for high and low occupancy areas. Alternatively, the cited regulation also allows for a risk-based (site-specific) cleanup approach to be employed. To be consistent with similar USEPA recommendations, we suggest that steps be taken to reduce exposure to occupants of the facility until the PCB materials can be removed and disposed of in accordance with regulations. Any plan to remove the PCB materials from the facility would need to be developed in consultation with the USEPA Region 1 manager.

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If you have any questions regarding this report, of the project as a whole, please feel free to contact either of the undersigned at (603) 437-8227.

Sincerely,

EnviroSense, Inc.

Marshall Gibson
Project Environmental Scientist

Russell P. Lagueux
President

Enclosures

MBG/RPL:cs

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TABLES

TABLE 1

DETECTED POLYCHLORINATED BIPHENYLS (PCB)

MWRA Alewife Brook Pumping Station
392 Alewife Brook Parkway, Somerville, Massachusetts
EnviroSense Project No. 07757-08-014

Room	Location	Paint Color	Base Material	Sample ID[1]	Bulk Sample[2]	Aroclor 1254[3]
Main Room	Ceiling	White	Concrete	MR1001	P	**87.7**
				MR2001C	C	1.3
				MR2019	P	**100**
				MR2019C	C	0.14
	Ceiling - Beam	White	Steel	MR1002	P	**6,410**
	Columns	Blue	Steel	MR1003	P	**337**
	Crane	Orange	Steel	MR1004	P	**2,990**
	Pump Equip. - 1 pmp hd,3 grbxs	Gray	Steel	MR1005	P	42.8
				MR2020	P	**55**
	Pump Equip. - 2 pmp hds	Light Gray	Steel	MR1006	P	19.9
				MR2021	P	14
	Stair Rails	Orange	Steel	MR1007	P	**1,380**
	Stair treads	Gray	Concrete	MR1008	P	**7,810**
				MR2008C	C	5.8
				MR2022	P	**5,400**
				MR2022C	C	13
	Stairway walls	Light Blue	Concrete	MR1009	P	**8,750**
				MR2009C	C	6.7
				MR2023	P	**4,000**
				MR2023Ca	C	6.2
				MR2023Cb	C	0.37
				Field Dup 1a (MR2023Ca)	C	1.0
				Field Dup 1b (MR2023Cb)	C	0.79
	Water Pipes Insulation	Light Blue	Fiberous/Tape	MR1012	P	**56.8**
				MR2012I	*I*	*27*
	Wall - Back Corner	White	Brick	MR1013	P	27.0
				MR2013B	B	BDL(0.14)[4]
				MR2013M	M	0.74
	Wall - Back Corner	Blue	Brick	MR1014	P	26.1
	Concrete Wet Well Foundation	Blue	Concrete	MR1015	P	**156**
				MR2015C	C	14
	HVAC Ducts	Light Gray	Steel	MR1017	P	48.0
				MR2024	P	25
	Duct frm. Pump Rm. Exhaust	Dark Blue	Sheet Metal	MR1018	P	**5,500**
Hallway	Ceiling	White	Concrete	HL1001	P	21.8
Pump Room	Wall	Blue - White Showing	Concrete	PR1001	P	**7,010**
				PR2001C	C	3.8
				PR2008	P	**1,300**
				PR2008C	C	0.49
				PR2009	P	**430**
				PR2009C	C	0.77
				PR2010	P	**1,900**
				PR2010Ca	C	1.7
				PR2010Cb	C	BDL(0.22)
	Ceiling	White	Concrete	PR1002	P	**18,500**
				PR2002Ca	C	8.1
				PR2002Cb	C	2.6

Notes:
1. Samples collected by EnviroSense, Inc., on Janaury 18th and 19th, 2011 and March 2nd - 4th, 2011.
2. Denotes type of material sampled. P = Paint, C = Concrete, I = Insulation, B = Brick, M = Mortar.
3. PCB analysis by USEPA Method 8082A with concentrations reported in milligrams-per-killogram (mg/kg). Paint concentrations listed in **BOLD** indicate reported concentration greater than 50 mg/kg.
Porous substrate PCB concentrations in shade exceed TSCA high-occupancy standard of 1 mg/kg and are at or below the TSCA low-occupancy standard of 25 mg/kg.
Porous substrate PCB concentrations in italics exceed TSCA low-occupancy standard of 25 mg/kg.
4. BDL = Below laboratory detection limit, as noted in parentheses.

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TABLE 1 (continued)

DETECTED POLYCHLORINATED BIPHENYLS (PCB)

MWRA Alewife Brook Pumping Station
392 Alewife Brook Parkway, Somerville, Massachusetts
EnviroSense Project No. 07757-08-014

Room	Location	Paint Color	Base Material	Sample ID[1]	Bulk Sample[2]	Aroclor 1254[3]
Pump Room (continued)	Duct - Exhaust	Dark Blue	Sheet Metal	PR1003	P	**754**
	Exhaust Fan Stand	Dark Gray	Steel	PR1004	P	**761**
	Equipment - Pmp, Pipe, Concrt Sprt	Gray - Drk/Lght	Steel and Concrete	PR1006	P	**739**
				PR2006C	C	0.71
				PR2011	P	**550**
				PR2012	P	**600**
	Drive Shafts (Pumps)	Orange	Steel	PR1007	P	**615**
Screen Room	Floor	Gray	Concrete	SC1001	P	21.9
	Wall	Blue	Concrete	SC1002	P	**3,160**
				SC2002C	*C*	*240*
				SC2012	P	**1,700**
				SC2012C	*C*	*62*
				SC2013	P	**1,100**
				SC2013C	*C*	*540*
				SC2014	P	**3,000**
				SC2014Ca	*C*	*430*
				SC2014Cb	C	4.4
	HVAC Equip.	White	Sheet Metal	SC1004	P	5.91
	Roof Access Pltfrm.	Light Blue	Concrete	SC1005	P	32.2
	Columns	Blue	Steel	SC1006	P	**7,440**
	Ceiling & Upper column	Gray	Steel	SC1007	P	**7,010**
				SC2015	P	**73**
				SC2015C	C	0.68
	Crane	Orange	Steel	SC1008	P	**3,010**
	Exhaust Air Filter	-	Filter Residue	SC1011	-	3.46
	Workbench	Gray	Wood	SC2016	P	**2,300**
Store Room	Ceiling	White	Concrete	SR1001	P	16.6
	Lower wall	Dark Gray	Concrete	SR1002	P	**356**
				Field Dup 1 (SR1002)	P	**3,860**
				SR2002C	*C*	*47*
				SR2007	P	**110**
				Field Dup 2 (SR2007)	P	**160**
				SR2007C	*C*	*26*
	Floor	Dark Gray	Concrete	SR1003	P	**612**
				SR2003C	C	20
				SR2008	P	**500**
				SR2008C	*C*	*40*
	Columns	Blue	Concrete	SR1004	P	**1,480**
				SR2004C	C	25
				SR2009	Removed per MWRA	
				SR2009C	Removed per MWRA	
	Pipes	Blue	Cast Iron	SR1005	P	**1,850**
Boiler Room	Ceiling	White	Concrete	BR1001	P	3.67
	Upper Wall	White	Concrete	BR1002	P	3.57
	Door	Gray	Steel	BR1004	P	45.4
				BR2005	P	**61**

Notes:
1. Samples collected by EnviroSense, Inc., on Janaury 18th and 19th, 2011 and March 2nd - 4th, 2011.
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TABLE 1 (continued)

DETECTED POLYCHLORINATED BIPHENYLS (PCB)

MWRA Alewife Brook Pumping Station
392 Alewife Brook Parkway, Somerville, Massachusetts
EnviroSense Project No. 07757-08-014

Room	Location	Paint Color	Base Material	Sample ID[1]	Bulk Sample[2]	Aroclor 1254[3]
Generator Room	Connecting Hallwy Floor/Stair	Dark Gray	Concrete	GR1001	P	**356**
				Field Dup 2 (GR1001)	P	**193**
				GR2001C	C	3.2
	Ceiling	White	Concrete	GR1002	P	8.94
	Columns	Blue	Steel	GR1005	P	8.65
	Louver	Dark Gray	Steel	GR1006	P	**88.3**
	Connecting Hallwy Floor/Stair	Dark Gray	Concrete	GR2007	P	**820**
				GR2007C	C	13
				Field Dup 3 (GR2007C)	C	8.0
Outdoors	Louvers - Gen. Rm.	Gray	Steel	OD1001	P	5.93
	Intake air screen frames	Blue-Gray	Steel	OD1002	P	40.5
				OD2008	P	**170**
	Fence	Black	Steel	OD1003	P	BDL(0.263)[5]
	Hatches	Light Gray	Steel	OD1004	P	**635**
	Man-Hole Covers	Blue	Steel	OD1005	P	1.35
Equipment Blank	March 2, 2011	-	-	Equipment Blank 1	-	BDL(0.25)
	March 3, 2011	-	-	Equipment Blank 2	-	BDL(0.25)
	March 4, 2011	-	-	Equipment Blank	-	BDL(0.23)

Notes:
1. Samples collected by EnviroSense, Inc., on Janaury 18th and 19th, 2011 and March 2nd - 4th, 2011.
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TABLE 2

FIELD NOTES FOR SAMPLING LOCATIONS

MWRA Alewife Brook Pumping Station
392 Alewife Brook Parkway, Somerville, Massachusetts
EnviroSense Project No. 07757-08-014

Room	Location	Paint Color	Sample ID	Sampling Notes
Main Room	Ceiling	White	MR1001	Above Pump No. 2, Left side of beam
			MR2001C	Near original location at center of ceiling, near conduit
			MR2019	Second ceiling section above main door, thin coat of paint, light sample
			MR2019C	Same location as MR2019, drilled 2 holes to get adequate sample weight
	Ceiling - Beam	White	MR1002	Above Pump No. 2 along left side of beam
	Columns	Blue	MR1003	From Entry Door - left side of rm - 2nd column
	Crane	Orange	MR1004	Vertical portion of crane beam - face towards room - towards side away from elec. Panel
	Pump equip- 1 pmp hd,3 grbxs	Grey	MR1005	Base of pump No. 2 along coller right side
			MR2020	First pump head closest to door, sample taken at base on door side
	Pump equip- 2 pmp hds	Light Grey	MR1006	Top of Pump No.3 (closest to entry door)
			MR2021	Middle pump head at several locations, paint difficult to remove
	Stair Rails	Orange	MR1007	Railing by desk - lower bar
	Stair treads	Grey	MR1008	Second tread down from Main Room floor - right side
			MR2008C	Taken at original location (MR1008), 1 hole drilled
			MR2022	Third step down from first landing
			MR2022C	Taken at original location (MR2022), 1 hole drilled
	Stairway walls	Light Blue	MR1009	Side of stairwell at third tread down stairs
			MR2009C	Taken at original location (MR1009), forth step down, 1.5' from tread
			MR2023	Taken at first flight, center of wall, bottom half. Paint removed in large chips
			MR2023Ca	Taken at location MR2023, two holes to get sample weight
			MR2023Cb	Taken from location MR2023Ca, used 1/2' drill bit and chisel to get sample volume
			Field Dup 1a (MR2023Ca)	Taken at location MR2023Ca
			Field Dup 1b (MR2023Cb)	Taken from location MR2023Cb
	Water pipes- insulation	Light Blue	MR1012	Water pipe left of entry door - as walking into facility, paper substrate attached to sample
			MR2012I	Sample was a full profile of pipe insulation, down to copper pipe
	Wall-back corner	White	MR1013	Wall - back right crnr. From entry door - approx. 1 ft off floor. Mortar possible in sample
			MR2013B	Taken at original location (MR1013), 1 hole in brick
			MR2013M	Taken around edges of sample brick (MR2013), sample removed used chisel
	Wall-Back Corner	Blue	MR1014	Wall - bck rigth crnr. Sample from mortar and brick
	Concrete wet well foundation	Blue	MR1015	Wall by hallway doorway
			MR2015C	Taken at original location (MR1015)
	HVAC ducts	Light Gray	MR1017	Duct work at wall by wet well foundation - paper backing with sample
			MR2024	Taken at new location on HVAC duct, sample includes foil and paper substrate
	Duct fr. Pmp. Rm.	Dark Blue	MR1018	Duct at back of room - collected from base
Hallway	Ceiling	White	HL1001	Left side, center of room
Pump Room	Wall	Blue-white showing	PR1001	Wall at first landing when going up stairs out of pump room
			PR2001C	Taken from original location (PR1001)
			PR2008	Taken from back wall, right of exhuast inlet, approx 4' off floor
			PR2008C	Taken at location of PR2008, 2 holes drilled to get sample volume
			PR2009	Taken from leftside of room, near door/hallway, approx 2' off floor
			PR2009C	Taken at location of PR2009, 2 holes drilled to get sample volume
			PR2010	Taken from right side of room, near stairway, approx 2' off floor
			PR2010Ca	Taken at location of PR2010, 3 holes drilled
			PR2010Cb	Taken at location of PR2010Ca
	Ceiling	White	PR1002	At first landing coming down from Main rm.
			PR2002Ca	Taken at original location (PR1002) on stairway, drilled 4 holes to get sample volume
			PR2002Cb	Taken at location PR2002Ca
	Duct - Exhaust	Dark Blue	PR1003	Top of duct inlet at floor level
	Exhaust Fan Stand	Dark Gray	PR1004	Btm of stand

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TABLE 2 (continued)

FIELD NOTES FOR SAMPLING LOCATIONS

MWRA Alewife Brook Pumping Station
392 Alewife Brook Parkway, Somerville, Massachusetts
EnviroSense Project No. 07757-08-014

Room	Location	Paint Color	Sample ID	Sampling Notes
Pump Room (continued)	Equipment-pmp, pipe, concrt suprt	Gray-drk/lght	PR1006	Off pipe and concrete support for pipe closest to strs.closest to wall, side of other pipes
			PR2006C	Taken at original location PR1006, approx 0.5' to the left, horizontal surface
			PR2011	Taken from steel pipe, first one in room from staris, far side approx 2' to right of support closest to well
			PR2012	Taken from the same support as PR1006, on vertical face
	Drive Shaft	Orange	PR1007	From first ladder in room (pump No. 3?) Concern over driveshaft becoming energized
Screen Room	Floor	Gray	SC1001	Bottom of stairway
	Wall	Blue	SC1002	Wall, right side, before stairway
			SC2002C	Taken from original location (SC1002)
			SC2012	Taken from back wall, behind screener, approx 1' off floor, thin coat of paint
			SC2012C	Taken at location SC2012
			SC2013	Taken form front wall, underneath ladder to platform, left side of HVAC system, appox 0.5' off floor
			SC2013C	Taken at location SC2013
			SC2014	Taken from door side of room, center of room, approx 1' off floor
			SC2014Ca	Taken at location SC2014
			SC2014Cb	Taken at location SC2014Ca
	HVAC Equipment	White	SC1004	Left side, bottom of unit, Sample was a fine powder
	Roof Access Pltfrm.	Light Blue	SC1005	Bottom of platform
	Columns	Blue	SC1006	Taken off column by thermostat
	Ceiling & Upper column	Gray	SC1007	At steel beam accesed by platform - limited volume
			SC2015	Taken above platform, right side of meter, sample difficult to remove
			SC2015C	Taken at location SC2015
	Crane	Orange	SC1008	Taken from left side, crane horizontal support beam, center
	Exhaust Air Fltr.	-	SC1011	Piece of filter, shaved piece off filter surface
	Workbench	Gray	SC2016	Taken from front bottom lower brace/rung, per MWRA
Store Room	Ceiling	White	SR1001	Taken from lower part of ceiling, center of room
	Lower wall	Dark Gray	SR1002	Left side of room, large flaking pieces
			Field Dup 1 (SR1002)	Field Dup of lower wall sample SR1002
			SR2002C	Taken from original location (SR1002), strong white paint on surface-possible traces in sample
			SR2007	Taken form backwall, near pipes, appox 1' off floor, large chips of paint used
			Field Dup 2 (Phase 2)	Paint sample, taken from location SR2007, samples collected together then split into jars
			SR2007C	Taken at loaction SR2007
	Floor	Dark Gray	SR1003	Left side of room, large flaking pieces
			SR2003C	Taken at original location (SR1003), strong paint on surface used hammer drill to break through paint
			SR2008	Taken from floor on right side of door, near stairs, approx 1' off wall. Flakey light weight paint
			SR2008C	Taken from location SR2008, strong paint on surface used hammer drill to break through paint
	Columns	Blue	SR1004	Right side of room, halfway up column, sample removed in small pieces
			SR2004C	Taken from loction SR2004, edge of column
			SR2009	Sample removed per MWRA
			SR2009C	Sample removed per MWRA
	Pipes	Blue	SR1005	Pipes toward back of room, flaking paint
Boiler Room	Ceiling	White	BR1001	Center of room, possible pieces of ceiling texture in sample
	Upper Wall	White	BR1002	Lower portion of wall, left side, center of room
	Door	Gray	BR1004	Taken from bottom, hallway side of door
			BR2005	Taken from same loaction as original sample BR1004

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TABLE 2 (continued)

FIELD NOTES FOR SAMPLING LOCATIONS

MWRA Alewife Brook Pumping Station
392 Alewife Brook Parkway, Somerville, Massachusetts
EnviroSense Project No. 07757-08-014

Generator Room	Connecting hallwy floor/stair	Dark Gray	GR1001	Taken on floor at top of stair
			Field Dup 2 (Phase 1)	Field Dup of hallway floor/stair sample GR1001
			GR2001C	Taken from original location (GR1001), strong paint on floor removed with wire wheel
	Ceiling	White	GR1002	Taken above air intake, toward front side of room
	Columns	Blue	GR1005	First column, right side of room, near floor
	Louver	Dark Gray	GR1006	Taken at right side of louver, near floor
	Connecting hallwy floor/stair	Dark Gray	GR2007	Taken from wall below screen room window
			GR2007C	Taken at location GR2007
			Field Dup 3 (Phase 2)	Concrete sample taken at location GR2007C
Outdoors	Louvers Gen. Rm.	Grey	OD1001	Taken on side of building, bottom of louver
	Intake air screen frames	Blue Grey	OD1002	Taken on screen, left side of main door
			OD2008	Taken from original location OD1002
	Fence	Black	OD1003	Back of building, gate, taken of horizontal poles, No label written, fence wet
	Hatches	Light Gray	OD1004	Taken at the hatches on left side of main door, wet with snow at time of sampling
	Man-hole Covers	Blue	OD1005	Taken at manhole off pavement, left side of driveway, wet with snow at time of sampling

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ATTACHMENT A

LIMITATIONS

LIMITATIONS

1. Observations described in this document were made under the conditions stated herein. Findings presented in this document were based solely upon the services and sources of information described herein and not on tasks or procedures beyond the scope of the described services or the time, budgetary, or scope of work authorized by our client. The work described in this document was conducted in accordance with the agreed upon Proposal, Terms and Conditions, and applicable Addenda. Any additional information that becomes available concerning this site should be provided to EnviroSense so that this document may be revised and/or modified, as necessary.

2. In preparing this document, EnviroSense has relied upon certain information provided by other parties including, but not limited to, analytical laboratories, other consultants and professionals, regulators, and persons with knowledge of the site and surrounding area. Except as expressly stated in this document, EnviroSense did not attempt to independently verify the accuracy, validity, representativeness, or completeness of all information reviewed or received during the course of our services.

3. Observations were made of the site as indicated within this document. The site, as described in this document, may be limited to a portion of one or more properties (hereafter the "property"). Where access to portions of the site or property was limited by our scope of work or unavailable, EnviroSense renders no opinion as to the presence of oil or hazardous material, or to the presence of indirect evidence relating to oil or hazardous material in that portion of the site or property. Further, EnviroSense does not and cannot represent that the site or property (including within structures) contains no other latent conditions beyond those tested, detected, or observed by EnviroSense during our services.

4. Except as expressly stated in this document, EnviroSense did not perform any testing, screening, laboratory analyses, or other method to determine the presence or concentration of asbestos, asbestos-containing material, radon, lead, lead-enriched paints, ureaformaldehyde, or polychlorinated biphenyls (PCBs) at the site or property (including within structures) or in the environment at the site or property. Additional chemical constituents and/or contaminants not searched for during this project may be present at the site or property (including within structures) or in the environment at the site or property.

5. Except as expressly stated in this document, the scope of work for this project did not include any attempt to check on the compliance of present or past owners or operators of the site or property with any federal, state, or local laws, regulations, or ordinances, environmental or otherwise.

6. Except as expressly stated in this document, no file reviews or interviews at the local, state, federal, or any other level were conducted as part of these services.

7. The findings and conclusions in this document are based upon the data obtained from a limited number of environmental samples. The nature and extent of variations on site or in other areas of the site or property (including within structures) other than those monitored during these services may not become evident until further exploration and testing. If variations or other latent conditions then appear evident, it may be necessary to re-evaluate the findings and conclusions of this document.

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8. The findings and conclusions in this document may be based, in part, upon chemical data for which, it should be noted, variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should chemical data become available in the future, these data should be reviewed by EnviroSense, and the findings and conclusions made in this document may be modified accordingly.

9. The findings of any risk evaluation, characterization, or assessment in this document are dependent upon numerous assumptions and uncertainties, including, but not limited to, the description of the site, conditions on the nature and extent of chemical contaminant distribution, and the use of toxicity information. Consequently, the findings of the risk evaluation, characterization, or assessment are not an absolute characterization of actual risks. Although the range of uncertainties has not been quantified, the use of conservative assumptions and parameters throughout the work would be expected to err on the side of protection of human health, safety, public welfare, and the environment.

10. This document is furnished solely for the exclusive, internal use and reliance of The Massachusetts Water Resources Authority, (hereinafter "Client"), their counsel, and for submittal to appropriate regulatory agencies in connection with the project or services provided for in the Agreement between EnviroSense and Client, but not for advertising or any other type of distribution. This document was intended to provide A PCB ASSESSMENT. No other purpose including, but not limited to, engineering or geotechnical references, conclusions, or recommendations are implied or should be inferred. This document and the information herein shall not, in whole or in part, be discussed or conveyed to any other party, nor used by any other party, on any extension of this project, on any other projects, or for any other purpose, in whole or in part, without the prior written consent of EnviroSense. However, if Client desires to release, or desires EnviroSense to provide, our report(s) to a third party not described above for that party's reliance, EnviroSense will agree to such release provided we receive written acceptance from such third party to be bound by the same or similar terms and conditions in our Agreement with Client and the limitations herein (e.g., Third Party's and Client's execution of EnviroSense's Third Party Agreement or Secondary Client Agreement). Any unauthorized use of this document or the information contained herein by Client or any third party shall be at the sole risk of that party without any liability to EnviroSense.

11. EnviroSense represents that these services and this document have been provided in a manner consistent with that level of care and skill ordinarily exercised by other reputable environmental consultants practicing under similar circumstances and conditions at the same time and in the same or similar geographical area. ENVIROSENSE NEITHER INTENDS, NOR MAKES, ANY OTHER WARRANTY, EXPRESS OR IMPLIED, OR GUARANTEE IN OUR AGREEMENT WITH CLIENT OR ANY ADDENDUM THERETO, OR BY ANY OF OUR ORAL OR WRITTEN REPORTS, PROPOSALS, OR OTHER COMMUNICATIONS OR DOCUMENTS ISSUED THEREUNDER, OR IN OUR PROMOTIONAL OR ADVERTISING MATERIAL. OUR SERVICES ARE NOT INTENDED FOR, NOR SHOULD THEY BE RELIED ON BY, ANY PARTY AS TAX, LEGAL, OR REAL ESTATE ADVICE, OR ANY OTHER SPECIALIZED SERVICE.

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ATTACHMENT B

MWRA - ALEWIFE BROOK PUMP STATION: PAINT INVENTORY BY ROOM

ATTACHMENT B

MWRA - Alewife Brook Pump Station
Paint Inventory by Room

MWRA Alewife Brook Pumping Station
392 Alewife Brook Parkway, Somerville, Massachusetts
EnviroSense Project No. 07757-08-014

Room	*Location*	*Color*	*Accessible from Floor*	*Air Test in Room*	*Wipe Test*	*Bulk Sample*
Main Room	ceiling	white		x		x
	ceiling beams	white				x
	columns	blue	x			x
	crane	orange				x
	pump equipment + 1 pump head + 3 gearboxes	gray	x		x	x
	pump equipment - 2 pump heads	light gray	x		x	x
	stair rails	orange	x		x	x
	stair treads	gray	x		x	x
	stairway walls	light blue	x		x	x
	doors	gray	x			1992
	windows	gray	x			1992
	water pipes (insulation)	light blue	x			x
	wall (back corner)	white	x			x
	wall (back corner)	blue	x			x
	concrete wet well foundation	blue	x			x
	HVAC ducts	blue	x			x
	HVAC ducts	light gray	x			x
	duct from pump room exhaust	dark blue	x		x	x
Office (in Main Room)	walls	white	x			age?
Pump Room	walls	blue (blue/white showing thru)	x	x	x	x
	ceiling	white	x-near stairs			x
	duct work (exhaust fan)	dark blue	x			x
	Exhaust fan stand	dark gray	x			x
	new pump	light gray	x			new
	equipment (pumps, pipes, concrete pipe supports)	gray (dark/light/silver)	x		x	x
	equipment (drive shafts)	orange	x			x
First Floor Hallway	ceiling	white	x			x
	doors	gray	x			1992
Bathrooms (2)	ceiling	white	x			1992

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ATTACHMENT B (continued)

MWRA - Alewife Brook Pump Station
Paint Inventory by Room

MWRA Alewife Brook Pumping Station
392 Alewife Brook Parkway, Somerville, Massachusetts
EnviroSense Project No. 07757-08-014

Room	*Location*	*Color*	*Accessible from Floor*	*Air Test in Room*	*Wipe Test*	*Bulk Sample*
Screen Room	floor	gray	x	x	x	x
	walls	blue	x			x
	equipment (sluice gate operators)	gray	x			1992
	HVAC equipment (exhaust air)	white, plus one red section	x			x
	roof access platform	light blue	x		x	x
	columns	blue	x			x
	ceiling & upper column (sample upper column?)	gray	?			x
	crane	orange			x	x
	windows	dark gray	x			1992
	door	gray	x			1992
	exhaust air filters		x			filter residue
Store Room	ceiling	white				x
	lower wall	dark gray	x			x
	floor	dark gray	x		x	x
	columns	blue	x			x
	pipes	blue	x			x
	doors	gray	x			1992
Boiler Room	ceiling	white	x	x		x
	upper wall	white	x		x	x
	window	gray	x			1992
	door	gray	x		x	x
Generator Room	connecting hallway floor & stairs	dark gray	x		x	x
	ceiling	white	x			x
	duct work	white	x			1992
	door	dark gray	x			1992
	columns	blue	x			x
Outdoors	louvers-generator room	gray	x			x
	Intake air screen frames	blue gray	x			x
	fence	black	x			x
	hatches	light gray	x			x
	manhole covers	blue	x			x
	doors	gray	x			1992
	window frames-factory finish?	gray	x			1992

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ATTACHMENT C

LABORATORY REPORTS

CERTIFICATE OF ANALYSIS

Russell Lagueux
EnviroSense, Inc.
1F Commons Drive
Londonderry, NH 03053

RE: Alewife Pump Station (07757-03/014)
ESS Laboratory Work Order Number: 1101213

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

ESS Laboratory certifies that the test results meet the requirements of NELAC and A2LA, except where noted within this project narrative.

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101213

SAMPLE RECEIPT

The following samples were received on January 24, 2011 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	SampleName	Matrix	Analysis
1101213-01	MR1003	Solid	8082A
1101213-02	MR1005	Solid	8082A
1101213-03	MR1006	Solid	8082A
1101213-04	MR1007	Solid	8082A
1101213-05	MR1008	Solid	8082A
1101213-06	MR1009	Solid	8082A
1101213-07	MR1012	Solid	8082A
1101213-08	MR1013	Solid	8082A
1101213-09	MR1014	Solid	8082A
1101213-10	MR1015	Solid	8082A
1101213-11	MR1017	Solid	8082A
1101213-12	MR1018	Solid	8082A
1101213-13	PR1001	Solid	8082A
1101213-14	PR1003	Solid	8082A
1101213-15	PR1004	Solid	8082A
1101213-16	PR1006	Solid	8082A
1101213-17	PR1007	Solid	8082A
1101213-18	SC1001	Solid	8082A
1101213-19	SC1002	Solid	8082A
1101213-20	SC1004	Solid	8082A

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101213

PROJECT NARRATIVE

8082A Polychlorinated Biphenyls (PCB)

1101213-01 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-04 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-05 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-06 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-08 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-10 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-11 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-12 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-13 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-14 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-15 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-16 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-17 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-18 **Surrogate recovery(ies) diluted below the MRL (SD).**

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station ESS Laboratory Work Order: 1101213

Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101213-19 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1003
Date Sampled: 01/18/11 11:02
Percent Solids: N/A
Initial Volume: 1
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-01
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (50.0)		100	01/31/11 13:50		CA12512
Aroclor 1221	ND (50.0)		100	01/31/11 13:50		CA12512
Aroclor 1232	ND (50.0)		100	01/31/11 13:50		CA12512
Aroclor 1242	ND (50.0)		100	01/31/11 13:50		CA12512
Aroclor 1248	ND (50.0)		100	01/31/11 13:50		CA12512
Aroclor 1254	**337** (50.0)		100	01/31/11 13:50		CA12512
Aroclor 1260	ND (50.0)		100	01/31/11 13:50		CA12512
Aroclor 1262	ND (50.0)		100	01/31/11 13:50		CA12512
Aroclor 1268	ND (50.0)		100	01/31/11 13:50		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1005
Date Sampled: 01/18/11 10:30
Percent Solids: N/A
Initial Volume: 1.2
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-02
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.417)		1	01/29/11 4:00		CA12512
Aroclor 1221	ND (0.417)		1	01/29/11 4:00		CA12512
Aroclor 1232	ND (0.417)		1	01/29/11 4:00		CA12512
Aroclor 1242	ND (0.417)		1	01/29/11 4:00		CA12512
Aroclor 1248	ND (0.417)		1	01/29/11 4:00		CA12512
Aroclor 1254	**42.8** (4.17)		10	01/31/11 14:19		CA12512
Aroclor 1260	ND (0.417)		1	01/29/11 4:00		CA12512
Aroclor 1262	ND (0.417)		1	01/29/11 4:00		CA12512
Aroclor 1268	ND (0.417)		1	01/29/11 4:00		CA12512

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*117 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*121 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*97 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*102 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1006
Date Sampled: 01/18/11 10:45
Percent Solids: N/A
Initial Volume: 1
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-03
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.500)		1	01/29/11 4:29		CA12512
Aroclor 1221	ND (0.500)		1	01/29/11 4:29		CA12512
Aroclor 1232	ND (0.500)		1	01/29/11 4:29		CA12512
Aroclor 1242	ND (0.500)		1	01/29/11 4:29		CA12512
Aroclor 1248	ND (0.500)		1	01/29/11 4:29		CA12512
Aroclor 1254	**19.9** (2.50)		5	01/31/11 14:48		CA12512
Aroclor 1260	ND (0.500)		1	01/29/11 4:29		CA12512
Aroclor 1262	ND (0.500)		1	01/29/11 4:29		CA12512
Aroclor 1268	ND (0.500)		1	01/29/11 4:29		CA12512

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*84 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*98 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*96 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*99 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1007
Date Sampled: 01/18/11 10:58
Percent Solids: N/A
Initial Volume: 0.8
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-04
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (625)		1000	01/31/11 15:17		CA12512
Aroclor 1221	ND (625)		1000	01/31/11 15:17		CA12512
Aroclor 1232	ND (625)		1000	01/31/11 15:17		CA12512
Aroclor 1242	ND (625)		1000	01/31/11 15:17		CA12512
Aroclor 1248	ND (625)		1000	01/31/11 15:17		CA12512
Aroclor 1254	**1380** (625)		1000	01/31/11 15:17		CA12512
Aroclor 1260	ND (625)		1000	01/31/11 15:17		CA12512
Aroclor 1262	ND (625)		1000	01/31/11 15:17		CA12512
Aroclor 1268	ND (625)		1000	01/31/11 15:17		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1008
Date Sampled: 01/18/11 11:18
Percent Solids: N/A
Initial Volume: 1.6
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-05
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (1560)		5000	01/31/11 15:46		CA12512
Aroclor 1221	ND (1560)		5000	01/31/11 15:46		CA12512
Aroclor 1232	ND (1560)		5000	01/31/11 15:46		CA12512
Aroclor 1242	ND (1560)		5000	01/31/11 15:46		CA12512
Aroclor 1248	ND (1560)		5000	01/31/11 15:46		CA12512
Aroclor 1254	**7810** (1560)		5000	01/31/11 15:46		CA12512
Aroclor 1260	ND (1560)		5000	01/31/11 15:46		CA12512
Aroclor 1262	ND (1560)		5000	01/31/11 15:46		CA12512
Aroclor 1268	ND (1560)		5000	01/31/11 15:46		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1009
Date Sampled: 01/18/11 11:52
Percent Solids: N/A
Initial Volume: 5.4
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-06
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (463)		5000	01/31/11 16:15		CA12512
Aroclor 1221	ND (463)		5000	01/31/11 16:15		CA12512
Aroclor 1232	ND (463)		5000	01/31/11 16:15		CA12512
Aroclor 1242	ND (463)		5000	01/31/11 16:15		CA12512
Aroclor 1248	ND (463)		5000	01/31/11 16:15		CA12512
Aroclor 1254	**8750** (463)		5000	01/31/11 16:15		CA12512
Aroclor 1260	ND (463)		5000	01/31/11 16:15		CA12512
Aroclor 1262	ND (463)		5000	01/31/11 16:15		CA12512
Aroclor 1268	ND (463)		5000	01/31/11 16:15		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1012
Date Sampled: 01/18/11 11:02
Percent Solids: N/A
Initial Volume: 0.7
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-07
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.714)		1	01/31/11 21:06		CA12512
Aroclor 1221	ND (0.714)		1	01/31/11 21:06		CA12512
Aroclor 1232	ND (0.714)		1	01/31/11 21:06		CA12512
Aroclor 1242	ND (0.714)		1	01/31/11 21:06		CA12512
Aroclor 1248	ND (0.714)		1	01/31/11 21:06		CA12512
Aroclor 1254	**56.8** (7.14)		10	01/31/11 16:45		CA12512
Aroclor 1260	ND (0.714)		1	01/31/11 21:06		CA12512
Aroclor 1262	ND (0.714)		1	01/31/11 21:06		CA12512
Aroclor 1268	ND (0.714)		1	01/31/11 21:06		CA12512

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*77 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*77 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*76 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*80 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1013
Date Sampled: 01/18/11 11:50
Percent Solids: N/A
Initial Volume: 1.9
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-08
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (5.26)		20	01/31/11 17:14		CA12512
Aroclor 1221	ND (5.26)		20	01/31/11 17:14		CA12512
Aroclor 1232	ND (5.26)		20	01/31/11 17:14		CA12512
Aroclor 1242	ND (5.26)		20	01/31/11 17:14		CA12512
Aroclor 1248	ND (5.26)		20	01/31/11 17:14		CA12512
Aroclor 1254	**63.5** (5.26)		20	01/31/11 17:14		CA12512
Aroclor 1260	ND (5.26)		20	01/31/11 17:14		CA12512
Aroclor 1262	ND (5.26)		20	01/31/11 17:14		CA12512
Aroclor 1268	ND (5.26)		20	01/31/11 17:14		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1014
Date Sampled: 01/18/11 12:00
Percent Solids: N/A
Initial Volume: 1.5
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-09
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.333)		1	02/01/11 3:54		CA12512
Aroclor 1221	ND (0.333)		1	02/01/11 3:54		CA12512
Aroclor 1232	ND (0.333)		1	02/01/11 3:54		CA12512
Aroclor 1242	ND (0.333)		1	02/01/11 3:54		CA12512
Aroclor 1248	ND (0.333)		1	02/01/11 3:54		CA12512
Aroclor 1254	**26.1** (3.33)		10	01/31/11 17:43		CA12512
Aroclor 1260	ND (0.333)		1	02/01/11 3:54		CA12512
Aroclor 1262	ND (0.333)		1	02/01/11 3:54		CA12512
Aroclor 1268	ND (0.333)		1	02/01/11 3:54		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*75 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*79 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*77 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*83 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1015
Date Sampled: 01/18/11 12:09
Percent Solids: N/A
Initial Volume: 1.8
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-10
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (27.8)		100	01/31/11 18:12		CA12512
Aroclor 1221	ND (27.8)		100	01/31/11 18:12		CA12512
Aroclor 1232	ND (27.8)		100	01/31/11 18:12		CA12512
Aroclor 1242	ND (27.8)		100	01/31/11 18:12		CA12512
Aroclor 1248	ND (27.8)		100	01/31/11 18:12		CA12512
Aroclor 1254	**156** (27.8)		100	01/31/11 18:12		CA12512
Aroclor 1260	ND (27.8)		100	01/31/11 18:12		CA12512
Aroclor 1262	ND (27.8)		100	01/31/11 18:12		CA12512
Aroclor 1268	ND (27.8)		100	01/31/11 18:12		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1017
Date Sampled: 01/18/11 12:20
Percent Solids: N/A
Initial Volume: 1.5
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-11
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (6.67)		20	01/31/11 18:41		CA12512
Aroclor 1221	ND (6.67)		20	01/31/11 18:41		CA12512
Aroclor 1232	ND (6.67)		20	01/31/11 18:41		CA12512
Aroclor 1242	ND (6.67)		20	01/31/11 18:41		CA12512
Aroclor 1248	ND (6.67)		20	01/31/11 18:41		CA12512
Aroclor 1254	**48.0** (6.67)		20	01/31/11 18:41		CA12512
Aroclor 1260	ND (6.67)		20	01/31/11 18:41		CA12512
Aroclor 1262	ND (6.67)		20	01/31/11 18:41		CA12512
Aroclor 1268	ND (6.67)		20	01/31/11 18:41		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1018
Date Sampled: 01/18/11 12:10
Percent Solids: N/A
Initial Volume: 1.2
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-12
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (2080)		5000	01/31/11 19:10		CA12512
Aroclor 1221	ND (2080)		5000	01/31/11 19:10		CA12512
Aroclor 1232	ND (2080)		5000	01/31/11 19:10		CA12512
Aroclor 1242	ND (2080)		5000	01/31/11 19:10		CA12512
Aroclor 1248	ND (2080)		5000	01/31/11 19:10		CA12512
Aroclor 1254	**5500** (2080)		5000	01/31/11 19:10		CA12512
Aroclor 1260	ND (2080)		5000	01/31/11 19:10		CA12512
Aroclor 1262	ND (2080)		5000	01/31/11 19:10		CA12512
Aroclor 1268	ND (2080)		5000	01/31/11 19:10		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: PR1001
Date Sampled: 01/18/11 12:28
Percent Solids: N/A
Initial Volume: 1.9
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-13
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (1320)		5000	01/31/11 19:39		CA12512
Aroclor 1221	ND (1320)		5000	01/31/11 19:39		CA12512
Aroclor 1232	ND (1320)		5000	01/31/11 19:39		CA12512
Aroclor 1242	ND (1320)		5000	01/31/11 19:39		CA12512
Aroclor 1248	ND (1320)		5000	01/31/11 19:39		CA12512
Aroclor 1254	**7010** (1320)		5000	01/31/11 19:39		CA12512
Aroclor 1260	ND (1320)		5000	01/31/11 19:39		CA12512
Aroclor 1262	ND (1320)		5000	01/31/11 19:39		CA12512
Aroclor 1268	ND (1320)		5000	01/31/11 19:39		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: PR1003
Date Sampled: 01/18/11 12:32
Percent Solids: N/A
Initial Volume: 2.6
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-14
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (96.2)		500	01/31/11 20:08		CA12512
Aroclor 1221	ND (96.2)		500	01/31/11 20:08		CA12512
Aroclor 1232	ND (96.2)		500	01/31/11 20:08		CA12512
Aroclor 1242	ND (96.2)		500	01/31/11 20:08		CA12512
Aroclor 1248	ND (96.2)		500	01/31/11 20:08		CA12512
Aroclor 1254	**754** (96.2)		500	01/31/11 20:08		CA12512
Aroclor 1260	ND (96.2)		500	01/31/11 20:08		CA12512
Aroclor 1262	ND (96.2)		500	01/31/11 20:08		CA12512
Aroclor 1268	ND (96.2)		500	01/31/11 20:08		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: PR1004
Date Sampled: 01/18/11 12:43
Percent Solids: N/A
Initial Volume: 1.4
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-15
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (179)		500	01/31/11 20:37		CA12512
Aroclor 1221	ND (179)		500	01/31/11 20:37		CA12512
Aroclor 1232	ND (179)		500	01/31/11 20:37		CA12512
Aroclor 1242	ND (179)		500	01/31/11 20:37		CA12512
Aroclor 1248	ND (179)		500	01/31/11 20:37		CA12512
Aroclor 1254	**761** (179)		500	01/31/11 20:37		CA12512
Aroclor 1260	ND (179)		500	01/31/11 20:37		CA12512
Aroclor 1262	ND (179)		500	01/31/11 20:37		CA12512
Aroclor 1268	ND (179)		500	01/31/11 20:37		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: PR1006
Date Sampled: 01/18/11 12:57
Percent Solids: N/A
Initial Volume: 1.6
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-16
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (156)		500	02/01/11 0:59		CA12512
Aroclor 1221	ND (156)		500	02/01/11 0:59		CA12512
Aroclor 1232	ND (156)		500	02/01/11 0:59		CA12512
Aroclor 1242	ND (156)		500	02/01/11 0:59		CA12512
Aroclor 1248	ND (156)		500	02/01/11 0:59		CA12512
Aroclor 1254	**739** (156)		500	02/01/11 0:59		CA12512
Aroclor 1260	ND (156)		500	02/01/11 0:59		CA12512
Aroclor 1262	ND (156)		500	02/01/11 0:59		CA12512
Aroclor 1268	ND (156)		500	02/01/11 0:59		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: PR1007
Date Sampled: 01/18/11 12:55
Percent Solids: N/A
Initial Volume: 2
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-17
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (125)		500	02/01/11 1:28		CA12512
Aroclor 1221	ND (125)		500	02/01/11 1:28		CA12512
Aroclor 1232	ND (125)		500	02/01/11 1:28		CA12512
Aroclor 1242	ND (125)		500	02/01/11 1:28		CA12512
Aroclor 1248	ND (125)		500	02/01/11 1:28		CA12512
Aroclor 1254	**615** (125)		500	02/01/11 1:28		CA12512
Aroclor 1260	ND (125)		500	02/01/11 1:28		CA12512
Aroclor 1262	ND (125)		500	02/01/11 1:28		CA12512
Aroclor 1268	ND (125)		500	02/01/11 1:28		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SC1001
Date Sampled: 01/18/11 13:10
Percent Solids: N/A
Initial Volume: 3.6
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-18
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (2.78)		20	02/01/11 1:57		CA12512
Aroclor 1221	ND (2.78)		20	02/01/11 1:57		CA12512
Aroclor 1232	ND (2.78)		20	02/01/11 1:57		CA12512
Aroclor 1242	ND (2.78)		20	02/01/11 1:57		CA12512
Aroclor 1248	ND (2.78)		20	02/01/11 1:57		CA12512
Aroclor 1254	**21.9** (2.78)		20	02/01/11 1:57		CA12512
Aroclor 1260	ND (2.78)		20	02/01/11 1:57		CA12512
Aroclor 1262	ND (2.78)		20	02/01/11 1:57		CA12512
Aroclor 1268	ND (2.78)		20	02/01/11 1:57		CA12512

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*%*	*SD*	*30-150*
Surrogate: Decachlorobiphenyl [2C]	*%*	*SD*	*30-150*
Surrogate: Tetrachloro-m-xylene	*%*	*SD*	*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*%*	*SD*	*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SC1002
Date Sampled: 01/18/11 13:13
Percent Solids: N/A
Initial Volume: 1.7
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-19
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (1470)		5000	02/01/11 2:26		CA12512
Aroclor 1221	ND (1470)		5000	02/01/11 2:26		CA12512
Aroclor 1232	ND (1470)		5000	02/01/11 2:26		CA12512
Aroclor 1242	ND (1470)		5000	02/01/11 2:26		CA12512
Aroclor 1248	ND (1470)		5000	02/01/11 2:26		CA12512
Aroclor 1254	**3160** (1470)		5000	02/01/11 2:26		CA12512
Aroclor 1260	ND (1470)		5000	02/01/11 2:26		CA12512
Aroclor 1262	ND (1470)		5000	02/01/11 2:26		CA12512
Aroclor 1268	ND (1470)		5000	02/01/11 2:26		CA12512

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SC1004
Date Sampled: 01/18/11 13:20
Percent Solids: N/A
Initial Volume: 1.1
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101213
ESS Laboratory Sample ID: 1101213-20
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.455)		1	02/01/11 2:56		CA12512
Aroclor 1221	ND (0.455)		1	02/01/11 2:56		CA12512
Aroclor 1232	ND (0.455)		1	02/01/11 2:56		CA12512
Aroclor 1242	ND (0.455)		1	02/01/11 2:56		CA12512
Aroclor 1248	ND (0.455)		1	02/01/11 2:56		CA12512
Aroclor 1254	**5.91** (0.455)		1	02/01/11 2:56		CA12512
Aroclor 1260	ND (0.455)		1	02/01/11 2:56		CA12512
Aroclor 1262	ND (0.455)		1	02/01/11 2:56		CA12512
Aroclor 1268	ND (0.455)		1	02/01/11 2:56		CA12512

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*85 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*88 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*90 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*98 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101213

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CA12512 - 3540										
Blank										
Aroclor 1016	ND	0.0250	mg/kg wet							
Aroclor 1016 (1)	ND	0.0250	mg/kg wet							
Aroclor 1016 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (2)	ND	0.0250	mg/kg wet							
Aroclor 1016 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (3)	ND	0.0250	mg/kg wet							
Aroclor 1016 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (4)	ND	0.0250	mg/kg wet							
Aroclor 1016 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (5)	ND	0.0250	mg/kg wet							
Aroclor 1016 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221	ND	0.0250	mg/kg wet							
Aroclor 1221 (1)	ND	0.0250	mg/kg wet							
Aroclor 1221 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (2)	ND	0.0250	mg/kg wet							
Aroclor 1221 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (3)	ND	0.0250	mg/kg wet							
Aroclor 1221 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (4)	ND	0.0250	mg/kg wet							
Aroclor 1221 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (5)	ND	0.0250	mg/kg wet							
Aroclor 1221 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232	ND	0.0250	mg/kg wet							
Aroclor 1232 (1)	ND	0.0250	mg/kg wet							
Aroclor 1232 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (2)	ND	0.0250	mg/kg wet							
Aroclor 1232 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (3)	ND	0.0250	mg/kg wet							
Aroclor 1232 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (4)	ND	0.0250	mg/kg wet							
Aroclor 1232 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (5)	ND	0.0250	mg/kg wet							
Aroclor 1232 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242	ND	0.0250	mg/kg wet							
Aroclor 1242 (1)	ND	0.0250	mg/kg wet							
Aroclor 1242 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (2)	ND	0.0250	mg/kg wet							
Aroclor 1242 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (3)	ND	0.0250	mg/kg wet							
Aroclor 1242 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (4)	ND	0.0250	mg/kg wet							
Aroclor 1242 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (5)	ND	0.0250	mg/kg wet							
Aroclor 1242 (5) [2C]	ND	0.0250	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101213

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CA12512 - 3540										
Aroclor 1248	ND	0.0250	mg/kg wet							
Aroclor 1248 (1)	ND	0.0250	mg/kg wet							
Aroclor 1248 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (2)	ND	0.0250	mg/kg wet							
Aroclor 1248 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (3)	ND	0.0250	mg/kg wet							
Aroclor 1248 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (4)	ND	0.0250	mg/kg wet							
Aroclor 1248 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (5)	ND	0.0250	mg/kg wet							
Aroclor 1248 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254	ND	0.0250	mg/kg wet							
Aroclor 1254 (1)	ND	0.0250	mg/kg wet							
Aroclor 1254 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (2)	ND	0.0250	mg/kg wet							
Aroclor 1254 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (3)	ND	0.0250	mg/kg wet							
Aroclor 1254 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (4)	ND	0.0250	mg/kg wet							
Aroclor 1254 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (5)	ND	0.0250	mg/kg wet							
Aroclor 1254 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260	ND	0.0250	mg/kg wet							
Aroclor 1260 (1)	ND	0.0250	mg/kg wet							
Aroclor 1260 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (2)	ND	0.0250	mg/kg wet							
Aroclor 1260 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (3)	ND	0.0250	mg/kg wet							
Aroclor 1260 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (4)	ND	0.0250	mg/kg wet							
Aroclor 1260 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (5)	ND	0.0250	mg/kg wet							
Aroclor 1260 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262	ND	0.0250	mg/kg wet							
Aroclor 1262 (1)	ND	0.0250	mg/kg wet							
Aroclor 1262 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (2)	ND	0.0250	mg/kg wet							
Aroclor 1262 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (3)	ND	0.0250	mg/kg wet							
Aroclor 1262 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (4)	ND	0.0250	mg/kg wet							
Aroclor 1262 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (5)	ND	0.0250	mg/kg wet							
Aroclor 1262 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268	ND	0.0250	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101213

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CA12512 - 3540										
Aroclor 1268 (1)	ND	0.0250	mg/kg wet							
Aroclor 1268 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (2)	ND	0.0250	mg/kg wet							
Aroclor 1268 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (3)	ND	0.0250	mg/kg wet							
Aroclor 1268 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (4)	ND	0.0250	mg/kg wet							
Aroclor 1268 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (5)	ND	0.0250	mg/kg wet							
Aroclor 1268 (5) [2C]	ND	0.0250	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0119*		mg/kg wet	*0.01250*		*95*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0108*		mg/kg wet	*0.01250*		*86*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0116*		mg/kg wet	*0.01250*		*93*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0115*		mg/kg wet	*0.01250*		*92*	*30-150*			
LCS										
Aroclor 1016	0.249	0.0250	mg/kg wet	0.2500		100	40-140			
Aroclor 1260	0.247	0.0250	mg/kg wet	0.2500		99	40-140			
Surrogate: Decachlorobiphenyl	*0.0116*		mg/kg wet	*0.01250*		*93*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0107*		mg/kg wet	*0.01250*		*85*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0118*		mg/kg wet	*0.01250*		*95*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0113*		mg/kg wet	*0.01250*		*91*	*30-150*			
LCS Dup										
Aroclor 1016	0.256	0.0250	mg/kg wet	0.2500		102	40-140	3	30	
Aroclor 1260	0.249	0.0250	mg/kg wet	0.2500		99	40-140	0.5	30	
Surrogate: Decachlorobiphenyl	*0.0117*		mg/kg wet	*0.01250*		*93*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0108*		mg/kg wet	*0.01250*		*86*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0122*		mg/kg wet	*0.01250*		*97*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0118*		mg/kg wet	*0.01250*		*94*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station ESS Laboratory Work Order: 1101213

Notes and Definitions

U	Analyte included in the analysis, but not detected
SD	Surrogate recovery(ies) diluted below the MRL (SD).
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station ESS Laboratory Work Order: 1101213

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/labs/waterlabs-instate.php

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/out_state.pdf

Maine Potable and Non Potable Water: RI0002
http://www.maine.gov/dep/blwq/topic/vessel/lab_list.pdf

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/labcert/labcert.aspx

New Hampshire (NELAP accredited) Potable and Non PotableWater, Solid and Hazardous Waste: 2424
http://www4.egov.nh.gov/des/nhelap/namesearch.asp

New York (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

United States Department of Agriculture Soil Permit: S-54210

Maryland Potable Water: 301
http://www.mde.state.md.us/assets/document/WSP_labs-2009apr20.pdf

South Carolina Volatile Organic Compounds in Potable Water: 78003

New Jersey Potable (VOA) and Non Potable Water (RCRA), Solids and Hazardous Waste: RI002
http://www.nj.gov/dep/oqa/certlabs.htm

Pensylvania Potable and Non Potable Water, Solid and Hazardous Waste: 68-01752
http://files.dep.state.pa.us/RegionalResources/Labs/LabsPortalFiles/2009-0911_accredited_laboratories.pdf

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

Sample and Cooler Receipt Checklist

Client: Envirosense
Client Project ID: _____
Shipped/Delivered Via: ESS Courier

ESS Project ID: 11010213
Date Project Due: 1/31/11
Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present? * No
   Air No.:
2. Were Custody Seals Present? No
3. Were Custody Seals Intact? N/A
4. Is Radiation count < 100 CPM? Yes
5. Is a cooler present? Yes
   Cooler Temp: **3.3**
   Iced With: **Icepacks**
6. Was COC included with samples? Yes
7. Was COC signed and dated by client? Yes
8. Does the COC match the sample Yes
9. Is COC complete and correct? Yes
10. Are the samples properly preserved? Yes
11. Proper sample containers used? Yes
12. Any air bubbles in the VOA vials? N/A
13. Holding times exceeded? No
14. Sufficient sample volumes? Yes
15. Any Subcontracting needed? No
16. Are ESS labels on correct containers? Yes/No
17. Were samples received intact? Yes/No

ESS Sample IDs: _____
Sub Lab: _____
Analysis: _____
TAT: _____

18. Was there need to call project manager to discuss status? If yes, please explain.

_____

Who was called?: _____ By whom? _____

Sample Number	Properly Preserved	Container Type	# of Containers	Preservative
1	Yes	2 oz 4 oz Soil Jar	1	NP
2	Yes	4 oz Soil Jar	1	NP
3	Yes	4 oz Soil Jar	1	NP
4	Yes	4 oz Soil Jar	1	NP
5	Yes	4 oz Soil Jar	1	NP
6	Yes	4 oz Soil Jar	1	NP
7	Yes	4 oz Soil Jar	1	NP
8	Yes	4 oz Soil Jar	1	NP
9	Yes	4 oz Soil Jar	1	NP
10	Yes	4 oz Soil Jar	1	NP
11	Yes	4 oz Soil Jar	1	NP
12	Yes	4 oz Soil Jar	1	NP
13	Yes	4 oz Soil Jar	1	NP
14	Yes	4 oz Soil Jar	1	NP
15	Yes	4 oz Soil Jar	1	NP
16	Yes	4 oz Soil Jar	1	NP
17	Yes	4 oz Soil Jar	1	NP
18	Yes	4 oz Soil Jar	1	NP
19	Yes	4 oz Soil Jar	1	NP
20	Yes	2 oz 4 oz Soil Jar	1	NP

Completed By: MK Date/Time: 1/24/11
Reviewed By: _____ Date/Time: 1/24/11

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time X Standard Other _____
If faster than 5 days, prior approval by laboratory is required # _____

State where samples were collected from:
(MA) RI CT NH NJ NY ME Other _____

Is this project for any of the following:
MA-MCP Navy USACE Other _____

Reporting Limits

ESS LAB PROJECT ID: 110213

Electronic Deliverable Yes X No ____
Format: Excel __ Access __ PDF X Other _____

Co. Name	Project #	Project Name (20 Char. or less)
EnviroSense, Inc.	07757-03/04	Alewife Pump Station

Contact Person	Address
Russell P. Lagueux	1F Commons Dr. Suite 34

City	State	Zip	PO#
Londonderry	NH	03053	N/A

Telephone #	Fax #	Email Address
603-437-8227	603-437-0500	rlagueux@enviroSense.com

Write Required Analysis: 8082 + Soxhlet Extraction via 3540C

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	8082 + Soxhlet Extraction via 3540C
1	1/18/11	1102		X	SD	MR1003	1	1	G	X
2	1/18/11	1030		X	SD	MR1005	1	1	G	X
3	1/18/11	1045		X	SD	MR1006	1	1	G	X
4	1/18/11	1058		X	SD	MR1007	1	1	G	X
5	1/18/11	1118		X	SD	MR1008	1	1	G	X
6	1/18/11	1152		X	SD	MR1009	1	1	G	X
7	1/18/11	1102		X	SD	MR1012	1	1	G	X
8	1/18/11	1150		X	SD	MR1013	1	1	G	X
9	1/18/11	1200		X	SD	MR1014	1	1	G	X
10	1/18/11	1209		X	SD	MR1015	1	1	G	X

Container Type: P-Poly G-Glass S-Sterile V-VOA
Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No
Seals Intact 3.3° Yes ___ No NA: ✓
Cooler Temp: ~~1446~~ CW 1/24/11

Internal Use Only
[✓] Pickup
[ ] Technicians _____

Preservation Code 1- NP, 2- HCl, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- _____

Sampled by: Marshall Gibson / Tom O'Dowd

Comments:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	1/19/11 1530	ESI Cold Storage	1/19/11 1530	ESI Cold Storage	1/24/11 1147	[signature]	1/24/11 1147
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	1/24/11 1446	Manal Keenan	1/24/11 1502				

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

MR 1/24/11

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Page 2 of ~~6~~ 2

Turn Time X Standard Other ____
If faster than 5 days, prior approval by laboratory is required # ____

~~State~~ where samples were collected from:
MA RI CT NH NJ NY ME Other ____

Is this project for any of the following:
MA-MCP Navy USACE Other ____

Reporting Limits

ESS LAB PROJECT ID: 1101213

Electronic Deliverable Yes X No ____
Format: Excel ___ Access ___ PDF X Other ____

Co. Name	Project #	Project Name (20 Char. or less)
EnviroSense, Inc.	~~07767-08/014~~ ~~07767/0~~	Alewife Pump Station

Contact Person	Address
Russell P. Lagueux	1F Commons Dr Suite 34

City	State	Zip	PO#
Londonderry	NH	03053	N/A

Telephone #	Fax #	Email Address
603-437-8227	603-437-0500	rlagueux@enviroSense.com

Write Required Analysis

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	8082 w/ Soxhlet Ext. via 3540C
11	1/18/11	1220		X	SD	MR1017	1	1	G	X
12	1/18/11	1210		X	SD	MR1018	1	1	G	X
13	1/18/11	1228		X	SD	PR1001	1	1	G	X
14	1/18/11	1232		X	SD	PR1003	1	1	G	X
15	1/18/11	1243		X	SD	PR1004	1	1	G	X
16	1/18/11	1257		X	SD	PR1006	1	1	G	X
17	1/18/11	1255		X	SD	PR1007	1	1	G	X
18	1/18/11	1310		X	SD	SC1001	1	1	G	X
19	1/18/11	1313		X	SD	SC1002	1	1	G	X
20	1/18/11	1320		X	SD	SC1004	1	1	G	X

Container Type: P-Poly G-Glass S-Sterile V-VOA | Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No Internal Use Only
Seals Intact ___ Yes ___ No NA: ✓ [ ] ~~Pickup~~
Cooler Temp: 3.3°
[ ] Technicians ____

Preservation Code 1- NP, 2- HCl, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- ____

Sampled by: Marshall Gibson & Tom O'Dowd

Comments:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	1/19/11 1530	ESI Cold Strg	1/19/11 1530	ESI Cold Strg	1/24/11 1147	[signature]	1/24/11 1147
[signature]	1/24/11 1446	[signature]	1/24/11 1500				

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

CERTIFICATE OF ANALYSIS

Russell Lagueux
EnviroSense, Inc.
1F Commons Drive
Londonderry, NH 03053

RE: Alewife Pump Station (07757-03/014)
ESS Laboratory Work Order Number: 1101215

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

ESS Laboratory certifies that the test results meet the requirements of NELAC and A2LA, except where noted within this project narrative.

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101215

SAMPLE RECEIPT

The following samples were received on January 24, 2011 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	SampleName	Matrix	Analysis
1101215-01	GR1005	Solid	8082A
1101215-02	GR1006	Solid	8082A
1101215-03	OD1001	Solid	8082A
1101215-04	OD1002	Solid	8082A
1101215-05	OD1004	Solid	8082A
1101215-06	OD1003	Solid	8082A
1101215-07	OD1005	Solid	8082A
1101215-08	Field Dup 2	Solid	8082A
1101215-09	Field Dup 1	Solid	8082A

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101215

PROJECT NARRATIVE

8082A Polychlorinated Biphenyls (PCB)

1101215-02 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101215-05 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101215-08 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101215-09 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: GR1005
Date Sampled: 01/19/11 11:35
Percent Solids: N/A
Initial Volume: 1.3
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101215
ESS Laboratory Sample ID: 1101215-01
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.385)		1	01/30/11 7:36		CA12615
Aroclor 1221	ND (0.385)		1	01/30/11 7:36		CA12615
Aroclor 1232	ND (0.385)		1	01/30/11 7:36		CA12615
Aroclor 1242	ND (0.385)		1	01/30/11 7:36		CA12615
Aroclor 1248	ND (0.385)		1	01/30/11 7:36		CA12615
Aroclor 1254	**8.65** (1.92)		5	02/01/11 9:43		CA12615
Aroclor 1260	ND (0.385)		1	01/30/11 7:36		CA12615
Aroclor 1262	ND (0.385)		1	01/30/11 7:36		CA12615
Aroclor 1268	ND (0.385)		1	01/30/11 7:36		CA12615

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*78 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*87 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*70 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*77 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: GR1006
Date Sampled: 01/19/11 11:13
Percent Solids: N/A
Initial Volume: 1.3
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101215
ESS Laboratory Sample ID: 1101215-02
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (19.2)		50	02/01/11 10:12		CA12615
Aroclor 1221	ND (19.2)		50	02/01/11 10:12		CA12615
Aroclor 1232	ND (19.2)		50	02/01/11 10:12		CA12615
Aroclor 1242	ND (19.2)		50	02/01/11 10:12		CA12615
Aroclor 1248	ND (19.2)		50	02/01/11 10:12		CA12615
Aroclor 1254	**88.3** (19.2)		50	02/01/11 10:12		CA12615
Aroclor 1260	ND (19.2)		50	02/01/11 10:12		CA12615
Aroclor 1262	ND (19.2)		50	02/01/11 10:12		CA12615
Aroclor 1268	ND (19.2)		50	02/01/11 10:12		CA12615

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: OD1001
Date Sampled: 01/19/11 09:30
Percent Solids: N/A
Initial Volume: 2.1
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101215
ESS Laboratory Sample ID: 1101215-03
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.238)		1	01/30/11 11:28		CA12615
Aroclor 1221	ND (0.238)		1	01/30/11 11:28		CA12615
Aroclor 1232	ND (0.238)		1	01/30/11 11:28		CA12615
Aroclor 1242	ND (0.238)		1	01/30/11 11:28		CA12615
Aroclor 1248	ND (0.238)		1	01/30/11 11:28		CA12615
Aroclor 1254	**5.93** (1.19)		5	02/01/11 10:41		CA12615
Aroclor 1260	ND (0.238)		1	01/30/11 11:28		CA12615
Aroclor 1262	ND (0.238)		1	01/30/11 11:28		CA12615
Aroclor 1268	ND (0.238)		1	01/30/11 11:28		CA12615

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*87 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*87 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*66 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*74 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: OD1002
Date Sampled: 01/19/11 09:40
Percent Solids: N/A
Initial Volume: 1.1
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101215
ESS Laboratory Sample ID: 1101215-04
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.455)		1	01/30/11 11:58		CA12615
Aroclor 1221	ND (0.455)		1	01/30/11 11:58		CA12615
Aroclor 1232	ND (0.455)		1	01/30/11 11:58		CA12615
Aroclor 1242	ND (0.455)		1	01/30/11 11:58		CA12615
Aroclor 1248	ND (0.455)		1	01/30/11 11:58		CA12615
Aroclor 1254	**40.5** (4.55)		10	02/01/11 11:10		CA12615
Aroclor 1260	ND (0.455)		1	01/30/11 11:58		CA12615
Aroclor 1262	ND (0.455)		1	01/30/11 11:58		CA12615
Aroclor 1268	ND (0.455)		1	01/30/11 11:58		CA12615

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*102 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*114 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*73 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*83 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: OD1004
Date Sampled: 01/19/11 09:50
Percent Solids: N/A
Initial Volume: 1.8
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101215
ESS Laboratory Sample ID: 1101215-05
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (139)		500	02/01/11 11:39		CA12615
Aroclor 1221	ND (139)		500	02/01/11 11:39		CA12615
Aroclor 1232	ND (139)		500	02/01/11 11:39		CA12615
Aroclor 1242	ND (139)		500	02/01/11 11:39		CA12615
Aroclor 1248	ND (139)		500	02/01/11 11:39		CA12615
Aroclor 1254	**635** (139)		500	02/01/11 11:39		CA12615
Aroclor 1260	ND (139)		500	02/01/11 11:39		CA12615
Aroclor 1262	ND (139)		500	02/01/11 11:39		CA12615
Aroclor 1268	ND (139)		500	02/01/11 11:39		CA12615

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: OD1003
Date Sampled: 01/19/11 09:21
Percent Solids: N/A
Initial Volume: 1.9
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101215
ESS Laboratory Sample ID: 1101215-06
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.263)		1	02/01/11 13:06		CA12615
Aroclor 1221	ND (0.263)		1	02/01/11 13:06		CA12615
Aroclor 1232	ND (0.263)		1	02/01/11 13:06		CA12615
Aroclor 1242	ND (0.263)		1	02/01/11 13:06		CA12615
Aroclor 1248	ND (0.263)		1	02/01/11 13:06		CA12615
Aroclor 1254	ND (0.263)		1	02/01/11 13:06		CA12615
Aroclor 1260	ND (0.263)		1	02/01/11 13:06		CA12615
Aroclor 1262	ND (0.263)		1	02/01/11 13:06		CA12615
Aroclor 1268	ND (0.263)		1	02/01/11 13:06		CA12615

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*63 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*49 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*43 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*46 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: OD1005
Date Sampled: 01/19/11 10:04
Percent Solids: N/A
Initial Volume: 1.7
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101215
ESS Laboratory Sample ID: 1101215-07
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.294)		1	01/30/11 13:25		CA12615
Aroclor 1221	ND (0.294)		1	01/30/11 13:25		CA12615
Aroclor 1232	ND (0.294)		1	01/30/11 13:25		CA12615
Aroclor 1242	ND (0.294)		1	01/30/11 13:25		CA12615
Aroclor 1248	ND (0.294)		1	01/30/11 13:25		CA12615
Aroclor 1254	**1.35** (0.294)		1	01/30/11 13:25		CA12615
Aroclor 1260	ND (0.294)		1	01/30/11 13:25		CA12615
Aroclor 1262	ND (0.294)		1	01/30/11 13:25		CA12615
Aroclor 1268	ND (0.294)		1	01/30/11 13:25		CA12615

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*88 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*88 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*87 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*96 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: Field Dup 2
Date Sampled: 01/19/11 11:53
Percent Solids: N/A
Initial Volume: 1.7
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101215
ESS Laboratory Sample ID: 1101215-08
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (29.4)		100	02/01/11 12:08		CA12615
Aroclor 1221	ND (29.4)		100	02/01/11 12:08		CA12615
Aroclor 1232	ND (29.4)		100	02/01/11 12:08		CA12615
Aroclor 1242	ND (29.4)		100	02/01/11 12:08		CA12615
Aroclor 1248	ND (29.4)		100	02/01/11 12:08		CA12615
Aroclor 1254	**193** (29.4)		100	02/01/11 12:08		CA12615
Aroclor 1260	ND (29.4)		100	02/01/11 12:08		CA12615
Aroclor 1262	ND (29.4)		100	02/01/11 12:08		CA12615
Aroclor 1268	ND (29.4)		100	02/01/11 12:08		CA12615

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: Field Dup 1
Date Sampled: 01/19/11 12:19
Percent Solids: N/A
Initial Volume: 2.5
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101215
ESS Laboratory Sample ID: 1101215-09
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (400)		2000	02/01/11 12:37		CA12615
Aroclor 1221	ND (400)		2000	02/01/11 12:37		CA12615
Aroclor 1232	ND (400)		2000	02/01/11 12:37		CA12615
Aroclor 1242	ND (400)		2000	02/01/11 12:37		CA12615
Aroclor 1248	ND (400)		2000	02/01/11 12:37		CA12615
Aroclor 1254	**3860** (400)		2000	02/01/11 12:37		CA12615
Aroclor 1260	ND (400)		2000	02/01/11 12:37		CA12615
Aroclor 1262	ND (400)		2000	02/01/11 12:37		CA12615
Aroclor 1268	ND (400)		2000	02/01/11 12:37		CA12615

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101215

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CA12615 - 3540										
Blank										
Aroclor 1016	ND	0.0250	mg/kg wet							
Aroclor 1016 (1)	ND	0.0250	mg/kg wet							
Aroclor 1016 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (2)	ND	0.0250	mg/kg wet							
Aroclor 1016 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (3)	ND	0.0250	mg/kg wet							
Aroclor 1016 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (4)	ND	0.0250	mg/kg wet							
Aroclor 1016 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (5)	ND	0.0250	mg/kg wet							
Aroclor 1016 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221	ND	0.0250	mg/kg wet							
Aroclor 1221 (1)	ND	0.0250	mg/kg wet							
Aroclor 1221 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (2)	ND	0.0250	mg/kg wet							
Aroclor 1221 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (3)	ND	0.0250	mg/kg wet							
Aroclor 1221 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (4)	ND	0.0250	mg/kg wet							
Aroclor 1221 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (5)	ND	0.0250	mg/kg wet							
Aroclor 1221 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232	ND	0.0250	mg/kg wet							
Aroclor 1232 (1)	ND	0.0250	mg/kg wet							
Aroclor 1232 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (2)	ND	0.0250	mg/kg wet							
Aroclor 1232 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (3)	ND	0.0250	mg/kg wet							
Aroclor 1232 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (4)	ND	0.0250	mg/kg wet							
Aroclor 1232 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (5)	ND	0.0250	mg/kg wet							
Aroclor 1232 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242	ND	0.0250	mg/kg wet							
Aroclor 1242 (1)	ND	0.0250	mg/kg wet							
Aroclor 1242 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (2)	ND	0.0250	mg/kg wet							
Aroclor 1242 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (3)	ND	0.0250	mg/kg wet							
Aroclor 1242 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (4)	ND	0.0250	mg/kg wet							
Aroclor 1242 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (5)	ND	0.0250	mg/kg wet							
Aroclor 1242 (5) [2C]	ND	0.0250	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101215

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CA12615 - 3540										
Aroclor 1248	ND	0.0250	mg/kg wet							
Aroclor 1248 (1)	ND	0.0250	mg/kg wet							
Aroclor 1248 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (2)	ND	0.0250	mg/kg wet							
Aroclor 1248 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (3)	ND	0.0250	mg/kg wet							
Aroclor 1248 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (4)	ND	0.0250	mg/kg wet							
Aroclor 1248 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (5)	ND	0.0250	mg/kg wet							
Aroclor 1248 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254	ND	0.0250	mg/kg wet							
Aroclor 1254 (1)	ND	0.0250	mg/kg wet							
Aroclor 1254 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (2)	ND	0.0250	mg/kg wet							
Aroclor 1254 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (3)	ND	0.0250	mg/kg wet							
Aroclor 1254 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (4)	ND	0.0250	mg/kg wet							
Aroclor 1254 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (5)	ND	0.0250	mg/kg wet							
Aroclor 1254 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260	ND	0.0250	mg/kg wet							
Aroclor 1260 (1)	ND	0.0250	mg/kg wet							
Aroclor 1260 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (2)	ND	0.0250	mg/kg wet							
Aroclor 1260 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (3)	ND	0.0250	mg/kg wet							
Aroclor 1260 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (4)	ND	0.0250	mg/kg wet							
Aroclor 1260 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (5)	ND	0.0250	mg/kg wet							
Aroclor 1260 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262	ND	0.0250	mg/kg wet							
Aroclor 1262 (1)	ND	0.0250	mg/kg wet							
Aroclor 1262 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (2)	ND	0.0250	mg/kg wet							
Aroclor 1262 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (3)	ND	0.0250	mg/kg wet							
Aroclor 1262 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (4)	ND	0.0250	mg/kg wet							
Aroclor 1262 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (5)	ND	0.0250	mg/kg wet							
Aroclor 1262 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268	ND	0.0250	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101215

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CA12615 - 3540										
Aroclor 1268 (1)	ND	0.0250	mg/kg wet							
Aroclor 1268 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (2)	ND	0.0250	mg/kg wet							
Aroclor 1268 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (3)	ND	0.0250	mg/kg wet							
Aroclor 1268 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (4)	ND	0.0250	mg/kg wet							
Aroclor 1268 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (5)	ND	0.0250	mg/kg wet							
Aroclor 1268 (5) [2C]	ND	0.0250	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0109*		mg/kg wet	*0.01250*		*87*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0107*		mg/kg wet	*0.01250*		*85*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0119*		mg/kg wet	*0.01250*		*95*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0126*		mg/kg wet	*0.01250*		*100*	*30-150*			
LCS										
Aroclor 1016	0.310	0.0250	mg/kg wet	0.2500		124	40-140			
Aroclor 1260	0.301	0.0250	mg/kg wet	0.2500		120	40-140			
Surrogate: Decachlorobiphenyl	*0.0129*		mg/kg wet	*0.01250*		*103*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0128*		mg/kg wet	*0.01250*		*103*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0146*		mg/kg wet	*0.01250*		*117*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0152*		mg/kg wet	*0.01250*		*121*	*30-150*			
LCS Dup										
Aroclor 1016	0.295	0.0250	mg/kg wet	0.2500		118	40-140	5	30	
Aroclor 1260	0.286	0.0250	mg/kg wet	0.2500		115	40-140	5	30	
Surrogate: Decachlorobiphenyl	*0.0127*		mg/kg wet	*0.01250*		*102*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0130*		mg/kg wet	*0.01250*		*104*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0130*		mg/kg wet	*0.01250*		*104*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0142*		mg/kg wet	*0.01250*		*113*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station ESS Laboratory Work Order: 1101215

Notes and Definitions

U	Analyte included in the analysis, but not detected
SD	Surrogate recovery(ies) diluted below the MRL (SD).
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station ESS Laboratory Work Order: 1101215

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/labs/waterlabs-instate.php

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/out_state.pdf

Maine Potable and Non Potable Water: RI0002
http://www.maine.gov/dep/blwq/topic/vessel/lab_list.pdf

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/labcert/labcert.aspx

New Hampshire (NELAP accredited) Potable and Non PotableWater, Solid and Hazardous Waste: 2424
http://www4.egov.nh.gov/des/nhelap/namesearch.asp

New York (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

United States Department of Agriculture Soil Permit: S-54210

Maryland Potable Water: 301
http://www.mde.state.md.us/assets/document/WSP_labs-2009apr20.pdf

South Carolina Volatile Organic Compounds in Potable Water: 78003

New Jersey Potable (VOA) and Non Potable Water (RCRA), Solids and Hazardous Waste: RI002
http://www.nj.gov/dep/oqa/certlabs.htm

Pensylvania Potable and Non Potable Water, Solid and Hazardous Waste: 68-01752
http://files.dep.state.pa.us/RegionalResources/Labs/LabsPortalFiles/2009-0911_accredited_laboratories.pdf

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

Sample and Cooler Receipt Checklist

Client: Envirosense
Client Project ID: _____
Shipped/Delivered Via: ESS Courier

ESS Project ID: 11010215
Date Project Due: 1/31/11
Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present? *** No**
   Air No.:
2. Were Custody Seals Present? **No**
3. Were Custody Seals Intact? **N/A**
4. Is Radiation count < 100 CPM? **Yes**
5. Is a cooler present? **Yes**
   Cooler Temp: **3.3**
   Iced With: **Icepacks**
6. Was COC included with samples? **Yes**
7. Was COC signed and dated by client? **Yes**
8. Does the COC match the sample **Yes**
9. Is COC complete and correct? **Yes**
10. Are the samples properly preserved? **Yes**
11. Proper sample containers used? **Yes**
12. Any air bubbles in the VOA vials? **N/A**
13. Holding times exceeded? **No**
14. Sufficient sample volumes? **Yes**
15. Any Subcontracting needed? **No**
16. Are ESS labels on correct containers? **Yes|No**
17. Were samples received intact? **Yes|No**

ESS Sample IDs: _____
Sub Lab: _____
Analysis: _____
TAT: _____

18. Was there need to call project manager to discuss status? If yes, please explain.

_____

_____

_____

Who was called?: _____ By whom? _____

Sample Number	Properly Preserved	Container Type	# of Containers	Preservative
1	Yes	2 oz Soil Jar	1	NP
2	Yes	2 oz Soil Jar	1	NP
3	Yes	2 oz Soil Jar	1	NP
4	Yes	2 oz Soil Jar	1	NP
5	Yes	2 oz Soil Jar	1	NP
6	Yes	2 oz Soil Jar	1	NP
7	Yes	2 oz Soil Jar	1	NP
8	Yes	2 oz Soil Jar	1	NP
9	Yes	2 oz Soil Jar	1	NP

Completed By: MK Date/Time: 1/24/11
Reviewed By: _____ Date/Time: 1/24/11

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Page 5 of 6 1 of 2 MK 1/24

Turn Time X Standard Other ____
If faster than 5 days, prior approval by laboratory is required # ____
State where samples were collected from: MA RI CT NH NJ NY ME Other ____
Is this project for any of the following: MA-MCP Navy USACE Other ____

Reporting Limits

ESS LAB PROJECT ID 1101215

Electronic Deliverable Yes X No ____
Format: Excel ___ Access ___ PDE X Other ____

Co. Name	Project #	Project Name (20 Char. or less)
EnviroSense, Inc.	07757-08/04	Alewife Pump Station

Contact Person	Address
Russell P. Lagueux	1F Commons Dr. Suite 34

City	State	Zip	PO#
Londonderry	NH	03053	N/A

Telephone #	Fax #	Email Address
603-437-8227	603-437-0500	rlagueux@enviroserse.com

Write Required Analysis

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	8082 w/ Soxhlet Ext.
1	1/19/11	1135		X	SD	GR1005	1	1	G	X
2	1/19/11	1113		X	SD	GR1006	1	1	G	X
3	1/19/11	0930		X	SD	OD1001	1	1	G	X
4	1/19/11	0940		X	SD	OD1002	1	1	G	X
5	1/19/11	0950		X	SD	OD1004	1	1	G	X
6	1/19/11	0921		X	SD	OD1003	1	1	G	X
7	1/19/11	1004		X	SD	OD1005	1	1	G	X
8	1/19/11	1153		X	SD	Field Dup 2	1	1	G	X
	~~1/19/11~~	~~1219~~		~~X~~	~~SD~~	~~SC1007~~	~~1~~	~~1~~	~~G~~	~~X~~
	~~1/19/11~~	~~1303~~		~~X~~	~~SD~~	~~SC1008~~	~~1~~	~~1~~	~~G~~	~~X~~

Container Type: P-Poly G-Glass S-Sterile V-VOA | Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No Internal Use Only
Seals Intact ___ Yes ___ No NA: ___ [~~] Pickup~~
Cooler Temp: 3.3° [ ] Technicians ____

Preservation Code 1- NP, 2- HC1, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- ____
Sampled by: Marshall Gibson / Tom O'Dowd
Comments:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	1/19/11 1530	ESI Cold Strg	1/19/11 1530	ESI Cold Strg	1/24/11 1147	[signature]	1/24/11 1147
[signature]	1/24/11 1446	[signature]	1/24/11 1500				

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Page ~~6~~ 2 of ~~6~~ 2

Turn Time X Standard Other ____
If faster than 5 days, prior approval by laboratory is required # ____
State where samples were collected from:
MA RI CT NH NJ NY ME Other ____
Is this project for any of the following:
MA-MCP Navy USACE Other ____

Reporting Limits

ESS LAB PROJECT ID 1101215 MK 1/24/11

Electronic Deliverable Yes X No ____
Format: Excel ___ Access ___ PDE X Other ____

Co. Name	Project #	Project Name (20 Char. or less)
EnviroSense, Inc.	07757-03/041	Alewife Pump Station

Contact Person	Address
Russell P. Lagueux	1F Commons Dr. Suite 34

City	State	Zip	PO#
Londonderry	NH	03053	N/A

Telephone #	Fax #	Email Address
603-437-8227	603-437-0500	rlagueux@envirosense.com

Write Required Analysis

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	8082 / Soxhlet Ext. via 3540C
9	1/19/11	1219		X	SD	Field Dup 1	1	1	G	X

Container Type: P-Poly G-Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No
Seals Intact ___ Yes ___ No NA: ✓
Cooler Temp: 33°

Internal Use Only
[✓] Pickup
[ ] Technicians ____

Preservation Code 1- NP, 2- HC1, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- ____

Sampled by: Marshall Gibson / Tom O'Dond

Comments:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	1/19/11 1530	ESI Cold Strg	1/19/11 1530	ESI Cold Strg MEX	1/24/11 1147	[signature]	1/24/11 1147
[signature]	1/24/11 1446	Maria Keenan	1/24/11 1500				

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

CERTIFICATE OF ANALYSIS

Russell Lagueux
EnviroSense, Inc.
1F Commons Drive
Londonderry, NH 03053

RE: Alewife Pump Station (07757-03/014)
ESS Laboratory Work Order Number: 1101214

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

ESS Laboratory certifies that the test results meet the requirements of NELAC and A2LA, except where noted within this project narrative.

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101214

SAMPLE RECEIPT

The following samples were received on January 24, 2011 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	SampleName	Matrix	Analysis
1101214-01	SC1005	Solid	8082A
1101214-02	SC1006	Solid	8082A
1101214-03	SC1011	Solid	8082A
1101214-04	MR1001	Solid	8082A
1101214-05	MR1002	Solid	8082A
1101214-06	MR1004	Solid	8082A
1101214-07	PR1002	Solid	8082A
1101214-08	HL1001	Solid	8082A
1101214-09	SC1008	Solid	8082A
1101214-10	SC1007	Solid	8082A
1101214-11	SR1002	Solid	8082A
1101214-12	SR1003	Solid	8082A
1101214-13	SR1004	Solid	8082A
1101214-14	SR1005	Solid	8082A
1101214-15	BR1004	Solid	8082A
1101214-16	BR1001	Solid	8082A
1101214-17	BR1002	Solid	8082A
1101214-18	GR1001	Solid	8082A
1101214-19	SR1001	Solid	8082A
1101214-20	GR1002	Solid	8082A

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101214

PROJECT NARRATIVE

8082A Polychlorinated Biphenyls (PCB)

1101214-02 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-04 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-05 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-06 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-07 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-09 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-10 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-11 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-12 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-13 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-14 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-15 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

1101214-18 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station ESS Laboratory Work Order: 1101214

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SC1005
Date Sampled: 01/18/11 13:25
Percent Solids: N/A
Initial Volume: 1.7
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-01
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.294)		1	01/29/11 17:33		CA12513
Aroclor 1221	ND (0.294)		1	01/29/11 17:33		CA12513
Aroclor 1232	ND (0.294)		1	01/29/11 17:33		CA12513
Aroclor 1242	ND (0.294)		1	01/29/11 17:33		CA12513
Aroclor 1248	ND (0.294)		1	01/29/11 17:33		CA12513
Aroclor 1254	**32.2** (2.94)		10	02/01/11 19:24		CA12513
Aroclor 1260	ND (0.294)		1	01/29/11 17:33		CA12513
Aroclor 1262	ND (0.294)		1	01/29/11 17:33		CA12513
Aroclor 1268	ND (0.294)		1	01/29/11 17:33		CA12513

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*69 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*73 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*77 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*80 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SC1006
Date Sampled: 01/18/11 13:52
Percent Solids: N/A
Initial Volume: 1.1
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-02
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/25/11 15:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (2270)		5000	02/01/11 19:54		CA12513
Aroclor 1221	ND (2270)		5000	02/01/11 19:54		CA12513
Aroclor 1232	ND (2270)		5000	02/01/11 19:54		CA12513
Aroclor 1242	ND (2270)		5000	02/01/11 19:54		CA12513
Aroclor 1248	ND (2270)		5000	02/01/11 19:54		CA12513
Aroclor 1254	**7440** (2270)		5000	02/01/11 19:54		CA12513
Aroclor 1260	ND (2270)		5000	02/01/11 19:54		CA12513
Aroclor 1262	ND (2270)		5000	02/01/11 19:54		CA12513
Aroclor 1268	ND (2270)		5000	02/01/11 19:54		CA12513

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SC1011
Date Sampled: 01/18/11 13:40
Percent Solids: N/A
Initial Volume: 1.3
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-03
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.385)		1	02/01/11 14:05		CA12513
Aroclor 1221	ND (0.385)		1	02/01/11 14:05		CA12513
Aroclor 1232	ND (0.385)		1	02/01/11 14:05		CA12513
Aroclor 1242	ND (0.385)		1	02/01/11 14:05		CA12513
Aroclor 1248	ND (0.385)		1	02/01/11 14:05		CA12513
Aroclor 1254	**3.46** (0.385)		1	02/01/11 14:05		CA12513
Aroclor 1260	ND (0.385)		1	02/01/11 14:05		CA12513
Aroclor 1262	ND (0.385)		1	02/01/11 14:05		CA12513
Aroclor 1268	ND (0.385)		1	02/01/11 14:05		CA12513

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*65 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*78 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*79 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*83 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1001
Date Sampled: 01/19/11 09:28
Percent Solids: N/A
Initial Volume: 1
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-04
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (10.0)		20	02/01/11 20:23		CA12513
Aroclor 1221	ND (10.0)		20	02/01/11 20:23		CA12513
Aroclor 1232	ND (10.0)		20	02/01/11 20:23		CA12513
Aroclor 1242	ND (10.0)		20	02/01/11 20:23		CA12513
Aroclor 1248	ND (10.0)		20	02/01/11 20:23		CA12513
Aroclor 1254	**87.7** (10.0)		20	02/01/11 20:23		CA12513
Aroclor 1260	ND (10.0)		20	02/01/11 20:23		CA12513
Aroclor 1262	ND (10.0)		20	02/01/11 20:23		CA12513
Aroclor 1268	ND (10.0)		20	02/01/11 20:23		CA12513

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1002
Date Sampled: 01/19/11 09:46
Percent Solids: N/A
Initial Volume: 1.1
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-05
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (2270)		5000	02/01/11 20:52		CA12513
Aroclor 1221	ND (2270)		5000	02/01/11 20:52		CA12513
Aroclor 1232	ND (2270)		5000	02/01/11 20:52		CA12513
Aroclor 1242	ND (2270)		5000	02/01/11 20:52		CA12513
Aroclor 1248	ND (2270)		5000	02/01/11 20:52		CA12513
Aroclor 1254	**6410** (2270)		5000	02/01/11 20:52		CA12513
Aroclor 1260	ND (2270)		5000	02/01/11 20:52		CA12513
Aroclor 1262	ND (2270)		5000	02/01/11 20:52		CA12513
Aroclor 1268	ND (2270)		5000	02/01/11 20:52		CA12513

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: MR1004
Date Sampled: 01/19/11 10:05
Percent Solids: N/A
Initial Volume: 1.2
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-06
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (417)		1000	02/01/11 21:21		CA12513
Aroclor 1221	ND (417)		1000	02/01/11 21:21		CA12513
Aroclor 1232	ND (417)		1000	02/01/11 21:21		CA12513
Aroclor 1242	ND (417)		1000	02/01/11 21:21		CA12513
Aroclor 1248	ND (417)		1000	02/01/11 21:21		CA12513
Aroclor 1254	**2990** (417)		1000	02/01/11 21:21		CA12513
Aroclor 1260	ND (417)		1000	02/01/11 21:21		CA12513
Aroclor 1262	ND (417)		1000	02/01/11 21:21		CA12513
Aroclor 1268	ND (417)		1000	02/01/11 21:21		CA12513

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*%*	*SD*	*30-150*
Surrogate: Decachlorobiphenyl [2C]	*%*	*SD*	*30-150*
Surrogate: Tetrachloro-m-xylene	*%*	*SD*	*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*%*	*SD*	*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: PR1002
Date Sampled: 01/19/11 10:50
Percent Solids: N/A
Initial Volume: 2.6
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-07
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (1920)		10000	02/01/11 21:50		CA12513
Aroclor 1221	ND (1920)		10000	02/01/11 21:50		CA12513
Aroclor 1232	ND (1920)		10000	02/01/11 21:50		CA12513
Aroclor 1242	ND (1920)		10000	02/01/11 21:50		CA12513
Aroclor 1248	ND (1920)		10000	02/01/11 21:50		CA12513
Aroclor 1254	**18500** (1920)		10000	02/01/11 21:50		CA12513
Aroclor 1260	ND (1920)		10000	02/01/11 21:50		CA12513
Aroclor 1262	ND (1920)		10000	02/01/11 21:50		CA12513
Aroclor 1268	ND (1920)		10000	02/01/11 21:50		CA12513

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: HL1001
Date Sampled: 01/19/11 10:40
Percent Solids: N/A
Initial Volume: 3.8
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-08
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.132)		1	02/01/11 15:03		CA12513
Aroclor 1221	ND (0.132)		1	02/01/11 15:03		CA12513
Aroclor 1232	ND (0.132)		1	02/01/11 15:03		CA12513
Aroclor 1242	ND (0.132)		1	02/01/11 15:03		CA12513
Aroclor 1248	ND (0.132)		1	02/01/11 15:03		CA12513
Aroclor 1254	**21.8** (1.32)		10	02/01/11 22:19		CA12513
Aroclor 1260	ND (0.132)		1	02/01/11 15:03		CA12513
Aroclor 1262	ND (0.132)		1	02/01/11 15:03		CA12513
Aroclor 1268	ND (0.132)		1	02/01/11 15:03		CA12513

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*75 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*82 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*78 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*88 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SC1008
Date Sampled: 01/19/11 13:03
Percent Solids: N/A
Initial Volume: 0.9
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-09
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (556)		1000	02/01/11 22:48		CA12513
Aroclor 1221	ND (556)		1000	02/01/11 22:48		CA12513
Aroclor 1232	ND (556)		1000	02/01/11 22:48		CA12513
Aroclor 1242	ND (556)		1000	02/01/11 22:48		CA12513
Aroclor 1248	ND (556)		1000	02/01/11 22:48		CA12513
Aroclor 1254	**3010** (556)		1000	02/01/11 22:48		CA12513
Aroclor 1260	ND (556)		1000	02/01/11 22:48		CA12513
Aroclor 1262	ND (556)		1000	02/01/11 22:48		CA12513
Aroclor 1268	ND (556)		1000	02/01/11 22:48		CA12513

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*%*	*SD*	*30-150*
Surrogate: Decachlorobiphenyl [2C]	*%*	*SD*	*30-150*
Surrogate: Tetrachloro-m-xylene	*%*	*SD*	*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*%*	*SD*	*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SC1007
Date Sampled: 01/19/11 12:19
Percent Solids: N/A
Initial Volume: 3.6
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-10
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (1390)		10000	02/01/11 23:17		CA12513
Aroclor 1221	ND (1390)		10000	02/01/11 23:17		CA12513
Aroclor 1232	ND (1390)		10000	02/01/11 23:17		CA12513
Aroclor 1242	ND (1390)		10000	02/01/11 23:17		CA12513
Aroclor 1248	ND (1390)		10000	02/01/11 23:17		CA12513
Aroclor 1254	**7010** (1390)		10000	02/01/11 23:17		CA12513
Aroclor 1260	ND (1390)		10000	02/01/11 23:17		CA12513
Aroclor 1262	ND (1390)		10000	02/01/11 23:17		CA12513
Aroclor 1268	ND (1390)		10000	02/01/11 23:17		CA12513

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SR1002
Date Sampled: 01/19/11 08:50
Percent Solids: N/A
Initial Volume: 3.9
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-11
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (64.1)		500	02/01/11 23:46		CA12513
Aroclor 1221	ND (64.1)		500	02/01/11 23:46		CA12513
Aroclor 1232	ND (64.1)		500	02/01/11 23:46		CA12513
Aroclor 1242	ND (64.1)		500	02/01/11 23:46		CA12513
Aroclor 1248	ND (64.1)		500	02/01/11 23:46		CA12513
Aroclor 1254	**356** (64.1)		500	02/01/11 23:46		CA12513
Aroclor 1260	ND (64.1)		500	02/01/11 23:46		CA12513
Aroclor 1262	ND (64.1)		500	02/01/11 23:46		CA12513
Aroclor 1268	ND (64.1)		500	02/01/11 23:46		CA12513

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*%*	*SD*	*30-150*
Surrogate: Decachlorobiphenyl [2C]	*%*	*SD*	*30-150*
Surrogate: Tetrachloro-m-xylene	*%*	*SD*	*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*%*	*SD*	*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SR1003
Date Sampled: 01/19/11 08:55
Percent Solids: N/A
Initial Volume: 8.7
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-12
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (115)		2000	02/02/11 0:15		CA12513
Aroclor 1221	ND (115)		2000	02/02/11 0:15		CA12513
Aroclor 1232	ND (115)		2000	02/02/11 0:15		CA12513
Aroclor 1242	ND (115)		2000	02/02/11 0:15		CA12513
Aroclor 1248	ND (115)		2000	02/02/11 0:15		CA12513
Aroclor 1254	**612** (115)		2000	02/02/11 0:15		CA12513
Aroclor 1260	ND (115)		2000	02/02/11 0:15		CA12513
Aroclor 1262	ND (115)		2000	02/02/11 0:15		CA12513
Aroclor 1268	ND (115)		2000	02/02/11 0:15		CA12513

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SR1004
Date Sampled: 01/19/11 09:04
Percent Solids: N/A
Initial Volume: 1.8
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-13
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (278)		1000	02/02/11 0:44		CA12513
Aroclor 1221	ND (278)		1000	02/02/11 0:44		CA12513
Aroclor 1232	ND (278)		1000	02/02/11 0:44		CA12513
Aroclor 1242	ND (278)		1000	02/02/11 0:44		CA12513
Aroclor 1248	ND (278)		1000	02/02/11 0:44		CA12513
Aroclor 1254	**1480** (278)		1000	02/02/11 0:44		CA12513
Aroclor 1260	ND (278)		1000	02/02/11 0:44		CA12513
Aroclor 1262	ND (278)		1000	02/02/11 0:44		CA12513
Aroclor 1268	ND (278)		1000	02/02/11 0:44		CA12513

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SR1005
Date Sampled: 01/19/11 09:10
Percent Solids: N/A
Initial Volume: 4.5
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-14
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (111)		1000	02/02/11 1:14		CA12513
Aroclor 1221	ND (111)		1000	02/02/11 1:14		CA12513
Aroclor 1232	ND (111)		1000	02/02/11 1:14		CA12513
Aroclor 1242	ND (111)		1000	02/02/11 1:14		CA12513
Aroclor 1248	ND (111)		1000	02/02/11 1:14		CA12513
Aroclor 1254	**1850** (111)		1000	02/02/11 1:14		CA12513
Aroclor 1260	ND (111)		1000	02/02/11 1:14		CA12513
Aroclor 1262	ND (111)		1000	02/02/11 1:14		CA12513
Aroclor 1268	ND (111)		1000	02/02/11 1:14		CA12513

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: BR1004
Date Sampled: 01/19/11 10:30
Percent Solids: N/A
Initial Volume: 2.8
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-15
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (3.57)		20	02/02/11 1:43		CA12513
Aroclor 1221	ND (3.57)		20	02/02/11 1:43		CA12513
Aroclor 1232	ND (3.57)		20	02/02/11 1:43		CA12513
Aroclor 1242	ND (3.57)		20	02/02/11 1:43		CA12513
Aroclor 1248	ND (3.57)		20	02/02/11 1:43		CA12513
Aroclor 1254	**45.4** (3.57)		20	02/02/11 1:43		CA12513
Aroclor 1260	ND (3.57)		20	02/02/11 1:43		CA12513
Aroclor 1262	ND (3.57)		20	02/02/11 1:43		CA12513
Aroclor 1268	ND (3.57)		20	02/02/11 1:43		CA12513

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: BR1001
Date Sampled: 01/19/11 11:15
Percent Solids: N/A
Initial Volume: 2.7
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-16
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.185)		1	02/01/11 16:01		CA12513
Aroclor 1221	ND (0.185)		1	02/01/11 16:01		CA12513
Aroclor 1232	ND (0.185)		1	02/01/11 16:01		CA12513
Aroclor 1242	ND (0.185)		1	02/01/11 16:01		CA12513
Aroclor 1248	ND (0.185)		1	02/01/11 16:01		CA12513
Aroclor 1254	**3.67** (0.185)		1	02/01/11 16:01		CA12513
Aroclor 1260	ND (0.185)		1	02/01/11 16:01		CA12513
Aroclor 1262	ND (0.185)		1	02/01/11 16:01		CA12513
Aroclor 1268	ND (0.185)		1	02/01/11 16:01		CA12513

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*97 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*100 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*97 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*106 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: BR1002
Date Sampled: 01/19/11 11:29
Percent Solids: N/A
Initial Volume: 1.2
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-17
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.417)		1	01/30/11 5:39		CA12513
Aroclor 1221	ND (0.417)		1	01/30/11 5:39		CA12513
Aroclor 1232	ND (0.417)		1	01/30/11 5:39		CA12513
Aroclor 1242	ND (0.417)		1	01/30/11 5:39		CA12513
Aroclor 1248	ND (0.417)		1	01/30/11 5:39		CA12513
Aroclor 1254	**3.57** (0.417)		1	01/30/11 5:39		CA12513
Aroclor 1260	ND (0.417)		1	01/30/11 5:39		CA12513
Aroclor 1262	ND (0.417)		1	01/30/11 5:39		CA12513
Aroclor 1268	ND (0.417)		1	01/30/11 5:39		CA12513

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*85 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*92 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*85 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*92 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: GR1001
Date Sampled: 01/19/11 10:14
Percent Solids: N/A
Initial Volume: 4.8
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-18
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (52.1)		500	02/02/11 2:12		CA12513
Aroclor 1221	ND (52.1)		500	02/02/11 2:12		CA12513
Aroclor 1232	ND (52.1)		500	02/02/11 2:12		CA12513
Aroclor 1242	ND (52.1)		500	02/02/11 2:12		CA12513
Aroclor 1248	ND (52.1)		500	02/02/11 2:12		CA12513
Aroclor 1254	**356** (52.1)		500	02/02/11 2:12		CA12513
Aroclor 1260	ND (52.1)		500	02/02/11 2:12		CA12513
Aroclor 1262	ND (52.1)		500	02/02/11 2:12		CA12513
Aroclor 1268	ND (52.1)		500	02/02/11 2:12		CA12513

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	%	SD	30-150
Surrogate: Decachlorobiphenyl [2C]	%	SD	30-150
Surrogate: Tetrachloro-m-xylene	%	SD	30-150
Surrogate: Tetrachloro-m-xylene [2C]	%	SD	30-150

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: SR1001
Date Sampled: 01/19/11 11:03
Percent Solids: N/A
Initial Volume: 3.1
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-19
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.161)		1	01/30/11 6:38		CA12513
Aroclor 1221	ND (0.161)		1	01/30/11 6:38		CA12513
Aroclor 1232	ND (0.161)		1	01/30/11 6:38		CA12513
Aroclor 1242	ND (0.161)		1	01/30/11 6:38		CA12513
Aroclor 1248	ND (0.161)		1	01/30/11 6:38		CA12513
Aroclor 1254	**16.6** (1.61)		10	02/02/11 2:41		CA12513
Aroclor 1260	ND (0.161)		1	01/30/11 6:38		CA12513
Aroclor 1262	ND (0.161)		1	01/30/11 6:38		CA12513
Aroclor 1268	ND (0.161)		1	01/30/11 6:38		CA12513

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*87 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*93 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*79 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*89 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station
Client Sample ID: GR1002
Date Sampled: 01/19/11 11:50
Percent Solids: N/A
Initial Volume: 2.2
Final Volume: 5
Extraction Method: 3540

ESS Laboratory Work Order: 1101214
ESS Laboratory Sample ID: 1101214-20
Sample Matrix: Solid
Units: mg/kg wet
Analyst: SEP
Prepared: 1/26/11 14:30
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.227)		1	01/30/11 7:07		CA12513
Aroclor 1221	ND (0.227)		1	01/30/11 7:07		CA12513
Aroclor 1232	ND (0.227)		1	01/30/11 7:07		CA12513
Aroclor 1242	ND (0.227)		1	01/30/11 7:07		CA12513
Aroclor 1248	ND (0.227)		1	01/30/11 7:07		CA12513
Aroclor 1254	**8.94** (1.14)		5	02/02/11 3:10		CA12513
Aroclor 1260	ND (0.227)		1	01/30/11 7:07		CA12513
Aroclor 1262	ND (0.227)		1	01/30/11 7:07		CA12513
Aroclor 1268	ND (0.227)		1	01/30/11 7:07		CA12513

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*76 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*82 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*77 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*85 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101214

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CA12513 - 3540										
Blank										
Aroclor 1016	ND	0.0250	mg/kg wet							
Aroclor 1016 (1)	ND	0.0250	mg/kg wet							
Aroclor 1016 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (2)	ND	0.0250	mg/kg wet							
Aroclor 1016 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (3)	ND	0.0250	mg/kg wet							
Aroclor 1016 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (4)	ND	0.0250	mg/kg wet							
Aroclor 1016 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1016 (5)	ND	0.0250	mg/kg wet							
Aroclor 1016 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221	ND	0.0250	mg/kg wet							
Aroclor 1221 (1)	ND	0.0250	mg/kg wet							
Aroclor 1221 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (2)	ND	0.0250	mg/kg wet							
Aroclor 1221 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (3)	ND	0.0250	mg/kg wet							
Aroclor 1221 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (4)	ND	0.0250	mg/kg wet							
Aroclor 1221 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1221 (5)	ND	0.0250	mg/kg wet							
Aroclor 1221 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232	ND	0.0250	mg/kg wet							
Aroclor 1232 (1)	ND	0.0250	mg/kg wet							
Aroclor 1232 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (2)	ND	0.0250	mg/kg wet							
Aroclor 1232 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (3)	ND	0.0250	mg/kg wet							
Aroclor 1232 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (4)	ND	0.0250	mg/kg wet							
Aroclor 1232 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1232 (5)	ND	0.0250	mg/kg wet							
Aroclor 1232 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242	ND	0.0250	mg/kg wet							
Aroclor 1242 (1)	ND	0.0250	mg/kg wet							
Aroclor 1242 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (2)	ND	0.0250	mg/kg wet							
Aroclor 1242 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (3)	ND	0.0250	mg/kg wet							
Aroclor 1242 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (4)	ND	0.0250	mg/kg wet							
Aroclor 1242 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1242 (5)	ND	0.0250	mg/kg wet							
Aroclor 1242 (5) [2C]	ND	0.0250	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101214

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CA12513 - 3540										
Aroclor 1248	ND	0.0250	mg/kg wet							
Aroclor 1248 (1)	ND	0.0250	mg/kg wet							
Aroclor 1248 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (2)	ND	0.0250	mg/kg wet							
Aroclor 1248 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (3)	ND	0.0250	mg/kg wet							
Aroclor 1248 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (4)	ND	0.0250	mg/kg wet							
Aroclor 1248 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1248 (5)	ND	0.0250	mg/kg wet							
Aroclor 1248 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254	ND	0.0250	mg/kg wet							
Aroclor 1254 (1)	ND	0.0250	mg/kg wet							
Aroclor 1254 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (2)	ND	0.0250	mg/kg wet							
Aroclor 1254 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (3)	ND	0.0250	mg/kg wet							
Aroclor 1254 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (4)	ND	0.0250	mg/kg wet							
Aroclor 1254 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1254 (5)	ND	0.0250	mg/kg wet							
Aroclor 1254 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260	ND	0.0250	mg/kg wet							
Aroclor 1260 (1)	ND	0.0250	mg/kg wet							
Aroclor 1260 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (2)	ND	0.0250	mg/kg wet							
Aroclor 1260 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (3)	ND	0.0250	mg/kg wet							
Aroclor 1260 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (4)	ND	0.0250	mg/kg wet							
Aroclor 1260 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1260 (5)	ND	0.0250	mg/kg wet							
Aroclor 1260 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262	ND	0.0250	mg/kg wet							
Aroclor 1262 (1)	ND	0.0250	mg/kg wet							
Aroclor 1262 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (2)	ND	0.0250	mg/kg wet							
Aroclor 1262 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (3)	ND	0.0250	mg/kg wet							
Aroclor 1262 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (4)	ND	0.0250	mg/kg wet							
Aroclor 1262 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1262 (5)	ND	0.0250	mg/kg wet							
Aroclor 1262 (5) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268	ND	0.0250	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station

ESS Laboratory Work Order: 1101214

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CA12513 - 3540										
Aroclor 1268 (1)	ND	0.0250	mg/kg wet							
Aroclor 1268 (1) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (2)	ND	0.0250	mg/kg wet							
Aroclor 1268 (2) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (3)	ND	0.0250	mg/kg wet							
Aroclor 1268 (3) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (4)	ND	0.0250	mg/kg wet							
Aroclor 1268 (4) [2C]	ND	0.0250	mg/kg wet							
Aroclor 1268 (5)	ND	0.0250	mg/kg wet							
Aroclor 1268 (5) [2C]	ND	0.0250	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0116*		mg/kg wet	*0.01250*		*93*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0112*		mg/kg wet	*0.01250*		*90*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0122*		mg/kg wet	*0.01250*		*98*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0128*		mg/kg wet	*0.01250*		*102*	*30-150*			
LCS										
Aroclor 1016	0.273	0.0250	mg/kg wet	0.2500		109	40-140			
Aroclor 1260	0.278	0.0250	mg/kg wet	0.2500		111	40-140			
Surrogate: Decachlorobiphenyl	*0.0118*		mg/kg wet	*0.01250*		*94*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0111*		mg/kg wet	*0.01250*		*89*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0124*		mg/kg wet	*0.01250*		*99*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0128*		mg/kg wet	*0.01250*		*102*	*30-150*			
LCS Dup										
Aroclor 1016	0.305	0.0250	mg/kg wet	0.2500		122	40-140	11	30	
Aroclor 1260	0.317	0.0250	mg/kg wet	0.2500		127	40-140	13	30	
Surrogate: Decachlorobiphenyl	*0.0144*		mg/kg wet	*0.01250*		*116*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0132*		mg/kg wet	*0.01250*		*106*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0145*		mg/kg wet	*0.01250*		*116*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0150*		mg/kg wet	*0.01250*		*120*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station ESS Laboratory Work Order: 1101214

Notes and Definitions

U	Analyte included in the analysis, but not detected
SD	Surrogate recovery(ies) diluted below the MRL (SD).
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte

CERTIFICATE OF ANALYSIS

Client Name: EnviroSense, Inc.
Client Project ID: Alewife Pump Station ESS Laboratory Work Order: 1101214

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/labs/waterlabs-instate.php

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/out_state.pdf

Maine Potable and Non Potable Water: RI0002
http://www.maine.gov/dep/blwq/topic/vessel/lab_list.pdf

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/labcert/labcert.aspx

New Hampshire (NELAP accredited) Potable and Non PotableWater, Solid and Hazardous Waste: 2424
http://www4.egov.nh.gov/des/nhelap/namesearch.asp

New York (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

United States Department of Agriculture Soil Permit: S-54210

Maryland Potable Water: 301
http://www.mde.state.md.us/assets/document/WSP_labs-2009apr20.pdf

South Carolina Volatile Organic Compounds in Potable Water: 78003

New Jersey Potable (VOA) and Non Potable Water (RCRA), Solids and Hazardous Waste: RI002
http://www.nj.gov/dep/oqa/certlabs.htm

Pensylvania Potable and Non Potable Water, Solid and Hazardous Waste: 68-01752
http://files.dep.state.pa.us/RegionalResources/Labs/LabsPortalFiles/2009-0911_accredited_laboratories.pdf

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

Sample and Cooler Receipt Checklist

Client: Envirosense
Client Project ID: _____
Shipped/Delivered Via: ESS Courier

ESS Project ID: 11010214
Date Project Due: 1/31/11
Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present? * No
   Air No.:
2. Were Custody Seals Present? No
3. Were Custody Seals Intact? N/A
4. Is Radiation count < 100 CPM? Yes
5. Is a cooler present? Yes
   Cooler Temp: **3.3**
   Iced With: **Icepacks**
6. Was COC included with samples? Yes
7. Was COC signed and dated by client? Yes
8. Does the COC match the sample Yes
9. Is COC complete and correct? Yes
10. Are the samples properly preserved? Yes
11. Proper sample containers used? Yes
12. Any air bubbles in the VOA vials? N/A
13. Holding times exceeded? No
14. Sufficient sample volumes? Yes
15. Any Subcontracting needed? No
16. Are ESS labels on correct containers? Yes | No
17. Were samples received intact? Yes | No
    ESS Sample IDs: _____
    Sub Lab: _____
    Analysis: _____
    TAT: _____

18. Was there need to call project manager to discuss status? If yes, please explain.

_____

_____

_____

Who was called?: _____ By whom? _____

Sample Number	Properly Preserved	Container Type	# of Containers	Preservative
1	Yes	2 oz Soil Jar	1	NP
2	Yes	2 oz Soil Jar	1	NP
3	Yes	2 oz Soil Jar	1	NP
4	Yes	2 oz Soil Jar	1	NP
5	Yes	2 oz Soil Jar	1	NP
6	Yes	2 oz Soil Jar	1	NP
7	Yes	2 oz Soil Jar	1	NP
8	Yes	2 oz Soil Jar	1	NP
9	Yes	2 oz Soil Jar	1	NP
10	Yes	2 oz Soil Jar	1	NP
11	Yes	2 oz Soil Jar	1	NP
12	Yes	2 oz Soil Jar	1	NP
13	Yes	2 oz Soil Jar	1	NP
14	Yes	2 oz Soil Jar	1	NP
15	Yes	2 oz Soil Jar	1	NP
16	Yes	2 oz Soil Jar	1	NP
17	Yes	2 oz Soil Jar	1	NP
18	Yes	2 oz Soil Jar	1	NP
19	Yes	2 oz Soil Jar	1	NP
20	Yes	2 oz Soil Jar	1	NP

Completed By: MK Date/Time: 1/24/11
Reviewed By: _____ Date/Time: 1/24/11

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

1 of 2 mk
Page 3 of 6 1/24

Turn Time X Standard Other ____
If faster than 5 days, prior approval by laboratory is required # ____
State where samples were collected from: MA RI CT NH NJ NY ME Other ____
Is this project for any of the following: MA-MCP Navy USACE Other ____

Reporting Limits

ESS LAB PROJECT ID: 110214

Electronic Deliverable Yes X No ____
Format: Excel __ Access __ PDF X Other ____

Co. Name	Project #	Project Name (20 Char. or less)
EnviroSense, Inc.	07757-08/014	Alewife Pump Station

Contact Person	Address
Russell P. Lagueux	1F Commons Dr, Suite 34

City	State	Zip	PO#
Londonderry	NH	03053	N/A

Telephone #	Fax #	Email Address
603-437-8227	603-437-0500	rlagueux@envirosense.com

Write Required Analysis: 8082 w/ Soxhlet Ext. via 3540C

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	8082 w/ Soxhlet Ext. via 3540C
1	1/18/11	1325		X	SD	SC1005	1	1	G	X
2	1/18/11	1352		X	SD	SC1006	1	1	G	X
3	1/18/11	1340		X	SD	SC1011	1	1	G	X
4	1/19/11	0928		X	SD	MR1001	1	1	G	X
5	1/19/11	0946		X	SD	MR1002	1	1	G	X
6	1/19/11	1005		X	SD	MR1004	1	1	G	X
7	1/19/11	1050		X	SD	PR1002	1	1	G	X
8	1/19/11	1040		X	SD	HL1001	1	1	G	X
9	1/19/11	1303		X	SD	SC1008	1	1	G	X
10	1/19/11	1219		X	SD	SC1007	1	1	G	X

Container Type: P-Poly G-Glass S-Sterile V-VOA
Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No
Internal Use Only
Seals Intact ___ Yes ___ No NA: ✓ [ ] Pickup
Cooler Temp: 3.3°
[ ] Technicians ____

Preservation Code 1- NP, 2- HC1, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- ____
Sampled by: Marshall Gibson & Tom O'Dowd
Comments:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	1/19/11 1530	ESI Cold Strg	1/19/11 1530	ESI Cold Strg MW	1/24/11 1147	[signature]	1/24/11 1147
[signature]	1/24/11 1446	Manal Keema	1/24/11 1500				

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time X Standard Other _____
If faster than 5 days, prior approval by laboratory is required # _____

State where samples were collected from:
(MA) RI CT NH NJ NY ME Other _____

Is this project for any of the following:
MA-MCP Navy USACE Other _____

Reporting Limits

ESS LAB PROJECT ID: 1101214

Electronic Deliverable Yes X No ___
Format: Excel ___ Access ___ PDF X Other _____

Co. Name	Project #	Project Name (20 Char. or less)
EnviroSense, Inc.	07757-03/04	Alewife Pump Station

Contact Person	Address
Russell P. Laqueux	1F Commons Dr. Suite 34

City	State	Zip	PO#
Londonderry	NH	03053	N/A

Telephone #	Fax #	Email Address
603-437-8227	603-437-0500	rlaqueux@envirosense.com

Write Required Analysis: Soxhlet Extraction via 3540C (8082)

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers
11	1/19/11	0850		X	SD	SR1002	1	1	G
12	1/19/11	0855		X	SD	SR1003	1	1	G
13	1/19/11	0904		X	SD	SR1004	1	1	G
14	1/19/11	0910		X	SD	SR1005	1	1	G
15	1/19/11	1030		X	SD	BR1004	1	1	G
16	1/19/11	1115		X	SD	BR1001	1	1	G
17	1/19/11	1129		X	SD	BR1002	1	1	G
18	1/19/11	1014		X	SD	GR1001	1	1	G
19	1/19/11	1103		X	SD	SR1001	1	1	G
20	1/19/11	1150		X	SD	GR1002	1	1	G

Container Type: P-Poly G-Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ___ Yes ___ No

Seals Intact ___ Yes ___ No NA: ✓

Cooler Temp: 3.3°

Internal Use Only
[ ] Pickup
[ ] Technicians _____

Preservation Code 1- NP, 2- HCl, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- _____

Sampled by: Marshall Gibson / Tom O'Dowd

Comments:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	1/19/11 1530	ESI Cold Store	1/19/11 1530	ESI Cold Store	1/24/11 1147	[signature]	1/24/11 1147
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	1/24/11 1446	[signature]	1/24/11 1500				

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

ANALYTICAL REPORT

Job Number: 360-32605-1

Job Description: 07757-08/014

For:
Envirosense
1F Commons Drive, Suite 34
Londonderry, NH 03053

Attention: Mr. Russ Lagueux

Approved for release.
Joe Chimi
Report Production Representative
3/16/11 11:40 AM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
03/16/2011

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. TestAmerica Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 2539, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY ELAP 10843, North Carolina 647, NELAP PA 68-04386. Field sampling is performed under SOPs WE-FLD-001 and WE-FLD-002.

TestAmerica Laboratories, Inc.
TestAmerica Westfield Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.testamericainc.com

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MassDEP Analytical Protocol Certification Form

Laboratory Name:	**TestAmerica Westfield**	Project #:	**360-32605-1**
Project Location:	**Alewife Pmp. Sta. - MA**	RTN:	

This form provides certifications for the following data set: list Laboratory Sample ID Number(s):

360-32605-(1-29)

Matrices: ☐ Groundwater/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocols (check all that apply below):

8260 VOC CAM II A ☐	7470/7471 Hg CAM III B ☐	Mass DEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	Mass DEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	Mass DEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☒	9014 Total Cyanide/PAC CAM VI A ☐	332.0 Perchlorate CAM VIII B ☐	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time.	☒ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☒ Yes ☐ No
E	a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☒ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☒ No[1]

***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350**

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☒ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?	☒ Yes ☐ No

[1] All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature:		Position:	Laboratory Director
Printed Name:	Steven C. Hartmann	Date:	3/16/11 10:09

This form has been electronically signed and approved

CASE NARRATIVE

Client: Envirosense

Project: 07757-08/014

Report Number: 360-32605-1

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

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

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

RECEIPT

The samples were received on 03/08/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 12.0 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2 C of the required temperature or method specified range. For samples with a specified temperature of 4 C, samples with a temperature ranging from just above freezing temperature of water to 6 C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

TestAmerica's Reporting Limits (RLs) for this report do not meet WSC-CAM-III method reporting limits due to various reasons such as methodology, dilutions or moisture content (soils). TestAmerica's MA pivot table EDD documents which compound(s) exceed certain regulatory standards. If not included with your deliverables, please contact your Project Manager about the availability of this EDD for your report.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MR2001C (360-32605-1), MR 2019 (360-32605-2), MR 2019C (360-32605-3), MR 2020 (360-32605-4), MR 2021 (360-32605-5), MR2008C (360-32605-6), MR 2022 (360-32605-7), MR 2022C (360-32605-8), MR2009C (360-32605-9), MR 2023 (360-32605-10), MR 2023 Ca (360-32605-11), MR 2023 Cb (360-32605-12), MR 2012I (360-32605-13), MR 2013B (360-32605-14), MR 2013M (360-32605-15), MR 2015C (360-32605-16), PR 2001C (360-32605-17), PR 2008C (360-32605-18), PR 2009 (360-32605-19), PR 2009C (360-32605-20), PR 2010 (360-32605-21), PR 2010Ca (360-32605-22), PR 2010Cb (360-32605-23), PR 2002Ca (360-32605-24), PR 2002Cb (360-32605-25), PR 2006C (360-32605-26), PR 2011 (360-32605-27), PR 2012 (360-32605-28) and SC2002C (360-32605-29) were analyzed for polychlorinated biphenyls (PCBs) in accordance with SW846 8082A. The samples were prepared on 03/09/2011 and analyzed on 03/10/2011, 03/14/2011 and 03/15/2011.

PCB-1254 and PCB-1254 were detected in method blank MB 360-70354/1-A at levels exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Insufficient sample remained to re-extract the associated samples. Refer to the QC report for details.

Tetrachloro-m-xylene failed the surrogate recovery criteria high for MR2001C (360-32605-1). DCB Decachlorobiphenyl failed the surrogate recovery criteria high for MR2008C (360-32605-6). DCB Decachlorobiphenyl and Tetrachloro-m-xylene failed the surrogate recovery criteria high for MR 2023 Ca (360-32605-11), MR 2012I (360-32605-13), PR 2001C (360-32605-17) and PR 2008C (360-32605-18). Evidence of matrix interference was present for these samples. Chromatograms are provided. Refer to the QC report for details.

Tetrachloro-m-xylene failed the surrogate recovery criteria low for MB 360-70355/1-A. Insufficient sample remained to re-extract the associated samples: PR 2009C (360-32605-20), PR 2010 (360-32605-21), PR 2010Ca (360-32605-22), PR 2010Cb (360-32605-23), PR 2002Ca (360-32605-24), PR 2002Cb (360-32605-25), PR 2006C (360-32605-26), PR 2011 (360-32605-27), PR 2012 (360-32605-28) and SC2002C (360-32605-29). Refer to the QC report for details.

For analytical batch 360-70566, DCB Decachlorobiphenyl failed the criteria low for the opening CCV associated with samples MR 2023 Ca (360-32605-11), PR 2001C (360-32605-17) and PR 2009 (360-32605-19).

Samples MR 2019 (360-32605-2)[10X], MR 2020 (360-32605-4)[20X], MR2008C (360-32605-6)[5X], MR 2022 (360-32605-7)[2000X], MR 2022C (360-32605-8)[50X], MR2009C (360-32605-9)[10X], MR 2023 (360-32605-10)[1000X], MR 2023 Ca (360-32605-11)[5X], MR 2012I

(360-32605-13)[5X], MR 2015C (360-32605-16)[20X], PR 2001C (360-32605-17)[2X], PR 2009 (360-32605-19)[100X], PR 2010 (360-32605-21)[500X], PR 2002Ca (360-32605-24)[5X], PR 2011 (360-32605-27)[100X], PR 2012 (360-32605-28)[100X] and SC2002C (360-32605-29)[1000X] required dilution prior to analysis due to high target concentration. The reporting limits have been adjusted accordingly. For all dilutions 20X or higher, the surrogates DCB Decachlorobiphenyl and Tetrachloro-m-xylene were diluted outside control limits.

A silica gel cleanup was performed on the following samples and their associated method blank, LCS and LCSD: MR 2023 Cb (360-32605-12) and MR 2013B (360-32605-14).

No other difficulties were encountered during the PCBs analyses.

All other quality control parameters were within the acceptance limits.

PERCENT SOLIDS

For samples MR2001C (360-32605-1), MR 2019 (360-32605-2), MR 2019C (360-32605-3), MR 2020 (360-32605-4), MR 2021 (360-32605-5), MR2008C (360-32605-6), MR 2022 (360-32605-7), MR 2022C (360-32605-8), MR2009C (360-32605-9), MR 2023 (360-32605-10), MR 2023 Ca (360-32605-11), MR 2023 Cb (360-32605-12), MR 2012I (360-32605-13), MR 2013B (360-32605-14), MR 2013M (360-32605-15), MR 2015C (360-32605-16), PR 2001C (360-32605-17), PR 2008C (360-32605-18), PR 2009 (360-32605-19), PR 2009C (360-32605-20), PR 2010 (360-32605-21), PR 2010Ca (360-32605-22), PR 2010Cb (360-32605-23), PR 2002Ca (360-32605-24), PR 2002Cb (360-32605-25), PR 2006C (360-32605-26), PR 2011 (360-32605-27), PR 2012 (360-32605-28) and SC2002C (360-32605-29), the laboratory assumes 100% solids for all samples. The percent solids data was entered on 03/09/2011.

All quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: Envirosense

Job Number: 360-32605-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
360-32605-1	**MR2001C**				
PCB-1254		1300	100	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-2	**MR 2019**				
PCB-1254		100000	7400	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-3	**MR 2019C**				
PCB-1254		140	120	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-4	**MR 2020**				
PCB-1254		55000	5100	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-5	**MR 2021**				
PCB-1254		14000	810	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-6	**MR2008C**				
PCB-1254		5800	590	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-7	**MR 2022**				
PCB-1254		5400000	710000	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Envirosense

Job Number: 360-32605-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
360-32605-8	**MR 2022C**					
PCB-1254		13000		6800	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-9	**MR2009C**					
PCB-1254		6700		920	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-10	**MR 2023**					
PCB-1254		4000000		550000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-11	**MR 2023 CA**					
PCB-1254		6200	B	600	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-12	**MR 2023 CB**					
PCB-1254		370	B	200	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-13	**MR 2012I**					
PCB-1254		27000		3900	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-14	**MR 2013B**					
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Envirosense

Job Number: 360-32605-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
360-32605-15	**MR 2013M**					
PCB-1254		740		190	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-16	**MR 2015C**					
PCB-1254		14000		2100	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-17	**PR 2001C**					
PCB-1254		3800	B	380	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-18	**PR 2008C**					
PCB-1254		490		110	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-19	**PR 2009**					
PCB-1254		430000	B	76000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-20	**PR 2009C**					
PCB-1254		770		110	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32605-21	**PR 2010**					
PCB-1254		1900000		360000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Envirosense

Job Number: 360-32605-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
360-32605-22	**PR 2010CA**				
PCB-1254		1700	200	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-23	**PR 2010CB**				
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-24	**PR 2002CA**				
PCB-1254		8100	490	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-25	**PR 2002CB**				
PCB-1254		2600	270	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-26	**PR 2006C**				
PCB-1254		710	96	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-27	**PR 2011**				
PCB-1254		550000	84000	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32605-28	**PR 2012**				
PCB-1254		600000	65000	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Envirosense

Job Number: 360-32605-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
360-32605-29	**SC2002C**				
PCB-1254		240000	98000	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture

METHOD SUMMARY

Client: Envirosense

Job Number: 360-32605-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Polychlorinated Biphenyls (GC/ECD)	TAL WFD	MA DEP 8082A	
Soxhlet Extraction	TAL WFD		SW846 3540C
Percent Moisture	TAL WFD	EPA Moisture	

Lab References:

TAL WFD = TestAmerica Westfield

Method References:

EPA = US Environmental Protection Agency

MA DEP = Massachusetts Department Of Environmental Protection

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

METHOD / ANALYST SUMMARY

Client: Envirosense

Job Number: 360-32605-1

Method	Analyst	Analyst ID
MA DEP 8082A	Bilodeau, Brian R	BRB
EPA Moisture	Nasiatka, Ellen M	EMN

SAMPLE SUMMARY

Client: Envirosense

Job Number: 360-32605-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-32605-1	MR2001C	Solid	03/03/2011 0847	03/08/2011 1810
360-32605-2	MR 2019	Solid	03/03/2011 0923	03/08/2011 1810
360-32605-3	MR 2019C	Solid	03/03/2011 0923	03/08/2011 1810
360-32605-4	MR 2020	Solid	03/03/2011 1243	03/08/2011 1810
360-32605-5	MR 2021	Solid	03/03/2011 1320	03/08/2011 1810
360-32605-6	MR2008C	Solid	03/02/2011 1125	03/08/2011 1810
360-32605-7	MR 2022	Solid	03/02/2011 1000	03/08/2011 1810
360-32605-8	MR 2022C	Solid	03/02/2011 1135	03/08/2011 1810
360-32605-9	MR2009C	Solid	03/02/2011 1117	03/08/2011 1810
360-32605-10	MR 2023	Solid	03/02/2011 0924	03/08/2011 1810
360-32605-11	MR 2023 Ca	Solid	03/02/2011 1027	03/08/2011 1810
360-32605-12	MR 2023 Cb	Solid	03/02/2011 1056	03/08/2011 1810
360-32605-13	MR 2012I	Solid	03/02/2011 1300	03/08/2011 1810
360-32605-14	MR 2013B	Solid	03/02/2011 1231	03/08/2011 1810
360-32605-15	MR 2013M	Solid	03/02/2011 1246	03/08/2011 1810
360-32605-16	MR 2015C	Solid	03/02/2011 1253	03/08/2011 1810
360-32605-17	PR 2001C	Solid	03/02/2011 1304	03/08/2011 1810
360-32605-18	PR 2008C	Solid	03/02/2011 1112	03/08/2011 1810
360-32605-19	PR 2009	Solid	03/02/2011 1337	03/08/2011 1810
360-32605-20	PR 2009C	Solid	03/03/2011 1117	03/08/2011 1810
360-32605-21	PR 2010	Solid	03/03/2011 1105	03/08/2011 1810
360-32605-22	PR 2010Ca	Solid	03/03/2011 1129	03/08/2011 1810
360-32605-23	PR 2010Cb	Solid	03/03/2011 1135	03/08/2011 1810
360-32605-24	PR 2002Ca	Solid	03/03/2011 1011	03/08/2011 1810
360-32605-25	PR 2002Cb	Solid	03/03/2011 1011	03/08/2011 1810
360-32605-26	PR 2006C	Solid	03/03/2011 1150	03/08/2011 1810
360-32605-27	PR 2011	Solid	03/03/2011 1115	03/08/2011 1810
360-32605-28	PR 2012	Solid	03/03/2011 1128	03/08/2011 1810
360-32605-29	SC2002C	Solid	03/04/2011 1040	03/08/2011 1810

SAMPLE RESULTS

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR2001C**

Lab Sample ID: 360-32605-1

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 0847

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	9.83 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2033			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		100
PCB-1221		ND		100
PCB-1232		ND		100
PCB-1242		ND		100
PCB-1248		ND		100
PCB-1254		1300		100
PCB-1260		ND		100
PCB-1262		ND		100
PCB-1268		ND		100

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	180	X	30 - 150
DCB Decachlorobiphenyl	150		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR2001C**

Lab Sample ID: 360-32605-1

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 0847

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	9.83 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2033			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	178	X	30 - 150
DCB Decachlorobiphenyl	140		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2019**

Lab Sample ID: 360-32605-2

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 0923

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	1.36 g
Dilution:	10			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2054			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		7400
PCB-1221		ND		7400
PCB-1232		ND		7400
PCB-1242		ND		7400
PCB-1248		ND		7400
PCB-1254		100000		7400
PCB-1260		ND		7400
PCB-1262		ND		7400
PCB-1268		ND		7400

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	103		30 - 150
DCB Decachlorobiphenyl	126		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2019**

Lab Sample ID: 360-32605-2

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 0923

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	1.36 g
Dilution:	10			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2054			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	98		30 - 150
DCB Decachlorobiphenyl	107		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2019C**

Lab Sample ID: 360-32605-3

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 0923

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	8.17 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2116			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		120
PCB-1221		ND		120
PCB-1232		ND		120
PCB-1242		ND		120
PCB-1248		ND		120
PCB-1254		140		120
PCB-1260		ND		120
PCB-1262		ND		120
PCB-1268		ND		120

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	137		30 - 150
DCB Decachlorobiphenyl	119		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2019C**

Lab Sample ID: 360-32605-3

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 0923

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	8.17 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2116			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	127		30 - 150
DCB Decachlorobiphenyl	116		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2020**

Lab Sample ID: 360-32605-4

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1243

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	3.95 g
Dilution:	20			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2138			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		5100
PCB-1221		ND		5100
PCB-1232		ND		5100
PCB-1242		ND		5100
PCB-1248		ND		5100
PCB-1254		55000		5100
PCB-1260		ND		5100
PCB-1262		ND		5100
PCB-1268		ND		5100

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2020**

Lab Sample ID: 360-32605-4

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1243

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	3.95 g
Dilution:	20			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2138			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2021**

Lab Sample ID: 360-32605-5

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1320

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	1.23 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2159			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		810
PCB-1221		ND		810
PCB-1232		ND		810
PCB-1242		ND		810
PCB-1248		ND		810
PCB-1254		14000		810
PCB-1260		ND		810
PCB-1262		ND		810
PCB-1268		ND		810

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	130		30 - 150
DCB Decachlorobiphenyl	110		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2021**

Lab Sample ID: 360-32605-5

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1320

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	1.23 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2159			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	109		30 - 150
DCB Decachlorobiphenyl	97		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR2008C**

Lab Sample ID: 360-32605-6

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1125

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	8.44 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2221			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		590
PCB-1221		ND		590
PCB-1232		ND		590
PCB-1242		ND		590
PCB-1248		ND		590
PCB-1254		5800		590
PCB-1260		ND		590
PCB-1262		ND		590
PCB-1268		ND		590

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	120		30 - 150
DCB Decachlorobiphenyl	126		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR2008C**

Lab Sample ID: 360-32605-6

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1125

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	8.44 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2221			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	117		30 - 150
DCB Decachlorobiphenyl	155	X	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2022**

Lab Sample ID: 360-32605-7

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1000

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507	Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354	Initial Weight/Volume:	2.81 g
Dilution:	2000		Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2243		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		710000
PCB-1221		ND		710000
PCB-1232		ND		710000
PCB-1242		ND		710000
PCB-1248		ND		710000
PCB-1254		5400000		710000
PCB-1260		ND		710000
PCB-1262		ND		710000
PCB-1268		ND		710000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2022**

Lab Sample ID: 360-32605-7

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1000

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	2.81 g
Dilution:	2000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2243			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2022C**

Lab Sample ID: 360-32605-8

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1135

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	7.37 g
Dilution:	50			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 2304			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		6800
PCB-1221		ND		6800
PCB-1232		ND		6800
PCB-1242		ND		6800
PCB-1248		ND		6800
PCB-1254		13000		6800
PCB-1260		ND		6800
PCB-1262		ND		6800
PCB-1268		ND		6800

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2022C**

Lab Sample ID: 360-32605-8

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1135

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	7.37 g
Dilution:	50			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 2304			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR2009C**

Lab Sample ID: 360-32605-9

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1117

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	10.87 g
Dilution:	10			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 2326			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		920
PCB-1221		ND		920
PCB-1232		ND		920
PCB-1242		ND		920
PCB-1248		ND		920
PCB-1254		6700		920
PCB-1260		ND		920
PCB-1262		ND		920
PCB-1268		ND		920

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	130		30 - 150
DCB Decachlorobiphenyl	150		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR2009C**

Lab Sample ID: 360-32605-9

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1117

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	10.87 g
Dilution:	10			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 2326			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	125		30 - 150
DCB Decachlorobiphenyl	119		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2023**

Lab Sample ID: 360-32605-10

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 0924

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	1.82 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 2348			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		550000
PCB-1221		ND		550000
PCB-1232		ND		550000
PCB-1242		ND		550000
PCB-1248		ND		550000
PCB-1254		4000000		550000
PCB-1260		ND		550000
PCB-1262		ND		550000
PCB-1268		ND		550000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2023**

Lab Sample ID: 360-32605-10

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 0924

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	1.82 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 2348			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2023 Ca**

Lab Sample ID: 360-32605-11

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1027

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70566		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	8.31 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 1508			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		600
PCB-1221		ND		600
PCB-1232		ND		600
PCB-1242		ND		600
PCB-1248		ND		600
PCB-1254		6200	B	600
PCB-1260		ND		600
PCB-1262		ND		600
PCB-1268		ND		600

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	271	X	30 - 150
DCB Decachlorobiphenyl	338	X	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2023 Ca**

Lab Sample ID: 360-32605-11

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1027

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70566		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	8.31 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 1508			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	232	X	30 - 150
DCB Decachlorobiphenyl	310	X	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2023 Cb**

Lab Sample ID: 360-32605-12

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1056

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	4.99 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2357			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		200
PCB-1221		ND		200
PCB-1232		ND		200
PCB-1242		ND		200
PCB-1248		ND		200
PCB-1254		370	B	200
PCB-1260		ND		200
PCB-1262		ND		200
PCB-1268		ND		200

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	113		30 - 150
DCB Decachlorobiphenyl	111		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2023 Cb**

Lab Sample ID: 360-32605-12

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1056

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526	Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70354	Initial Weight/Volume:	4.99 g
Dilution:	1.0		Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2357		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	111		30 - 150
DCB Decachlorobiphenyl	108		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2012I**

Lab Sample ID: 360-32605-13

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1300

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	1.28 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0031			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		3900
PCB-1221		ND		3900
PCB-1232		ND		3900
PCB-1242		ND		3900
PCB-1248		ND		3900
PCB-1254		27000		3900
PCB-1260		ND		3900
PCB-1262		ND		3900
PCB-1268		ND		3900

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	162	X	30 - 150
DCB Decachlorobiphenyl	175	X	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2012I**

Lab Sample ID: 360-32605-13

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1300

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	1.28 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0031			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	160	X	30 - 150
DCB Decachlorobiphenyl	158	X	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2013B**

Lab Sample ID: 360-32605-14

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1231

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	7.18 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0019			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		140
PCB-1221		ND		140
PCB-1232		ND		140
PCB-1242		ND		140
PCB-1248		ND		140
PCB-1254		ND		140
PCB-1260		ND		140
PCB-1262		ND		140
PCB-1268		ND		140

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	82		30 - 150
DCB Decachlorobiphenyl	87		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2013B**

Lab Sample ID: 360-32605-14

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1231

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	7.18 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0019			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	79		30 - 150
DCB Decachlorobiphenyl	84		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2013M**

Lab Sample ID: 360-32605-15

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1246

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	5.25 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0053			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		190
PCB-1221		ND		190
PCB-1232		ND		190
PCB-1242		ND		190
PCB-1248		ND		190
PCB-1254		740		190
PCB-1260		ND		190
PCB-1262		ND		190
PCB-1268		ND		190

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	113		30 - 150
DCB Decachlorobiphenyl	112		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2013M**

Lab Sample ID: 360-32605-15

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1246

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	5.25 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0053			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	101		30 - 150
DCB Decachlorobiphenyl	98		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2015C**

Lab Sample ID: 360-32605-16

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1253

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507	Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354	Initial Weight/Volume:	9.66 g
Dilution:	20		Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0114		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		2100
PCB-1221		ND		2100
PCB-1232		ND		2100
PCB-1242		ND		2100
PCB-1248		ND		2100
PCB-1254		14000		2100
PCB-1260		ND		2100
PCB-1262		ND		2100
PCB-1268		ND		2100

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **MR 2015C**

Lab Sample ID: 360-32605-16

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1253

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	9.66 g
Dilution:	20			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0114			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2001C**

Lab Sample ID: 360-32605-17

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1304

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70566	Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70354	Initial Weight/Volume:	10.56 g
Dilution:	2.0		Final Weight/Volume:	20.00 mL
Date Analyzed:	03/15/2011 1529		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		380
PCB-1221		ND		380
PCB-1232		ND		380
PCB-1242		ND		380
PCB-1248		ND		380
PCB-1254		3800	B	380
PCB-1260		ND		380
PCB-1262		ND		380
PCB-1268		ND		380

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	406	X	30 - 150
DCB Decachlorobiphenyl	447	X	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2001C**

Lab Sample ID: 360-32605-17

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1304

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70566	Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70354	Initial Weight/Volume:	10.56 g
Dilution:	2.0		Final Weight/Volume:	20.00 mL
Date Analyzed:	03/15/2011 1529		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	337	X	30 - 150
DCB Decachlorobiphenyl	395	X	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2008C**

Lab Sample ID: 360-32605-18

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1112

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	8.96 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0158			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		110
PCB-1221		ND		110
PCB-1232		ND		110
PCB-1242		ND		110
PCB-1248		ND		110
PCB-1254		490		110
PCB-1260		ND		110
PCB-1262		ND		110
PCB-1268		ND		110

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	187	X	30 - 150
DCB Decachlorobiphenyl	181	p X	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2008C**

Lab Sample ID: 360-32605-18

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1112

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	8.96 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0158			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	183	X	30 - 150
DCB Decachlorobiphenyl	272	X	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2009**

Lab Sample ID: 360-32605-19

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1337

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70566		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	1.31 g
Dilution:	100			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 1550			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		76000
PCB-1221		ND		76000
PCB-1232		ND		76000
PCB-1242		ND		76000
PCB-1248		ND		76000
PCB-1254		430000	B	76000
PCB-1260		ND		76000
PCB-1262		ND		76000
PCB-1268		ND		76000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2009**

Lab Sample ID: 360-32605-19

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1337

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70566		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70354		Initial Weight/Volume:	1.31 g
Dilution:	100			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 1550			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2009C**

Lab Sample ID: 360-32605-20

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1117

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375	Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355	Initial Weight/Volume:	9.11 g
Dilution:	1.0		Final Weight/Volume:	10.00 mL
Date Analyzed:	03/10/2011 1746		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		110
PCB-1221		ND		110
PCB-1232		ND		110
PCB-1242		ND		110
PCB-1248		ND		110
PCB-1254		770		110
PCB-1260		ND		110
PCB-1262		ND		110
PCB-1268		ND		110

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	149		30 - 150
DCB Decachlorobiphenyl	135		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2009C**

Lab Sample ID: 360-32605-20

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1117

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	9.11 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/10/2011 1746			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	126		30 - 150
DCB Decachlorobiphenyl	129		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2010**

Lab Sample ID: 360-32605-21

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1105

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.38 g
Dilution:	500			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0324			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		360000
PCB-1221		ND		360000
PCB-1232		ND		360000
PCB-1242		ND		360000
PCB-1248		ND		360000
PCB-1254		1900000		360000
PCB-1260		ND		360000
PCB-1262		ND		360000
PCB-1268		ND		360000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2010**

Lab Sample ID: 360-32605-21

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1105

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.38 g
Dilution:	500			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0324			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2010Ca**

Lab Sample ID: 360-32605-22

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1129

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375	Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355	Initial Weight/Volume:	10.12 g
Dilution:	1.0		Final Weight/Volume:	20.00 mL
Date Analyzed:	03/10/2011 1828		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		200
PCB-1221		ND		200
PCB-1232		ND		200
PCB-1242		ND		200
PCB-1248		ND		200
PCB-1254		1700		200
PCB-1260		ND		200
PCB-1262		ND		200
PCB-1268		ND		200

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	143		30 - 150
DCB Decachlorobiphenyl	95		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2010Ca**

Lab Sample ID: 360-32605-22

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1129

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.12 g
Dilution:	1.0			Final Weight/Volume:	20.00 mL
Date Analyzed:	03/10/2011 1828			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	135		30 - 150
DCB Decachlorobiphenyl	91		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2010Cb**

Lab Sample ID: 360-32605-23

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1135

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	4.56 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/10/2011 1849			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		220
PCB-1221		ND		220
PCB-1232		ND		220
PCB-1242		ND		220
PCB-1248		ND		220
PCB-1254		ND		220
PCB-1260		ND		220
PCB-1262		ND		220
PCB-1268		ND		220

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	122		30 - 150
DCB Decachlorobiphenyl	96		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2010Cb**

Lab Sample ID: 360-32605-23

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1135

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	4.56 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/10/2011 1849			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	104		30 - 150
DCB Decachlorobiphenyl	93		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2002Ca**

Lab Sample ID: 360-32605-24

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1011

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507	Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355	Initial Weight/Volume:	10.28 g
Dilution:	5.0		Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0346		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		490
PCB-1221		ND		490
PCB-1232		ND		490
PCB-1242		ND		490
PCB-1248		ND		490
PCB-1254		8100		490
PCB-1260		ND		490
PCB-1262		ND		490
PCB-1268		ND		490

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	45		30 - 150
DCB Decachlorobiphenyl	54	p	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2002Ca**

Lab Sample ID: 360-32605-24

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1011

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.28 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0346			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	44		30 - 150
DCB Decachlorobiphenyl	82		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2002Cb**

Lab Sample ID: 360-32605-25

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1011

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	3.70 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/10/2011 1931			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		270
PCB-1221		ND		270
PCB-1232		ND		270
PCB-1242		ND		270
PCB-1248		ND		270
PCB-1254		2600		270
PCB-1260		ND		270
PCB-1262		ND		270
PCB-1268		ND		270

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	111		30 - 150
DCB Decachlorobiphenyl	89		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2002Cb**

Lab Sample ID: 360-32605-25

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1011

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375	Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355	Initial Weight/Volume:	3.70 g
Dilution:	1.0		Final Weight/Volume:	10.00 mL
Date Analyzed:	03/10/2011 1931		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	100		30 - 150
DCB Decachlorobiphenyl	88		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2006C**

Lab Sample ID: 360-32605-26

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1150

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375	Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355	Initial Weight/Volume:	10.47 g
Dilution:	1.0		Final Weight/Volume:	10.00 mL
Date Analyzed:	03/10/2011 1952		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		96
PCB-1221		ND		96
PCB-1232		ND		96
PCB-1242		ND		96
PCB-1248		ND		96
PCB-1254		710		96
PCB-1260		ND		96
PCB-1262		ND		96
PCB-1268		ND		96

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	118		30 - 150
DCB Decachlorobiphenyl	101		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2006C**

Lab Sample ID: 360-32605-26

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1150

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375	Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355	Initial Weight/Volume:	10.47 g
Dilution:	1.0		Final Weight/Volume:	10.00 mL
Date Analyzed:	03/10/2011 1952		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	103		30 - 150
DCB Decachlorobiphenyl	97		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2011**

Lab Sample ID: 360-32605-27

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1115

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.19 g
Dilution:	100			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0408			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		84000
PCB-1221		ND		84000
PCB-1232		ND		84000
PCB-1242		ND		84000
PCB-1248		ND		84000
PCB-1254		550000		84000
PCB-1260		ND		84000
PCB-1262		ND		84000
PCB-1268		ND		84000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2011**

Lab Sample ID: 360-32605-27

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1115

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.19 g
Dilution:	100			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0408			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2012**

Lab Sample ID: 360-32605-28

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1128

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.53 g
Dilution:	100			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0429			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		65000
PCB-1221		ND		65000
PCB-1232		ND		65000
PCB-1242		ND		65000
PCB-1248		ND		65000
PCB-1254		600000		65000
PCB-1260		ND		65000
PCB-1262		ND		65000
PCB-1268		ND		65000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **PR 2012**

Lab Sample ID: 360-32605-28

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1128

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.53 g
Dilution:	100			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0429			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **SC2002C**

Lab Sample ID: 360-32605-29

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1040

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.18 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0451			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		98000
PCB-1221		ND		98000
PCB-1232		ND		98000
PCB-1242		ND		98000
PCB-1248		ND		98000
PCB-1254		240000		98000
PCB-1260		ND		98000
PCB-1262		ND		98000
PCB-1268		ND		98000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Client Sample ID: **SC2002C**

Lab Sample ID: 360-32605-29

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1040

Date Received: 03/08/2011 1810

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.18 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0451			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

General Chemistry

Client Sample ID: **MR2001C**

Lab Sample ID: 360-32605-1

Client Matrix: Solid

Date Sampled: 03/03/2011 0847

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2019**

Lab Sample ID: 360-32605-2

Client Matrix: Solid

Date Sampled: 03/03/2011 0923

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2019C**

Lab Sample ID: 360-32605-3

Client Matrix: Solid

Date Sampled: 03/03/2011 0923

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2020**

Lab Sample ID: 360-32605-4

Client Matrix: Solid

Date Sampled: 03/03/2011 1243

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143				DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143				DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2021**

Lab Sample ID: 360-32605-5

Client Matrix: Solid

Date Sampled: 03/03/2011 1320

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **MR2008C**

Lab Sample ID: 360-32605-6

Client Matrix: Solid

Date Sampled: 03/02/2011 1125

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2022**

Lab Sample ID: 360-32605-7

Client Matrix: Solid

Date Sampled: 03/02/2011 1000

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2022C**

Lab Sample ID: 360-32605-8

Client Matrix: Solid

Date Sampled: 03/02/2011 1135

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **MR2009C**

Lab Sample ID: 360-32605-9

Client Matrix: Solid

Date Sampled: 03/02/2011 1117

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2023**

Lab Sample ID: 360-32605-10

Client Matrix: Solid

Date Sampled: 03/02/2011 0924

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2023 Ca**

Lab Sample ID: 360-32605-11

Client Matrix: Solid

Date Sampled: 03/02/2011 1027

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2023 Cb**

Lab Sample ID: 360-32605-12

Client Matrix: Solid

Date Sampled: 03/02/2011 1056

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2012I**

Lab Sample ID: 360-32605-13

Client Matrix: Solid

Date Sampled: 03/02/2011 1300

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2013B**

Lab Sample ID: 360-32605-14

Client Matrix: Solid

Date Sampled: 03/02/2011 1231

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2013M**

Lab Sample ID: 360-32605-15

Client Matrix: Solid

Date Sampled: 03/02/2011 1246

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2015C**

Lab Sample ID: 360-32605-16

Client Matrix: Solid

Date Sampled: 03/02/2011 1253

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2001C**

Lab Sample ID: 360-32605-17

Client Matrix: Solid

Date Sampled: 03/02/2011 1304

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2008C**

Lab Sample ID: 360-32605-18

Client Matrix: Solid

Date Sampled: 03/02/2011 1112

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2009**

Lab Sample ID: 360-32605-19

Client Matrix: Solid

Date Sampled: 03/02/2011 1337

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2009C**

Lab Sample ID: 360-32605-20

Client Matrix: Solid

Date Sampled: 03/03/2011 1117

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2010**

Lab Sample ID: 360-32605-21

Client Matrix: Solid

Date Sampled: 03/03/2011 1105

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2010Ca**

Lab Sample ID: 360-32605-22

Client Matrix: Solid

Date Sampled: 03/03/2011 1129

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2010Cb**

Lab Sample ID: 360-32605-23

Client Matrix: Solid

Date Sampled: 03/03/2011 1135

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2002Ca**

Lab Sample ID: 360-32605-24

Client Matrix: Solid

Date Sampled: 03/03/2011 1011

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2002Cb**

Lab Sample ID: 360-32605-25

Client Matrix: Solid

Date Sampled: 03/03/2011 1011

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2006C**

Lab Sample ID: 360-32605-26

Client Matrix: Solid

Date Sampled: 03/03/2011 1150

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2011**

Lab Sample ID: 360-32605-27

Client Matrix: Solid

Date Sampled: 03/03/2011 1115

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2012**

Lab Sample ID: 360-32605-28

Client Matrix: Solid

Date Sampled: 03/03/2011 1128

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **SC2002C**

Lab Sample ID: 360-32605-29

Client Matrix: Solid

Date Sampled: 03/04/2011 1040

Date Received: 03/08/2011 1810

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: Envirosense

Job Number: 360-32605-1

Lab Section	Qualifier	Description
GC Semi VOA		
	B	Compound was found in the blank and sample.
	X	Surrogate is outside control limits
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
	p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

QUALITY CONTROL RESULTS

Client: Envirosense

Job Number: 360-32605-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 360-70354					
LCS 360-70354/2-A	Lab Control Sample	T	Solid	3540C	
LCS 360-70354/2-ARA	Lab Control Sample	T	Solid	3540C	
LCSD 360-70354/3-A	Lab Control Sample Duplicate	T	Solid	3540C	
LCSD 360-70354/3-ARA	Lab Control Sample Duplicate	T	Solid	3540C	
MB 360-70354/1-A	Method Blank	T	Solid	3540C	
MB 360-70354/1-ARA	Method Blank	T	Solid	3540C	
360-32605-1	MR2001C	T	Solid	3540C	
360-32605-2	MR 2019	T	Solid	3540C	
360-32605-3	MR 2019C	T	Solid	3540C	
360-32605-4	MR 2020	T	Solid	3540C	
360-32605-5	MR 2021	T	Solid	3540C	
360-32605-6	MR2008C	T	Solid	3540C	
360-32605-7	MR 2022	T	Solid	3540C	
360-32605-8	MR 2022C	T	Solid	3540C	
360-32605-9	MR2009C	T	Solid	3540C	
360-32605-10	MR 2023	T	Solid	3540C	
360-32605-11	MR 2023 Ca	T	Solid	3540C	
360-32605-12	MR 2023 Cb	T	Solid	3540C	
360-32605-13	MR 2012I	T	Solid	3540C	
360-32605-14	MR 2013B	T	Solid	3540C	
360-32605-15	MR 2013M	T	Solid	3540C	
360-32605-16	MR 2015C	T	Solid	3540C	
360-32605-17	PR 2001C	T	Solid	3540C	
360-32605-18	PR 2008C	T	Solid	3540C	
360-32605-19	PR 2009	T	Solid	3540C	
Prep Batch: 360-70355					
LCS 360-70355/2-A	Lab Control Sample	T	Solid	3540C	
LCSD 360-70355/3-A	Lab Control Sample Duplicate	T	Solid	3540C	
MB 360-70355/1-A	Method Blank	T	Solid	3540C	
360-32605-20	PR 2009C	T	Solid	3540C	
360-32605-21	PR 2010	T	Solid	3540C	
360-32605-22	PR 2010Ca	T	Solid	3540C	
360-32605-23	PR 2010Cb	T	Solid	3540C	
360-32605-24	PR 2002Ca	T	Solid	3540C	
360-32605-25	PR 2002Cb	T	Solid	3540C	
360-32605-26	PR 2006C	T	Solid	3540C	
360-32605-27	PR 2011	T	Solid	3540C	
360-32605-28	PR 2012	T	Solid	3540C	
360-32605-29	SC2002C	T	Solid	3540C	

Client: Envirosense

Job Number: 360-32605-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:360-70375					
LCS 360-70355/2-A	Lab Control Sample	T	Solid	8082A	360-70355
LCSD 360-70355/3-A	Lab Control Sample Duplicate	T	Solid	8082A	360-70355
MB 360-70355/1-A	Method Blank	T	Solid	8082A	360-70355
360-32605-20	PR 2009C	T	Solid	8082A	360-70355
360-32605-22	PR 2010Ca	T	Solid	8082A	360-70355
360-32605-23	PR 2010Cb	T	Solid	8082A	360-70355
360-32605-25	PR 2002Cb	T	Solid	8082A	360-70355
360-32605-26	PR 2006C	T	Solid	8082A	360-70355
Analysis Batch:360-70507					
LCS 360-70354/2-A	Lab Control Sample	T	Solid	8082A	360-70354
LCSD 360-70354/3-A	Lab Control Sample Duplicate	T	Solid	8082A	360-70354
MB 360-70354/1-A	Method Blank	T	Solid	8082A	360-70354
360-32605-1	MR2001C	T	Solid	8082A	360-70354
360-32605-2	MR 2019	T	Solid	8082A	360-70354
360-32605-3	MR 2019C	T	Solid	8082A	360-70354
360-32605-4	MR 2020	T	Solid	8082A	360-70354
360-32605-5	MR 2021	T	Solid	8082A	360-70354
360-32605-6	MR2008C	T	Solid	8082A	360-70354
360-32605-7	MR 2022	T	Solid	8082A	360-70354
360-32605-8	MR 2022C	T	Solid	8082A	360-70354
360-32605-9	MR2009C	T	Solid	8082A	360-70354
360-32605-10	MR 2023	T	Solid	8082A	360-70354
360-32605-13	MR 2012I	T	Solid	8082A	360-70354
360-32605-15	MR 2013M	T	Solid	8082A	360-70354
360-32605-16	MR 2015C	T	Solid	8082A	360-70354
360-32605-18	PR 2008C	T	Solid	8082A	360-70354
360-32605-21	PR 2010	T	Solid	8082A	360-70355
360-32605-24	PR 2002Ca	T	Solid	8082A	360-70355
360-32605-27	PR 2011	T	Solid	8082A	360-70355
360-32605-28	PR 2012	T	Solid	8082A	360-70355
360-32605-29	SC2002C	T	Solid	8082A	360-70355
Analysis Batch:360-70526					
LCS 360-70354/2-ARA	Lab Control Sample	T	Solid	8082A	360-70354
LCSD 360-70354/3-ARA	Lab Control Sample Duplicate	T	Solid	8082A	360-70354
MB 360-70354/1-ARA	Method Blank	T	Solid	8082A	360-70354
360-32605-12	MR 2023 Cb	T	Solid	8082A	360-70354
360-32605-14	MR 2013B	T	Solid	8082A	360-70354
Analysis Batch:360-70566					
360-32605-11	MR 2023 Ca	T	Solid	8082A	360-70354
360-32605-17	PR 2001C	T	Solid	8082A	360-70354
360-32605-19	PR 2009	T	Solid	8082A	360-70354

Client: Envirosense

Job Number: 360-32605-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Report Basis					
T = Total					
General Chemistry					
Analysis Batch:360-70291					
360-32605-1	MR2001C	T	Solid	Moisture	
360-32605-1DU	Duplicate	T	Solid	Moisture	
360-32605-2	MR 2019	T	Solid	Moisture	
360-32605-3	MR 2019C	T	Solid	Moisture	
360-32605-4	MR 2020	T	Solid	Moisture	
360-32605-5	MR 2021	T	Solid	Moisture	
360-32605-6	MR2008C	T	Solid	Moisture	
360-32605-7	MR 2022	T	Solid	Moisture	
360-32605-8	MR 2022C	T	Solid	Moisture	
360-32605-9	MR2009C	T	Solid	Moisture	
360-32605-10	MR 2023	T	Solid	Moisture	
360-32605-11	MR 2023 Ca	T	Solid	Moisture	
360-32605-12	MR 2023 Cb	T	Solid	Moisture	
360-32605-13	MR 2012I	T	Solid	Moisture	
360-32605-14	MR 2013B	T	Solid	Moisture	
360-32605-15	MR 2013M	T	Solid	Moisture	
360-32605-16	MR 2015C	T	Solid	Moisture	
360-32605-17	PR 2001C	T	Solid	Moisture	
360-32605-18	PR 2008C	T	Solid	Moisture	
360-32605-19	PR 2009	T	Solid	Moisture	
360-32605-20	PR 2009C	T	Solid	Moisture	
360-32605-20DU	Duplicate	T	Solid	Moisture	
360-32605-21	PR 2010	T	Solid	Moisture	
360-32605-22	PR 2010Ca	T	Solid	Moisture	
360-32605-23	PR 2010Cb	T	Solid	Moisture	
360-32605-24	PR 2002Ca	T	Solid	Moisture	
360-32605-25	PR 2002Cb	T	Solid	Moisture	
360-32605-26	PR 2006C	T	Solid	Moisture	
360-32605-27	PR 2011	T	Solid	Moisture	
360-32605-28	PR 2012	T	Solid	Moisture	
360-32605-29	SC2002C	T	Solid	Moisture	

Report Basis
T = Total

Client: Envirosense

Job Number: 360-32605-1

Surrogate Recovery Report

8082A Polychlorinated Biphenyls (GC/ECD)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TCX1 %Rec	TCX2 %Rec	DCB1 %Rec	DCB2 %Rec
360-32605-1	MR2001C	180X	178X	150	140
360-32605-2	MR 2019	103	98	126	107
360-32605-3	MR 2019C	127	137	119	116
360-32605-4	MR 2020	0X D	0X D	0X D	0X D
360-32605-5	MR 2021	109	130	110	97
360-32605-6	MR2008C	117	120	155X	126
360-32605-7	MR 2022	0X D	0X D	0X D	0X D
360-32605-8	MR 2022C	0X D	0X D	0X D	0X D
360-32605-9	MR2009C	125	130	150	119
360-32605-10	MR 2023	0X D	0X D	0X D	0X D
360-32605-11	MR 2023 Ca	232X	271X	310X	338X
360-32605-12	MR 2023 Cb	111	113	111	108
360-32605-13	MR 2012I	160X	162X	175X	158X
360-32605-14	MR 2013B	79	82	87	84
360-32605-15	MR 2013M	101	113	112	98
360-32605-16	MR 2015C	0X D	0X D	0X D	0X D
360-32605-17	PR 2001C	337X	406X	395X	447X
360-32605-18	PR 2008C	183X	187X	272X	181p X
360-32605-19	PR 2009	0X D	0X D	0X D	0X D
360-32605-20	PR 2009C	126	149	129	135
360-32605-21	PR 2010	0X D	0X D	0X D	0X D
360-32605-22	PR 2010Ca	135	143	91	95
360-32605-23	PR 2010Cb	104	122	96	93
360-32605-24	PR 2002Ca	45	44	82	54p
360-32605-25	PR 2002Cb	100	111	88	89
360-32605-26	PR 2006C	103	118	97	101
360-32605-27	PR 2011	0X D	0X D	0X D	0X D
360-32605-28	PR 2012	0X D	0X D	0X D	0X D
360-32605-29	SC2002C	0X D	0X D	0X D	0X D

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	30-150
DCB = DCB Decachlorobiphenyl	30-150

Client: Envirosense

Job Number: 360-32605-1

Surrogate Recovery Report

8082A Polychlorinated Biphenyls (GC/ECD)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TCX1 %Rec	TCX2 %Rec	DCB1 %Rec	DCB2 %Rec
MB 360-70354/1-A		100	110	111	100
MB 360-70354/1-A RA		77	81	82	78
MB 360-70355/1-A		22X	21X	88	89
LCS 360-70354/2-A		110	102	101	91
LCS 360-70354/2-A RA		82	85	92	91
LCS 360-70355/2-A		93	96	91	90
LCSD 360-70354/3-A		95	97	92	83
LCSD 360-70354/3-A RA		87	85	92	88
LCSD 360-70355/3-A		90	92	89	88

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	30-150
DCB = DCB Decachlorobiphenyl	30-150

Client: Envirosense

Job Number: 360-32605-1

Method Blank - Batch: 360-70354

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70354/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/14/2011 1928
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70507
Prep Batch: 360-70354
Units: ug/Kg

Instrument ID: Inst. M
Lab File ID: M26800.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	ND		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	110	30 - 150
DCB Decachlorobiphenyl	111	30 - 150

Method Blank - Batch: 360-70354

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70354/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/14/2011 1928
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70507
Prep Batch: 360-70354
Units: ug/Kg

Instrument ID: Inst. M
Lab File ID: M26800.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: SECONDARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	ND		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	100	30 - 150
DCB Decachlorobiphenyl	100	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Method Blank - Batch: 360-70354

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70354/1-ARA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/14/2011 2254
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70526
Prep Batch: 360-70354
Units: ug/Kg
Run Type: RA

Instrument ID: Inst. U
Lab File ID: U15275.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	176		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	81	30 - 150
DCB Decachlorobiphenyl	82	30 - 150

Method Blank - Batch: 360-70354

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70354/1-ARA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/14/2011 2254
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70526
Prep Batch: 360-70354
Units: ug/Kg
Run Type: RA

Instrument ID: Inst. U
Lab File ID: U15275.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: SECONDARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	151		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	77	30 - 150
DCB Decachlorobiphenyl	78	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70354

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70354/2-A	Analysis Batch:	360-70507	Instrument ID:	Inst. M
Client Matrix:	Solid	Prep Batch:	360-70354	Lab File ID:	M26801.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/14/2011 1949			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 360-70354/3-A	Analysis Batch:	360-70507	Instrument ID:	Inst. M
Client Matrix:	Solid	Prep Batch:	360-70354	Lab File ID:	M26802.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/14/2011 2011			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	114	117	40 - 140	3	30		
PCB-1260	112	110	40 - 140	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	110	97	30 - 150
DCB Decachlorobiphenyl	101	92	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70354

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70354/2-A	Analysis Batch:	360-70507	Instrument ID:	Inst. M
Client Matrix:	Solid	Prep Batch:	360-70354	Lab File ID:	M26801.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/14/2011 1949			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 360-70354/3-A	Analysis Batch:	360-70507	Instrument ID:	Inst. M
Client Matrix:	Solid	Prep Batch:	360-70354	Lab File ID:	M26802.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/14/2011 2011			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	106	112	40 - 140	5	30		
PCB-1260	104	104	40 - 140	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	102	95	30 - 150
DCB Decachlorobiphenyl	91	83	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70354

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70354/2-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70354	Lab File ID:	U15276.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/14/2011 2315	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 360-70354/3-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70354	Lab File ID:	U15277.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/14/2011 2336	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	98	97	40 - 140	0	30		
PCB-1260	104	101	40 - 140	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	85	87	30 - 150
DCB Decachlorobiphenyl	92	92	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70354

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70354/2-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70354	Lab File ID:	U15276.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/14/2011 2315	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 360-70354/3-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70354	Lab File ID:	U15277.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/14/2011 2336	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	91	93	40 - 140	2	30		
PCB-1260	103	100	40 - 140	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	82	85	30 - 150
DCB Decachlorobiphenyl	91	88	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Method Blank - Batch: 360-70355

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70355/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/10/2011 1643
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70375
Prep Batch: 360-70355
Units: ug/Kg

Instrument ID: Inst. U
Lab File ID: U15183.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	ND		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec		Acceptance Limits
Tetrachloro-m-xylene	22	X	30 - 150
DCB Decachlorobiphenyl	89		30 - 150

Method Blank - Batch: 360-70355

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70355/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/10/2011 1643
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70375
Prep Batch: 360-70355
Units: ug/Kg

Instrument ID: Inst. U
Lab File ID: U15183.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: SECONDARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	ND		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec		Acceptance Limits
Tetrachloro-m-xylene	21	X	30 - 150
DCB Decachlorobiphenyl	88		30 - 150

Client: Envirosense

Job Number: 360-32605-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70355

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70355/2-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15184.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/10/2011 1704			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 360-70355/3-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15185.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/10/2011 1725			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	109	107	40 - 140	2	30		
PCB-1260	113	113	40 - 140	0	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	96	92	30 - 150
DCB Decachlorobiphenyl	91	89	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70355

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70355/2-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15184.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/10/2011 1704			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 360-70355/3-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15185.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/10/2011 1725			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	107	105	40 - 140	2	30		
PCB-1260	109	110	40 - 140	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	93	90	30 - 150
DCB Decachlorobiphenyl	90	88	30 - 150

Client: Envirosense

Job Number: 360-32605-1

Duplicate - Batch: 360-70291

Method: Moisture
Preparation: N/A

Lab Sample ID: 360-32605-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/09/2011 1143
Date Prepared: N/A

Analysis Batch: 360-70291
Prep Batch: N/A
Units: %

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	0.00	0.00	NC	20	
Percent Solids	100	100	0	20	

Duplicate - Batch: 360-70291

Method: Moisture
Preparation: N/A

Lab Sample ID: 360-32605-20
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/09/2011 1143
Date Prepared: N/A

Analysis Batch: 360-70291
Prep Batch: N/A
Units: %

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	0.00	0.00	NC	20	
Percent Solids	100	100	0	20	

State Accreditation Matrix

Method Name	Description	State where Primary Accreditation is Carried				
		New Hampshire (NELAC) prim.	Mass	Conn	Florida (NELAC)	North Carolina
821-R-02-012	Toxicity, Acute (48-Hour)(list upon request)	NP			NP	
SM 4500 Cl F	Chlorine, Residual		NP			
SM 9215E	Heterotrophic Plate Count (SimPlate)		P			
SM 9222D	Coliforms, Fecal (Membrane Filter)		P/NP			
SM 9223	Coliforms, Total, and E.Coli (Colilert-P/A)		P			
SM 9224	Coliforms, Total, and E.Coli (Enumeration)		P			
1103.1	E.coli		ambient/ source			
Enterolert	Enterococcus					
200.8 Rev 5.4	Metals (ICP/MS) (list upon request)	NP/P	NP/P	NP/P		
200.7 Rev 4.4	Metals (ICP)(list upon request)	NP/P	NP/P	NP/P		
6010B	Metals (ICP)(list upon request)	NP/SW		NP/SW		
245.1	Mercury (CVAA)	NP/P	NP	NP/P		
7470A	Mercury (CVAA)	NP		NP		
7471A	Mercury (CVAA)	SW		SW		
SM 2340B	Total Hardness (as CaCO3) by calculation	NP/P	NP	NP/P		
3005A	Preparation, Total Recoverable or Dissolved Metals	NP/P		NP/P		
3010A	Preparation, Total Metals	NP/P		NP/P		
3020A	Preparation, Total Metals	NP/P/SW		NP/P/SW		
3050B	Preparation, Metals	SW		SW		
504.1	EDB, DBCP and 1,2,3-TCP (GC)	P	P	P		
608	Organochlorine Pest/PCBs (list upon request)	NP	NP	NP		
625	Semivolatile Org Comp (GC/MS)(list upon request)	NP		NP		
3546	Microwave Extraction	SW				
3510C	Liquid-Liquid Extraction (Separatory Funnel)	NP		NP		
3540C	Soxhlet Extraction	SW				
3550B	Ultrasonic Extraction	SW		SW		
600/4-81-045	Polychlorinated Biphenyls (PCBs) (GC)		NP	NP		
8081A	Organochlorine Pesticides (GC)(list upon request)	NP/SW		NP/SW		
8082	PCBs by Gas Chromatography(list upon request)	NP/SW		NP/SW		
8270C	Semivolatile Comp.(GC/MS)(list upon request)	NP/SW		NP/SW		
CT ETPH	Conn - Ext. Total petroleum Hydrocarbons (GC)			NP/SW		
MA-EPH	Mass - Extractable Petroleum Hydrocarbons (GC)			NP/SW		NP/SW
524.2	Volatile Org Comp (GC/MS)(list upon request)	P	P	P		
524.2	Trihalomethane compounds	P	P	P		
624	Volatile Org Comp (GC/MS)(list upon request)	NP	NP	NP		
5035	Closed System Purge and Trap	SW		SW		
5030B	Purge and Trap	NP		NP		
8260B	Volatile Org Comp. (GC/MS)(list upon request)	NP/SW		NP/SW		
MAVPH	Mass - Volatile Petroleum Hydrocarbons (GC)			NP/SW		NP/SW
180.1	Turbidity, Nephelometric	P	P	P		
300	Anions, Ion Chromatography	NP/P	NP/P	NP/P		
410.4	COD	NP	NP	NP		
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW		SW		
10-107-06-2	Nitrogen, Total Kjeldahl	NP	NP	NP		
7196A	Chromium, Hexavalent	NP/SW		NP/SW		
9012A	Cyanide, Total and/or Amenable	NP/SW		NP/SW		
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	NP		NP		
9040B	pH	NP		NP		
9045C	pH	SW		SW		
L107041C	Nitrogen, Nitrate	NP	P	NP/P		
L107-06-1B	Nitrogen Ammonia	NP	NP	NP/P		
L204001A CN	Cyanide, Total	P	NP/P	NP/P		
L210-001A	Phenolics, Total Recoverable	NP	NP	NP		
SM 2320B	Alkalinity	NP/P	NP/P	NP/P		
SM 2510B	Conductivity, Specific Conductance	NP/P	NP/P	NP/P		
SM 2540C	Solids, Total Dissolved (TDS)	NP/P	NP/P	NP/P		
SM 2540D	Solids, Total Suspended (TSS)	NP	NP	NP		
SM 3500 CR D	Chromium, Hexavalent	NP		NP		
SM 4500 H+ B	pH	NP/P	NP/P	NP/P		
SM 4500 NO2 B	Nitrogen, Nitrite	NP	P	NP/P		
SM 4500 P E	Phosphorus, Orthophosphate	NP/P	NP	NP/P		
SM 4500 P E	Phosphorus, Total	NP	NP	NP		
SM 4500 S2 D	Sulfide, Total	NP		NP		
SM 5210B	BOD, 5-Day	NP	NP	NP		
SM 5310B	Organic Carbon, Total (TOC)	NP/P	NP	NP/P		

Not all organic compounds are accreditied under NELAC
For methods with multiple compounds all compounds may not meet NELAC criteria, listing should be obtained from the laboratory
The lab carries additional accreditations with several states. This is the laboratories typcial listing but is subject to change based on the laboratories current certification standing.

Login Sample Receipt Checklist

Client: Envirosense

Job Number: 360-32605-1

Login Number: 32605

List Source: TestAmerica Westfield

List Number: 1

Creator: Ard, Vanessa L

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
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.	False	
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

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Chain of Custody Form

004800

•53 Southampton Road
Westfield, MA 01085
(P) 413-572-4000
(F) 413-572-3707
Westfield

•148 Rangeway Road
N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871
Boston - Service Center

Client: Enviro Sense
Address: 1F Commons Drive Suite 34
Londonderry NH 03053
Phone: 603 4378227 Fax: 603 437 0500

Client Project #: 07787-08/014
Site ID & State: Alewife Pmp. Sta. - MA
Reports Sent To: Russ Cagueux
Email: rlagueux@enviosense.com Email Rpt: ☑

Job# 320-32605 Quote# PO#

Shaded areas for office use
Invoice same as Report to? ☐
If Invoice contact or address different, note in Comments

Comments (Special Instructions)

Please print legibly. If the analytical requests are not clearly defined on the chain-of-custody, the turnaround time will begin after all questions have been satisfactorily answered.

Requested Turnaround Time (PLEASE SPECIFY)
STANDARD X
RUSH ____ (Lab Approval Required)

Regulatory Programs/Presumptive Certainty/QC Forms
MADEP MCP ☐ GW1/S1 ☐ PWS DEP Forms ☐
CTDEP RCP ☐ CT RSR ☐ EDD Required ☐
QA Rpt: No QC ☐ Std QC Rpt ☒ CLP QC Rpt: ☐

500-series for drinking water
600-series for waste water, NPDES
6000-series for groundwater, soil, waste
8000-series for groundwater, soil, waste
Use comments section to further define.

Sample Type Codes: WW-Wastewater, DW-Drinking Water, SW-Surface Water, GW-Groundwater, LW Lab Water, A-Air, "Z"-Other (please specify) Z = Solid

Sample I.D.	Sample Type	Sampler's Initials	Date Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	NaHSO4/MeOH	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH <2	NaOH to pH >12	Na2S2O3	None / 4° C	524 / 624 / 8260	525 / 625 / 8270	PCB / Pest / Herbicide	EPH / VPH	DRO / GRO / ETPH	Metals (Please Specify)	Mercury	General Chemistry	Bacteriological	Toxicity
~~MR100C~~ MR2001C	Z	TTO MBG	3-3-11 0847	X		1	G										X							
MR 2019	Z	MBG TTO	3-3-11 0923	X		1	G										X							
MR 2019C	Z	MBG TTO	3-3-11 0923	X		1	G										X							
MR 2020	Z	MBG TTO	3-3-11 1243	X		1	G										X							
MR 2021	Z	MBG TTO	3-3-11 1320	X		1	G										X							
~~MR100BC~~ MR2008C	Z	MBG TTO	3-2-11 1125	X		1	G										X							
MR 2022	Z	MBG TTO	3/2/11 1000	X		1	G										X							
MR 2022C	Z	MBG TTO	3-2-11 1135	X		1	G										X							
~~MR100AC~~ MR2009C	Z	MBG TTO	3-2-11 1117	X		1	G										X							
MR 2023	Z	MBG TTO	3-2-11 0924	X		1	G										X							

Comments:
All PCB Analysis:
8082 w/Soxhlet via 3540C

Sampled by (print):
Signature:

Cooler? (Y) N
MADEP Requirement Samples Iced? (Y) / N

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Tom Dowd	3-4-11	1610	FSI Service Storage	3-4-11	1610
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
FSI Cold Storage	3-8-11	1120	Jerry Pach	3-8-11	0120
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jerry Pach	3-8-11	1610	[illegible]	3/10/11	1610

Temp @ receipt: 10.0 °C
Preservation / pH checked? Y / N N/A
By: JB Date: 3/9/11

WESTFIELD

Page 1 of 1

White = Lab file Yellow = Report copy Pink = Customer copy

TAL-8245(1007)

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Chain of Custody Form

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•53 Southampton Road
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(F) 413-572-3707
Westfield

•148 Rangeway Road
N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871
Boston - Service Center

Client: EnviroSense
Address: 1F Commons Drive Suite 34
Londonderry 03053
Phone: 603 4378227 Fax: 603 4370500

Client Project #: 07757-08/014
Site ID & State: Alewife Pmp Sta - MA
Reports Sent To: Russ Laqueux
Email: rlaqueux@EnviroSense.com Email Rpt: [X]

Job# 360-32605 Quote# PO#

Shaded areas for office use
Invoice same as Report to? [ ]
If Invoice contact or address different, note in Comments

Comments (Special Instructions)
Please print legibly. If the analytical requests are not clearly defined on the chain-of-custody, the turnaround time will begin after all questions have been satisfactorily answered.

Requested Turnaround Time (PLEASE SPECIFY)
STANDARD X RUSH ____ (Lab Approval Required)

Regulatory Programs/Presumptive Certainty/QC Forms
MADEP MCP [ ] GW1/S1 [ ] PWS DEP Forms [ ]
CTDEP RCP [ ] CT RSR [ ] EDD Required [ ]
QA Rpt: No QC [ ] Std QC Rpt [X] CLP QC Rpt: [ ]

500-series for drinking water
600-series for waste water, NPDES
6000-series for groundwater, soil, waste
8000-series for groundwater, soil, waste
Use comments section to further define.

Sample Type Codes: WW-Wastewater, DW-Drinking Water, SW-Surface Water, GW-Groundwater, LW Lab Water, A-Air, "Z"-Other (please specify) Z = Solid

Comments: All PCB Analysis: 8082 w/Soxhlet via 3540C

Sample I.D.	Sample Type	Sampler's Initials	Date / Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	NaHSO4/MeOH	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH <2	NaOH to pH >12	Na2S2O3	None / 4º C	524 / 624 / 8260	525 / 625 / 8270	PCB / Pest / Herbicide	EPH / VPH	DRO / GRO / ETPH	Metals (Please Specify)	Mercury	General Chemistry	Bacteriological	Toxicity
MR2023Ca	Z	MBG/TTO	3-2-11 1027	X		1	G										X							
MR2023Cb	Z	MBG TTO	3-2-11 1056	X		1	G										X							
~~MR1012I~~ MR2012I	Z	MBG TTO	3-3-11 1300	X		1	G										X							
~~MR1013B~~ MR2013B	Z	MBG TTO	3-2-11 1231	X		1	G										X							
~~MR1013M~~ MR2013M	Z	MBG TTO	3-2-11 1246	X		1	G										X							
~~MR1015C~~ MR2015C	Z	MBG TTO	3-2-11 1253	X		1	G										X							
~~MR2024~~	~~Z~~	~~MBG TTO~~	~~3-2-11 1004~~	~~X~~		~~1~~	~~G~~										~~X~~							
~~PR1001C~~ PR2001C	Z	MBG TTO	3-2-11 1304	X		1	G										X							
PR2008C	Z	MBG TTO	3-3-11 1112	X		1	G										X							
PR2009	Z	MBG TTO	3-2-11 1337	X		1	G										X							

Sampled by (print):
Signature:

Cooler? Y / N
MADEP Requirement Samples Iced? Y / N

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Tom O'Donnell	3-4-11	1610	ESI Secure Storage	3-4-11	1610
ESI Cold Storage	3-8-11	1120	[signature]	3-8-11	1120
[signature]	3-8-11	1810	[signature]	3/8/11	1810

Temp @ receipt: 12.0 ºC
Preservation / pH checked? Y / N N/A
By: JB Date: 3/9/11

WESTFIELD

Page 2 of 7

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TAL-8245(1007)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Form

004802

•53 Southampton Road
Westfield, MA 01085
(P) 413-572-4000
(F) 413-572-3707
Westfield

•148 Rangeway Road
N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871
Boston - Service Center

Client: EnviroSense
Address: 1F Commons Drive Suite 34
Londonderry NH 03053
Phone: 603 437 8227 Fax: 603 437 0500

Client Project #: 07757-08/014
Site ID & State: Alewife Pump Sta. MA
Reports Sent To: Russ Lagueux
Email: rlagueux@EnviroSense.com Email Rpt: ☒

Job# 360-32605 Quote# PO#

Shaded areas for office use
Invoice same as Report to? ☐
If Invoice contact or address different, note in Comments

Requested Turnaround Time (PLEASE SPECIFY)
STANDARD X
RUSH ____ (Lab Approval Required)

Regulatory Programs/Presumptive Certainty/QC Forms
MADEP MCP ☐ GW1/S1 ☐ PWS DEP Forms ☐
CTDEP RCP ☐ CT RSR ☐ EDD Required ☐
QA Rpt: No QC ☐ Std QC Rpt ☒ CLP QC Rpt: ☐

500-series for drinking water
600-series for waste water, NPDES
6000-series for groundwater, soil, waste
8000-series for groundwater, soil, waste
Use comments section to further define.

Comments (Special Instructions)

Please print legibly. If the analytical requests are not clearly defined on the chain-of-custody, the turnaround time will begin after all questions have been satisfactorily answered.

Comments:
All PCB Analysis:
8082 w/Soxhlet via 3540C

Sample Type Codes: WW-Wastewater, DW-Drinking Water, SW-Surface Water, GW-Groundwater, LW Lab Water, A-Air, "Z"-Other (please specify) Z=Solid

Sample I.D.	Sample Type	Sampler's Initials	Date / Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	Preservative: NaHSO4/MeOH	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH <2	NaOH to pH >12	Na2S2O3	None / 4° C	524 / 624 / 8260	525 / 625 / 8270	PCB / Pest / Herbicide	EPH / VPH	DRO / GRO / ETPH	Metals (Please Specify)	Mercury	General Chemistry	Bacteriological	Toxicity
PR2009C	Z	MBG TTO	3-3-11 1117	X		1	G										X							
PR2010	Z	MBG TTO	3-3-11 1105	X		1	G										X							
PR2010Ca	Z	MBG TTO	3-3-11 1129	X		1	G										X							
PR2010Cb	Z	MBG TTO	3-3-11 1135	X		1	G										X							
~~PR1002Ca~~ PR2002Ca	Z	MBG TTO	3-3-11 1011	X		1	G										X							
~~PR1002Cb~~ PR2002Cb	Z	MBG TTO	3-3-11 1011	X		1	G										X							
~~PR1006C~~ PR2006C	Z	MBG TTO	3-3-11 1150	X		1	G										X							
PR2011	Z	MBG TTO	3-3-11 1115	X		1	G										X							
PR2012	Z	MBG TTO	3-3-11 1128	X		1	G										X							
~~SC1002C~~ SC2002C	Z	MBG TTO	3/4/11 1040	X		1	G										X							

Sampled by (print):
Signature:

Cooler? Y / N
MADEP Requirement Samples Iced? Y / N

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Tom O'Donnell	3-4-11	1610	EST Secure Storage	3-4-11	1610
EST Cold Storage	3-8-11	1120	Jerry Dach	3-8-11	1120
Jerry Dach	3-8-11	1410	[illegible]	3/9/11	1010

Temp @ receipt: 1.0 °C
Preservation / pH checked? Y / N N/A
By: JB Date: 3/9/11

WESTFIELD

Page 3 of 7

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TAL-8245(1007)

TestAmerica
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ANALYTICAL REPORT

Job Number: 360-32606-1

Job Description: 07757-08/014

For:
Envirosense
1F Commons Drive, Suite 34
Londonderry, NH 03053

Attention: Mr. Russ Lagueux

Approved for release.
Joe Chimi
Report Production Representative
3/17/11 3:47 PM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
03/17/2011

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. TestAmerica Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 2539, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY ELAP 10843, North Carolina 647, NELAP PA 68-04386. Field sampling is performed under SOPs WE-FLD-001 and WE-FLD-002.

TestAmerica Laboratories, Inc.
TestAmerica Westfield Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

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MassDEP Analytical Protocol Certification Form

Laboratory Name:	**TestAmerica Westfield**	Project #:	**360-32606-1**
Project Location:	**Alewife Pmp Sta - MA**	RTN:	

This form provides certifications for the following data set: list Laboratory Sample ID Number(s):

360-32606-(1-31)

Matrices: ☐ Groundwater/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☒ Other:

CAM Protocols (check all that apply below):

8260 VOC CAM II A ☐	7470/7471 Hg CAM III B ☐	Mass DEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	Mass DEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	Mass DEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☒	9014 Total Cyanide/PAC CAM VI A ☐	332.0 Perchlorate CAM VIII B ☐	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time.	☒ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☒ Yes ☐ No
E	a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☒ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☒ No[1]

***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350**

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☒ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?	☒ Yes ☐ No

[1] All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature:		Position:	Laboratory Director
Printed Name:	Steven C. Hartmann	Date:	3/17/11 15:22

This form has been electronically signed and approved

CASE NARRATIVE

Client: Envirosense

Project: 07757-08/014

Report Number: 360-32606-1

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

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

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

RECEIPT

The samples were received on 03/08/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 12.0 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2 C of the required temperature or method specified range. For samples with a specified temperature of 4 C, samples with a temperature ranging from just above freezing temperature of water to 6 C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

TestAmerica's Reporting Limits (RLs) for this report do not meet WSC-CAM-III method reporting limits due to various reasons such as methodology, dilutions or moisture content (soils). TestAmerica's MA pivot table EDD documents which compound(s) exceed certain regulatory standards. If not included with your deliverables, please contact your Project Manager about the availability of this EDD for your report.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples SC 2012 (360-32606-1), SC 2012C (360-32606-2), SC 2013 (360-32606-3), SC 2013C (360-32606-4), SC 2014 (360-32606-5), SC 2014 Ca (360-32606-6), SC 2014 Cb (360-32606-7), SC 2015 (360-32606-8), SC 2015C (360-32606-9), SR 2002C (360-32606-10), SR 2007 (360-32606-11), SR 2007C (360-32606-12), SR 2003C (360-32606-13), SR 2008 (360-32606-14), SR 2008C (360-32606-15), SR 2004C (360-32606-16), BR 2005 (360-32606-17), GR 2001C (360-32606-18), GR 2007 (360-32606-19), GR 2007C (360-32606-20), OD 2008 (360-32606-21), Field Duplicate 1a (360-32606-22), Field Duplicate 1b (360-32606-23), PR 2008 (360-32606-24), MR 2024 (360-32606-26), Field Duplicate 2 (360-32606-28), SC 2016 (360-32606-29) and Field Duplicate 3 (360-32606-30) were analyzed for polychlorinated biphenyls (PCBs) in accordance with SW846 8082A. The samples were prepared on 03/09/2011 and analyzed on 03/10/2011, 03/11/2011, 03/14/2011 and 03/15/2011.

PCB-1254 was detected in method blank MB 360-70356/1-A at levels exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Insufficient sample remained to re-extract the associated samples that contained this analyte. Refer to the QC report for details.

Tetrachloro-m-xylene failed the surrogate recovery criteria low for SR 2003C (360-32606-13) for the primary column only. Recovery was acceptable in the secondary column. Tetrachloro-m-xylene failed the surrogate recovery criteria high for Field Duplicate 1b (360-32606-23). Tetrachloro-m-xylene failed the surrogate recovery criteria low for MB 360-70355/1-A and its subsequent re-analysis (RA). Insufficient sample remained to re-extract the associated samples SC 2012 (360-32606-1), SC 2012C (360-32606-2), SC 2013 (360-32606-3), SC 2013C (360-32606-4), SC 2014 (360-32606-5), SC 2014 Ca (360-32606-6), SC 2014 Cb (360-32606-7), SC 2015 (360-32606-8) and SC 2015C (360-32606-9). Refer to the QC report for details.

Samples SC 2012 (360-32606-1)[1000X], SC 2012C (360-32606-2)[20X], SC 2013 (360-32606-3)[1000X], SC 2013C (360-32606-4)[1000X], SC 2014 (360-32606-5)[1000X], SC 2014 Ca (360-32606-6)[1000X], SC 2014 Cb (360-32606-7)[5X], SC 2015 (360-32606-8)[10X], SR 2002C (360-32606-10)[100X], SR 2007 (360-32606-11)[50X], SR 2007C (360-32606-12)[20X], SR 2003C (360-32606-13)[10X], SR 2008 (360-32606-14)[100X], SR 2008C (360-32606-15)[50X], SR 2004C (360-32606-16)[20X], BR 2005 (360-32606-17)[5X], GR 2001C (360-32606-18)[2X], GR 2007 (360-32606-19)[1000X], GR 2007C (360-32606-20)[10X], OD 2008 (360-32606-21)[20X], PR 2008 (360-32606-24)[1000X], MR 2024 (360-32606-26)[5X], Field Duplicate 2 (360-32606-28)[20X], SC 2016 (360-32606-29)[1000X] and Field Duplicate 3 (360-32606-30)[10X] required dilution prior to analysis due to high target concentration. The reporting limits have been adjusted accordingly. For all dilutions 20X or higher, the surrogates DCB Decachlorobiphenyl and Tetrachloro-m-xylene were diluted outside control limits.

Silica gel cleanup was performed on the following samples: MB 360-70355/1-A, MB 360-70356/1-A, LCS 360-70355/2-A, LCS 360-70356/2-A, LCSD 360-70355/3-A, LCSD 360-70356/3-A, SC 2012C (360-32606-2), SC 2014 Cb (360-32606-7), SR 2002C (360-32606-10), SR 2007C (360-32606-12) and SR 2003C (360-32606-13).

No other difficulties were encountered during the PCBs analyses.

All other quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples Equipment Blank 1 (360-32606-25), Equipment Blank 2 (360-32606-27) and Equipment Blank (360-32606-31) were analyzed for polychlorinated biphenyls (PCBs) in accordance with SW846 8082A. The samples were prepared on 03/09/2011 and 03/16/2011 and analyzed on 03/14/2011 and 03/17/2011.

DCB Decachlorobiphenyl failed the surrogate recovery criteria low for Equipment Blank (360-32606-31). The sample was re-extracted outside of holding time with acceptable surrogate recoveries. Both sets of results are reported. Refer to the QC report for details.

Due to a system error, the following samples were listed as analyzed on 03/17/2011, when they were actually analyzed on 03/16/2011: MB 360-70620/1-A, LCS 360-70620/2-A and LCSD 360-70620/3-A.

No other difficulties were encountered during the PCBs analyses.

All other quality control parameters were within the acceptance limits.

PERCENT SOLIDS

For samples SC 2012 (360-32606-1), SC 2012C (360-32606-2), SC 2013 (360-32606-3), SC 2013C (360-32606-4), SC 2014 (360-32606-5), SC 2014 Ca (360-32606-6), SC 2014 Cb (360-32606-7), SC 2015 (360-32606-8), SC 2015C (360-32606-9), SR 2002C (360-32606-10), SR 2007 (360-32606-11), SR 2007C (360-32606-12), SR 2003C (360-32606-13), SR 2008 (360-32606-14), SR 2008C (360-32606-15), SR 2004C (360-32606-16), BR 2005 (360-32606-17), GR 2001C (360-32606-18), GR 2007 (360-32606-19), GR 2007C (360-32606-20), OD 2008 (360-32606-21), Field Duplicate 1a (360-32606-22), Field Duplicate 1b (360-32606-23), PR 2008 (360-32606-24), MR 2024 (360-32606-26), Field Duplicate 2 (360-32606-28), SC 2016 (360-32606-29) and Field Duplicate 3 (360-32606-30), the laboratory assumes 100% solids for all samples. The percent solids data were entered on 03/09/2011.

All quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: Envirosense

Job Number: 360-32606-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
360-32606-1	**SC 2012**				
PCB-1254		1700000	560000	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32606-2	**SC 2012C**				
PCB-1254		62000	3900	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32606-3	**SC 2013**				
PCB-1254		1100000	920000	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32606-4	**SC 2013C**				
PCB-1254		540000	99000	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32606-5	**SC 2014**				
PCB-1254		3000000	830000	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32606-6	**SC 2014 CA**				
PCB-1254		430000	99000	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture
360-32606-7	**SC 2014 CB**				
PCB-1254		4400	860	ug/Kg	8082A
Percent Moisture		0.00	1.0	%	Moisture
Percent Solids		100	1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Envirosense

Job Number: 360-32606-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
360-32606-8	**SC 2015**					
PCB-1254		73000		15000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-9	**SC 2015C**					
PCB-1254		680		98	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-10	**SR 2002C**					
PCB-1254		47000		9500	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-11	**SR 2007**					
PCB-1254		110000	B	14000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-12	**SR 2007C**					
PCB-1254		26000		2000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-13	**SR 2003C**					
PCB-1254		20000		1800	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-14	**SR 2008**					
PCB-1254		500000	B	71000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Envirosense

Job Number: 360-32606-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
360-32606-15	**SR 2008C**					
PCB-1254		40000	B	4700	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-16	**SR 2004C**					
PCB-1254		25000	B	3000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-17	**BR 2005**					
PCB-1254		61000	B	4500	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-18	**GR 2001C**					
PCB-1254		3200	B	250	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-19	**GR 2007**					
PCB-1254		820000	B	700000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-20	**GR 2007C**					
PCB-1254		13000	B	980	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-21	**OD 2008**					
PCB-1254		170000	B	16000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Envirosense

Job Number: 360-32606-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
360-32606-22	**FIELD DUPLICATE 1A**					
PCB-1254		1000	B	100	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-23	**FIELD DUPLICATE 1B**					
PCB-1254		790	B	400	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-24	**PR 2008**					
PCB-1254		1300000		800000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-26	**MR 2024**					
PCB-1254		25000		3800	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-28	**FIELD DUPLICATE 2**					
PCB-1254		160000		17000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-29	**SC 2016**					
PCB-1254		2300000		530000	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture
360-32606-30	**FIELD DUPLICATE 3**					
PCB-1254		8000		1200	ug/Kg	8082A
Percent Moisture		0.00		1.0	%	Moisture
Percent Solids		100		1.0	%	Moisture

METHOD SUMMARY

Client: Envirosense

Job Number: 360-32606-1

Description	Lab Location	Method	Preparation Method
Matrix Solid			
Polychlorinated Biphenyls (GC/ECD)	TAL WFD	MA DEP 8082A	
Soxhlet Extraction	TAL WFD		SW846 3540C
Percent Moisture	TAL WFD	EPA Moisture	
Matrix Water			
Polychlorinated Biphenyls (GC/ECD)	TAL WFD	MA DEP 8082A	
Liquid-Liquid Extraction (Separatory Funnel)	TAL WFD		SW846 3510C

Lab References:

TAL WFD = TestAmerica Westfield

Method References:

EPA = US Environmental Protection Agency

MA DEP = Massachusetts Department Of Environmental Protection

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

METHOD / ANALYST SUMMARY

Client: Envirosense

Job Number: 360-32606-1

Method	Analyst	Analyst ID
MA DEP 8082A	Bilodeau, Brian R	BRB
MA DEP 8082A	Sullivan, Pat J	PJS
EPA Moisture	Nasiatka, Ellen M	EMN

SAMPLE SUMMARY

Client: Envirosense

Job Number: 360-32606-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-32606-1	SC 2012	Solid	03/03/2011 1318	03/08/2011 1610
360-32606-2	SC 2012C	Solid	03/04/2011 1040	03/08/2011 1610
360-32606-3	SC 2013	Solid	03/03/2011 1331	03/08/2011 1610
360-32606-4	SC 2013C	Solid	03/04/2011 1049	03/08/2011 1610
360-32606-5	SC 2014	Solid	03/03/2011 1333	03/08/2011 1610
360-32606-6	SC 2014 Ca	Solid	03/04/2011 1048	03/08/2011 1610
360-32606-7	SC 2014 Cb	Solid	03/04/2011 1055	03/08/2011 1610
360-32606-8	SC 2015	Solid	03/04/2011 0933	03/08/2011 1610
360-32606-9	SC 2015C	Solid	03/04/2011 1008	03/08/2011 1610
360-32606-10	SR 2002C	Solid	03/04/2011 1149	03/08/2011 1610
360-32606-11	SR 2007	Solid	03/04/2011 0915	03/08/2011 1610
360-32606-12	SR 2007C	Solid	03/04/2011 1155	03/08/2011 1610
360-32606-13	SR 2003C	Solid	03/04/2011 1133	03/08/2011 1610
360-32606-14	SR 2008	Solid	03/04/2011 0933	03/08/2011 1610
360-32606-15	SR 2008C	Solid	03/04/2011 1139	03/08/2011 1610
360-32606-16	SR 2004C	Solid	03/04/2011 1159	03/08/2011 1610
360-32606-17	BR 2005	Solid	03/04/2011 1228	03/08/2011 1610
360-32606-18	GR 2001C	Solid	03/04/2011 1310	03/08/2011 1610
360-32606-19	GR 2007	Solid	03/04/2011 1255	03/08/2011 1610
360-32606-20	GR 2007C	Solid	03/04/2011 1316	03/08/2011 1610
360-32606-21	OD 2008	Solid	03/04/2011 1030	03/08/2011 1610
360-32606-22	Field Duplicate 1a	Solid	03/02/2011 1030	03/08/2011 1610
360-32606-23	Field Duplicate 1b	Solid	03/02/2011 1107	03/08/2011 1610
360-32606-24	PR 2008	Solid	03/02/2011 1335	03/08/2011 1610
360-32606-25	Equipment Blank 1	Water	03/02/2011 1355	03/08/2011 1610
360-32606-26	MR 2024	Solid	03/03/2011 1246	03/08/2011 1610
360-32606-27	Equipment Blank 2	Water	03/03/2011 1345	03/08/2011 1610
360-32606-28	Field Duplicate 2	Solid	03/04/2011 0917	03/08/2011 1610
360-32606-29	SC 2016	Solid	03/04/2011 1025	03/08/2011 1610
360-32606-30	Field Duplicate 3	Solid	03/04/2011 1316	03/08/2011 1610
360-32606-31	Equipment Blank	Water	03/04/2011 1330	03/08/2011 1610

SAMPLE RESULTS

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2012**

Lab Sample ID: 360-32606-1

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1318

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.79 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0513			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		560000
PCB-1221		ND		560000
PCB-1232		ND		560000
PCB-1242		ND		560000
PCB-1248		ND		560000
PCB-1254		1700000		560000
PCB-1260		ND		560000
PCB-1262		ND		560000
PCB-1268		ND		560000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2012**

Lab Sample ID: 360-32606-1

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1318

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.79 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0513			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2012C**

Lab Sample ID: 360-32606-2

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1040

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.16 g
Dilution:	20			Final Weight/Volume:	20.00 mL
Date Analyzed:	03/15/2011 0143			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		3900
PCB-1221		ND		3900
PCB-1232		ND		3900
PCB-1242		ND		3900
PCB-1248		ND		3900
PCB-1254		62000		3900
PCB-1260		ND		3900
PCB-1262		ND		3900
PCB-1268		ND		3900

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2012C**

Lab Sample ID: 360-32606-2

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1040

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.16 g
Dilution:	20			Final Weight/Volume:	20.00 mL
Date Analyzed:	03/15/2011 0143			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2013**

Lab Sample ID: 360-32606-3

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1331

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.09 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0534			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		920000
PCB-1221		ND		920000
PCB-1232		ND		920000
PCB-1242		ND		920000
PCB-1248		ND		920000
PCB-1254		1100000		920000
PCB-1260		ND		920000
PCB-1262		ND		920000
PCB-1268		ND		920000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2013**

Lab Sample ID: 360-32606-3

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1331

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.09 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0534			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2013C**

Lab Sample ID: 360-32606-4

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1049

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.06 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0556			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		99000
PCB-1221		ND		99000
PCB-1232		ND		99000
PCB-1242		ND		99000
PCB-1248		ND		99000
PCB-1254		540000		99000
PCB-1260		ND		99000
PCB-1262		ND		99000
PCB-1268		ND		99000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2013C**

Lab Sample ID: 360-32606-4

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1049

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.06 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0556			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2014**

Lab Sample ID: 360-32606-5

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1333

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.21 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0618			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		830000
PCB-1221		ND		830000
PCB-1232		ND		830000
PCB-1242		ND		830000
PCB-1248		ND		830000
PCB-1254		3000000		830000
PCB-1260		ND		830000
PCB-1262		ND		830000
PCB-1268		ND		830000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2014**

Lab Sample ID: 360-32606-5

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1333

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	1.21 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0618			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2014 Ca**

Lab Sample ID: 360-32606-6

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1048

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.09 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0639			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		99000
PCB-1221		ND		99000
PCB-1232		ND		99000
PCB-1242		ND		99000
PCB-1248		ND		99000
PCB-1254		430000		99000
PCB-1260		ND		99000
PCB-1262		ND		99000
PCB-1268		ND		99000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2014 Ca**

Lab Sample ID: 360-32606-6

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1048

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.09 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0639			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2014 Cb**

Lab Sample ID: 360-32606-7

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1055

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	5.84 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0204			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		860
PCB-1221		ND		860
PCB-1232		ND		860
PCB-1242		ND		860
PCB-1248		ND		860
PCB-1254		4400		860
PCB-1260		ND		860
PCB-1262		ND		860
PCB-1268		ND		860

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	43	p	30 - 150
DCB Decachlorobiphenyl	79		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2014 Cb**

Lab Sample ID: 360-32606-7

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1055

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526	Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355	Initial Weight/Volume:	5.84 g
Dilution:	5.0		Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0204		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	74		30 - 150
DCB Decachlorobiphenyl	71		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2015**

Lab Sample ID: 360-32606-8

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 0933

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	.66 g
Dilution:	10			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0701			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		15000
PCB-1221		ND		15000
PCB-1232		ND		15000
PCB-1242		ND		15000
PCB-1248		ND		15000
PCB-1254		73000		15000
PCB-1260		ND		15000
PCB-1262		ND		15000
PCB-1268		ND		15000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	120		30 - 150
DCB Decachlorobiphenyl	100		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2015**

Lab Sample ID: 360-32606-8

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 0933

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	.66 g
Dilution:	10			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0701			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	95		30 - 150
DCB Decachlorobiphenyl	98		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2015C**

Lab Sample ID: 360-32606-9

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1008

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.23 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/10/2011 2323			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		98
PCB-1221		ND		98
PCB-1232		ND		98
PCB-1242		ND		98
PCB-1248		ND		98
PCB-1254		680		98
PCB-1260		ND		98
PCB-1262		ND		98
PCB-1268		ND		98

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	101		30 - 150
DCB Decachlorobiphenyl	80		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2015C**

Lab Sample ID: 360-32606-9

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1008

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70355		Initial Weight/Volume:	10.23 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/10/2011 2323			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	99		30 - 150
DCB Decachlorobiphenyl	75		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2002C**

Lab Sample ID: 360-32606-10

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1149

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	10.58 g
Dilution:	100			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0411			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		9500
PCB-1221		ND		9500
PCB-1232		ND		9500
PCB-1242		ND		9500
PCB-1248		ND		9500
PCB-1254		47000		9500
PCB-1260		ND		9500
PCB-1262		ND		9500
PCB-1268		ND		9500

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2002C**

Lab Sample ID: 360-32606-10

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1149

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	10.58 g
Dilution:	100			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0411			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2007**

Lab Sample ID: 360-32606-11

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 0915

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	3.51 g
Dilution:	50			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0723			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		14000
PCB-1221		ND		14000
PCB-1232		ND		14000
PCB-1242		ND		14000
PCB-1248		ND		14000
PCB-1254		110000	B	14000
PCB-1260		ND		14000
PCB-1262		ND		14000
PCB-1268		ND		14000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2007**

Lab Sample ID: 360-32606-11

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 0915

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	3.51 g
Dilution:	50			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0723			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2007C**

Lab Sample ID: 360-32606-12

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1155

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	10.01 g
Dilution:	20			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0432			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		2000
PCB-1221		ND		2000
PCB-1232		ND		2000
PCB-1242		ND		2000
PCB-1248		ND		2000
PCB-1254		26000		2000
PCB-1260		ND		2000
PCB-1262		ND		2000
PCB-1268		ND		2000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2007C**

Lab Sample ID: 360-32606-12

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1155

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	10.01 g
Dilution:	20			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0432			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2003C**

Lab Sample ID: 360-32606-13

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1133

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	10.87 g
Dilution:	10			Final Weight/Volume:	20.00 mL
Date Analyzed:	03/15/2011 0453			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		1800
PCB-1221		ND		1800
PCB-1232		ND		1800
PCB-1242		ND		1800
PCB-1248		ND		1800
PCB-1254		20000		1800
PCB-1260		ND		1800
PCB-1262		ND		1800
PCB-1268		ND		1800

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	59		30 - 150
DCB Decachlorobiphenyl	39	p	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2003C**

Lab Sample ID: 360-32606-13

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1133

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	10.87 g
Dilution:	10			Final Weight/Volume:	20.00 mL
Date Analyzed:	03/15/2011 0453			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	-4	X	30 - 150
DCB Decachlorobiphenyl	96		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2008**

Lab Sample ID: 360-32606-14

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 0933

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.40 g
Dilution:	100			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0744			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		71000
PCB-1221		ND		71000
PCB-1232		ND		71000
PCB-1242		ND		71000
PCB-1248		ND		71000
PCB-1254		500000	B	71000
PCB-1260		ND		71000
PCB-1262		ND		71000
PCB-1268		ND		71000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2008**

Lab Sample ID: 360-32606-14

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 0933

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.40 g
Dilution:	100			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0744			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2008C**

Lab Sample ID: 360-32606-15

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1139

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	10.62 g
Dilution:	50			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0806			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		4700
PCB-1221		ND		4700
PCB-1232		ND		4700
PCB-1242		ND		4700
PCB-1248		ND		4700
PCB-1254		40000	B	4700
PCB-1260		ND		4700
PCB-1262		ND		4700
PCB-1268		ND		4700

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2008C**

Lab Sample ID: 360-32606-15

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1139

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	10.62 g
Dilution:	50			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0806			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2004C**

Lab Sample ID: 360-32606-16

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1159

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	6.71 g
Dilution:	20			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0827			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		3000
PCB-1221		ND		3000
PCB-1232		ND		3000
PCB-1242		ND		3000
PCB-1248		ND		3000
PCB-1254		25000	B	3000
PCB-1260		ND		3000
PCB-1262		ND		3000
PCB-1268		ND		3000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SR 2004C**

Lab Sample ID: 360-32606-16

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1159

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	6.71 g
Dilution:	20			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0827			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **BR 2005**

Lab Sample ID: 360-32606-17

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1228

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.12 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0849			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		4500
PCB-1221		ND		4500
PCB-1232		ND		4500
PCB-1242		ND		4500
PCB-1248		ND		4500
PCB-1254		61000	B	4500
PCB-1260		ND		4500
PCB-1262		ND		4500
PCB-1268		ND		4500

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	116		30 - 150
DCB Decachlorobiphenyl	139		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **BR 2005**

Lab Sample ID: 360-32606-17

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1228

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.12 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0849			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	107		30 - 150
DCB Decachlorobiphenyl	107		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **GR 2001C**

Lab Sample ID: 360-32606-18

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1310

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	8.06 g
Dilution:	2.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0911			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		250
PCB-1221		ND		250
PCB-1232		ND		250
PCB-1242		ND		250
PCB-1248		ND		250
PCB-1254		3200	B	250
PCB-1260		ND		250
PCB-1262		ND		250
PCB-1268		ND		250

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	103		30 - 150
DCB Decachlorobiphenyl	135		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **GR 2001C**

Lab Sample ID: 360-32606-18

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1310

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	8.06 g
Dilution:	2.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0911			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	94		30 - 150
DCB Decachlorobiphenyl	107		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **GR 2007**

Lab Sample ID: 360-32606-19

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1255

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.42 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0932			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		700000
PCB-1221		ND		700000
PCB-1232		ND		700000
PCB-1242		ND		700000
PCB-1248		ND		700000
PCB-1254		820000	B	700000
PCB-1260		ND		700000
PCB-1262		ND		700000
PCB-1268		ND		700000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **GR 2007**

Lab Sample ID: 360-32606-19

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1255

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.42 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0932			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **GR 2007C**

Lab Sample ID: 360-32606-20

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1316

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	10.24 g
Dilution:	10			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0954			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		980
PCB-1221		ND		980
PCB-1232		ND		980
PCB-1242		ND		980
PCB-1248		ND		980
PCB-1254		13000	B	980
PCB-1260		ND		980
PCB-1262		ND		980
PCB-1268		ND		980

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	47	p	30 - 150
DCB Decachlorobiphenyl	146		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **GR 2007C**

Lab Sample ID: 360-32606-20

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1316

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	10.24 g
Dilution:	10			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 0954			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	91		30 - 150
DCB Decachlorobiphenyl	111		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **OD 2008**

Lab Sample ID: 360-32606-21

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1030

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.29 g
Dilution:	20			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 1015			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		16000
PCB-1221		ND		16000
PCB-1232		ND		16000
PCB-1242		ND		16000
PCB-1248		ND		16000
PCB-1254		170000	B	16000
PCB-1260		ND		16000
PCB-1262		ND		16000
PCB-1268		ND		16000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **OD 2008**

Lab Sample ID: 360-32606-21

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1030

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70507		Instrument ID:	Inst. M
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.29 g
Dilution:	20			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/15/2011 1015			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Field Duplicate 1a**

Lab Sample ID: 360-32606-22

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1030

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	9.97 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/11/2011 0440			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		100
PCB-1221		ND		100
PCB-1232		ND		100
PCB-1242		ND		100
PCB-1248		ND		100
PCB-1254		1000	B	100
PCB-1260		ND		100
PCB-1262		ND		100
PCB-1268		ND		100

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	118		30 - 150
DCB Decachlorobiphenyl	63		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Field Duplicate 1a**

Lab Sample ID: 360-32606-22

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1030

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	9.97 g
Dilution:	1.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/11/2011 0440			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		100
PCB-1221		ND		100
PCB-1232		ND		100
PCB-1242		ND		100
PCB-1248		ND		100
PCB-1254		980	B	100
PCB-1260		ND		100
PCB-1262		ND		100
PCB-1268		ND		100

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	108		30 - 150
DCB Decachlorobiphenyl	51		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Field Duplicate 1b**

Lab Sample ID: 360-32606-23

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1107

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	4.94 g
Dilution:	1.0			Final Weight/Volume:	20.00 mL
Date Analyzed:	03/11/2011 0501			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		400
PCB-1221		ND		400
PCB-1232		ND		400
PCB-1242		ND		400
PCB-1248		ND		400
PCB-1254		790	B	400
PCB-1260		ND		400
PCB-1262		ND		400
PCB-1268		ND		400

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	142		30 - 150
DCB Decachlorobiphenyl	119		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Field Duplicate 1b**

Lab Sample ID: 360-32606-23

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1107

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70375		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	4.94 g
Dilution:	1.0			Final Weight/Volume:	20.00 mL
Date Analyzed:	03/11/2011 0501			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		400
PCB-1221		ND		400
PCB-1232		ND		400
PCB-1242		ND		400
PCB-1248		ND		400
PCB-1254		740	B	400
PCB-1260		ND		400
PCB-1262		ND		400
PCB-1268		ND		400

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	161	X	30 - 150
DCB Decachlorobiphenyl	82		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **PR 2008**

Lab Sample ID: 360-32606-24

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1335

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.25 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2109			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		800000
PCB-1221		ND		800000
PCB-1232		ND		800000
PCB-1242		ND		800000
PCB-1248		ND		800000
PCB-1254		1300000		800000
PCB-1260		ND		800000
PCB-1262		ND		800000
PCB-1268		ND		800000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **PR 2008**

Lab Sample ID: 360-32606-24

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/02/2011 1335

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.25 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2109			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Equipment Blank 1**

Lab Sample ID: 360-32606-25

Client Matrix: Water

Date Sampled: 03/02/2011 1355

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70523	Instrument ID:	Inst. P
Preparation:	3510C	Prep Batch: 360-70304	Initial Weight/Volume:	1000 mL
Dilution:	1.0		Final Weight/Volume:	5.0 mL
Date Analyzed:	03/14/2011 1754		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1511		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
PCB-1016	ND		0.25
PCB-1221	ND		0.25
PCB-1232	ND		0.25
PCB-1242	ND		0.25
PCB-1248	ND		0.25
PCB-1254	ND		0.25
PCB-1260	ND		0.25
PCB-1262	ND		0.25
PCB-1268	ND		0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	86		30 - 150
DCB Decachlorobiphenyl	58		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Equipment Blank 1**

Lab Sample ID: 360-32606-25

Client Matrix: Water

Date Sampled: 03/02/2011 1355

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70523	Instrument ID:	Inst. P
Preparation:	3510C	Prep Batch: 360-70304	Initial Weight/Volume:	1000 mL
Dilution:	1.0		Final Weight/Volume:	5.0 mL
Date Analyzed:	03/14/2011 1754		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1511		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	79		30 - 150
DCB Decachlorobiphenyl	52		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **MR 2024**

Lab Sample ID: 360-32606-26

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1246

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.32 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2130			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		3800
PCB-1221		ND		3800
PCB-1232		ND		3800
PCB-1242		ND		3800
PCB-1248		ND		3800
PCB-1254		25000		3800
PCB-1260		ND		3800
PCB-1262		ND		3800
PCB-1268		ND		3800

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	48	p	30 - 150
DCB Decachlorobiphenyl	61	p	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **MR 2024**

Lab Sample ID: 360-32606-26

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/03/2011 1246

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.32 g
Dilution:	5.0			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2130			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	73		30 - 150
DCB Decachlorobiphenyl	97		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Equipment Blank 2**

Lab Sample ID: 360-32606-27

Client Matrix: Water

Date Sampled: 03/03/2011 1345

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70523		Instrument ID:	Inst. P
Preparation:	3510C	Prep Batch: 360-70304		Initial Weight/Volume:	1000 mL
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Date Analyzed:	03/14/2011 1818			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1511			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
PCB-1016	ND		0.25
PCB-1221	ND		0.25
PCB-1232	ND		0.25
PCB-1242	ND		0.25
PCB-1248	ND		0.25
PCB-1254	ND		0.25
PCB-1260	ND		0.25
PCB-1262	ND		0.25
PCB-1268	ND		0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	89		30 - 150
DCB Decachlorobiphenyl	46		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Equipment Blank 2**

Lab Sample ID: 360-32606-27

Client Matrix: Water

Date Sampled: 03/03/2011 1345

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70523	Instrument ID:	Inst. P
Preparation:	3510C	Prep Batch: 360-70304	Initial Weight/Volume:	1000 mL
Dilution:	1.0		Final Weight/Volume:	5.0 mL
Date Analyzed:	03/14/2011 1818		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1511		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	81		30 - 150
DCB Decachlorobiphenyl	39		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Field Duplicate 2**

Lab Sample ID: 360-32606-28

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 0917

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.21 g
Dilution:	20			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2151			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		17000
PCB-1221		ND		17000
PCB-1232		ND		17000
PCB-1242		ND		17000
PCB-1248		ND		17000
PCB-1254		160000		17000
PCB-1260		ND		17000
PCB-1262		ND		17000
PCB-1268		ND		17000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Field Duplicate 2**

Lab Sample ID: 360-32606-28

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 0917

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.21 g
Dilution:	20			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2151			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2016**

Lab Sample ID: 360-32606-29

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1025

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.88 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2212			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		530000
PCB-1221		ND		530000
PCB-1232		ND		530000
PCB-1242		ND		530000
PCB-1248		ND		530000
PCB-1254		2300000		530000
PCB-1260		ND		530000
PCB-1262		ND		530000
PCB-1268		ND		530000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **SC 2016**

Lab Sample ID: 360-32606-29

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1025

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	1.88 g
Dilution:	1000			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2212			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X D	30 - 150
DCB Decachlorobiphenyl	0	X D	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Field Duplicate 3**

Lab Sample ID: 360-32606-30

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1316

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	8.59 g
Dilution:	10			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2233			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		1200
PCB-1221		ND		1200
PCB-1232		ND		1200
PCB-1242		ND		1200
PCB-1248		ND		1200
PCB-1254		8000		1200
PCB-1260		ND		1200
PCB-1262		ND		1200
PCB-1268		ND		1200

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	38	p	30 - 150
DCB Decachlorobiphenyl	71		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Field Duplicate 3**

Lab Sample ID: 360-32606-30

Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 03/04/2011 1316

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70526		Instrument ID:	Inst. U
Preparation:	3540C	Prep Batch: 360-70356		Initial Weight/Volume:	8.59 g
Dilution:	10			Final Weight/Volume:	10.00 mL
Date Analyzed:	03/14/2011 2233			Injection Volume:	2 uL
Date Prepared:	03/09/2011 1400			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	64		30 - 150
DCB Decachlorobiphenyl	66		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Equipment Blank**

Lab Sample ID: 360-32606-31

Client Matrix: Water

Date Sampled: 03/04/2011 1330

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70523	Instrument ID:	Inst. P
Preparation:	3510C	Prep Batch: 360-70304	Initial Weight/Volume:	1100 mL
Dilution:	1.0		Final Weight/Volume:	5.0 mL
Date Analyzed:	03/14/2011 1843		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1511		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
PCB-1016	ND		0.23
PCB-1221	ND		0.23
PCB-1232	ND		0.23
PCB-1242	ND		0.23
PCB-1248	ND		0.23
PCB-1254	ND		0.23
PCB-1260	ND		0.23
PCB-1262	ND		0.23
PCB-1268	ND		0.23

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	87		30 - 150
DCB Decachlorobiphenyl	26	X	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Equipment Blank**

Lab Sample ID: 360-32606-31

Client Matrix: Water

Date Sampled: 03/04/2011 1330

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70523	Instrument ID:	Inst. P
Preparation:	3510C	Prep Batch: 360-70304	Initial Weight/Volume:	1100 mL
Dilution:	1.0		Final Weight/Volume:	5.0 mL
Date Analyzed:	03/14/2011 1843		Injection Volume:	2 uL
Date Prepared:	03/09/2011 1511		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	84		30 - 150
DCB Decachlorobiphenyl	23	X	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Equipment Blank**

Lab Sample ID: 360-32606-31

Client Matrix: Water

Date Sampled: 03/04/2011 1330

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70613	Instrument ID:	Inst. M
Preparation:	3510C	Prep Batch: 360-70620	Initial Weight/Volume:	1000 mL
Dilution:	1.0		Final Weight/Volume:	5.0 mL
Date Analyzed:	03/17/2011 0017		Injection Volume:	2 uL
Date Prepared:	03/16/2011 1500		Result Type:	PRIMARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	83		30 - 150
DCB Decachlorobiphenyl	40		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Client Sample ID: **Equipment Blank**

Lab Sample ID: 360-32606-31

Client Matrix: Water

Date Sampled: 03/04/2011 1330

Date Received: 03/08/2011 1610

8082A Polychlorinated Biphenyls (GC/ECD)

Method:	8082A	Analysis Batch: 360-70613		Instrument ID:	Inst. M
Preparation:	3510C	Prep Batch: 360-70620		Initial Weight/Volume:	1000 mL
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Date Analyzed:	03/17/2011 0017			Injection Volume:	2 uL
Date Prepared:	03/16/2011 1500			Result Type:	SECONDARY

Analyte	Result (ug/L)	Qualifier	RL
PCB-1016	ND	H	0.25
PCB-1221	ND	H	0.25
PCB-1232	ND	H	0.25
PCB-1242	ND	H	0.25
PCB-1248	ND	H	0.25
PCB-1254	ND	H	0.25
PCB-1260	ND	H	0.25
PCB-1262	ND	H	0.25
PCB-1268	ND	H	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	83		30 - 150
DCB Decachlorobiphenyl	39		30 - 150

General Chemistry

Client Sample ID: **SC 2012**

Lab Sample ID: 360-32606-1

Client Matrix: Solid

Date Sampled: 03/03/2011 1318

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SC 2012C**

Lab Sample ID: 360-32606-2

Client Matrix: Solid

Date Sampled: 03/04/2011 1040

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SC 2013**

Lab Sample ID: 360-32606-3

Client Matrix: Solid

Date Sampled: 03/03/2011 1331

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SC 2013C**

Lab Sample ID: 360-32606-4

Client Matrix: Solid

Date Sampled: 03/04/2011 1049

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SC 2014**

Lab Sample ID: 360-32606-5

Client Matrix: Solid

Date Sampled: 03/03/2011 1333

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SC 2014 Ca**

Lab Sample ID: 360-32606-6

Client Matrix: Solid

Date Sampled: 03/04/2011 1048

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **SC 2014 Cb**

Lab Sample ID: 360-32606-7

Client Matrix: Solid

Date Sampled: 03/04/2011 1055

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SC 2015**

Lab Sample ID: 360-32606-8

Client Matrix: Solid

Date Sampled: 03/04/2011 0933

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SC 2015C**

Lab Sample ID: 360-32606-9

Client Matrix: Solid

Date Sampled: 03/04/2011 1008

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SR 2002C**

Lab Sample ID: 360-32606-10

Client Matrix: Solid

Date Sampled: 03/04/2011 1149

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **SR 2007**

Lab Sample ID: 360-32606-11

Client Matrix: Solid

Date Sampled: 03/04/2011 0915

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **SR 2007C**

Lab Sample ID: 360-32606-12

Client Matrix: Solid

Date Sampled: 03/04/2011 1155

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SR 2003C**

Lab Sample ID: 360-32606-13

Client Matrix: Solid

Date Sampled: 03/04/2011 1133

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **SR 2008**

Lab Sample ID: 360-32606-14

Client Matrix: Solid

Date Sampled: 03/04/2011 0933

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SR 2008C**

Lab Sample ID: 360-32606-15

Client Matrix: Solid

Date Sampled: 03/04/2011 1139

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SR 2004C**

Lab Sample ID: 360-32606-16

Client Matrix: Solid

Date Sampled: 03/04/2011 1159

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **BR 2005**

Lab Sample ID: 360-32606-17

Client Matrix: Solid

Date Sampled: 03/04/2011 1228

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **GR 2001C**

Lab Sample ID: 360-32606-18

Client Matrix: Solid

Date Sampled: 03/04/2011 1310

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **GR 2007**

Lab Sample ID: 360-32606-19

Client Matrix: Solid

Date Sampled: 03/04/2011 1255

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **GR 2007C**

Lab Sample ID: 360-32606-20

Client Matrix: Solid

Date Sampled: 03/04/2011 1316

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **OD 2008**

Lab Sample ID: 360-32606-21

Client Matrix: Solid

Date Sampled: 03/04/2011 1030

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **Field Duplicate 1a**

Lab Sample ID: 360-32606-22

Client Matrix: Solid

Date Sampled: 03/02/2011 1030

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **Field Duplicate 1b**

Lab Sample ID: 360-32606-23

Client Matrix: Solid

Date Sampled: 03/02/2011 1107

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **PR 2008**

Lab Sample ID: 360-32606-24

Client Matrix: Solid

Date Sampled: 03/02/2011 1335

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **MR 2024**

Lab Sample ID: 360-32606-26

Client Matrix: Solid

Date Sampled: 03/03/2011 1246

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
Analysis Batch: 360-70291	Date Analyzed: 03/09/2011 1143					DryWt Corrected: N

General Chemistry

Client Sample ID: **Field Duplicate 2**

Lab Sample ID: 360-32606-28

Client Matrix: Solid

Date Sampled: 03/04/2011 0917

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **SC 2016**

Lab Sample ID: 360-32606-29

Client Matrix: Solid

Date Sampled: 03/04/2011 1025

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

General Chemistry

Client Sample ID: **Field Duplicate 3**

Lab Sample ID: 360-32606-30

Client Matrix: Solid

Date Sampled: 03/04/2011 1316

Date Received: 03/08/2011 1610

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	0.00		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N
Percent Solids	100		%	1.0	1.0	Moisture
	Analysis Batch: 360-70291		Date Analyzed: 03/09/2011 1143			DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: Envirosense

Job Number: 360-32606-1

Lab Section	Qualifier	Description
GC Semi VOA		
	B	Compound was found in the blank and sample.
	H	Sample was prepped or analyzed beyond the specified holding time
	X	Surrogate is outside control limits
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
	p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

QUALITY CONTROL RESULTS

Client: Envirosense

Job Number: 360-32606-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 360-70304					
LCS 360-70304/2-A	Lab Control Sample	T	Water	3510C	
LCSD 360-70304/3-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 360-70304/1-A	Method Blank	T	Water	3510C	
360-32606-25	Equipment Blank 1	T	Water	3510C	
360-32606-27	Equipment Blank 2	T	Water	3510C	
360-32606-31	Equipment Blank	T	Water	3510C	
Prep Batch: 360-70355					
LCS 360-70355/2-A	Lab Control Sample	T	Solid	3540C	
LCS 360-70355/2-ARA	Lab Control Sample	T	Solid	3540C	
LCSD 360-70355/3-A	Lab Control Sample Duplicate	T	Solid	3540C	
LCSD 360-70355/3-ARA	Lab Control Sample Duplicate	T	Solid	3540C	
MB 360-70355/1-A	Method Blank	T	Solid	3540C	
MB 360-70355/1-ARA	Method Blank	T	Solid	3540C	
360-32606-1	SC 2012	T	Solid	3540C	
360-32606-2	SC 2012C	T	Solid	3540C	
360-32606-3	SC 2013	T	Solid	3540C	
360-32606-4	SC 2013C	T	Solid	3540C	
360-32606-5	SC 2014	T	Solid	3540C	
360-32606-6	SC 2014 Ca	T	Solid	3540C	
360-32606-7	SC 2014 Cb	T	Solid	3540C	
360-32606-8	SC 2015	T	Solid	3540C	
360-32606-9	SC 2015C	T	Solid	3540C	

Client: Envirosense

Job Number: 360-32606-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 360-70356					
LCS 360-70356/2-A	Lab Control Sample	T	Solid	3540C	
LCS 360-70356/2-ARA	Lab Control Sample	T	Solid	3540C	
LCSD 360-70356/3-A	Lab Control Sample Duplicate	T	Solid	3540C	
LCSD 360-70356/3-ARA	Lab Control Sample Duplicate	T	Solid	3540C	
MB 360-70356/1-A	Method Blank	T	Solid	3540C	
MB 360-70356/1-ARA	Method Blank	T	Solid	3540C	
360-32606-10	SR 2002C	T	Solid	3540C	
360-32606-11	SR 2007	T	Solid	3540C	
360-32606-12	SR 2007C	T	Solid	3540C	
360-32606-13	SR 2003C	T	Solid	3540C	
360-32606-14	SR 2008	T	Solid	3540C	
360-32606-15	SR 2008C	T	Solid	3540C	
360-32606-16	SR 2004C	T	Solid	3540C	
360-32606-17	BR 2005	T	Solid	3540C	
360-32606-18	GR 2001C	T	Solid	3540C	
360-32606-19	GR 2007	T	Solid	3540C	
360-32606-20	GR 2007C	T	Solid	3540C	
360-32606-21	OD 2008	T	Solid	3540C	
360-32606-22	Field Duplicate 1a	T	Solid	3540C	
360-32606-23	Field Duplicate 1b	T	Solid	3540C	
360-32606-24	PR 2008	T	Solid	3540C	
360-32606-26	MR 2024	T	Solid	3540C	
360-32606-28	Field Duplicate 2	T	Solid	3540C	
360-32606-29	SC 2016	T	Solid	3540C	
360-32606-30	Field Duplicate 3	T	Solid	3540C	
Analysis Batch:360-70375					
LCS 360-70355/2-A	Lab Control Sample	T	Solid	8082A	360-70355
LCSD 360-70355/3-A	Lab Control Sample Duplicate	T	Solid	8082A	360-70355
MB 360-70355/1-A	Method Blank	T	Solid	8082A	360-70355
LCS 360-70356/2-A	Lab Control Sample	T	Solid	8082A	360-70356
LCSD 360-70356/3-A	Lab Control Sample Duplicate	T	Solid	8082A	360-70356
MB 360-70356/1-A	Method Blank	T	Solid	8082A	360-70356
360-32606-9	SC 2015C	T	Solid	8082A	360-70355
360-32606-22	Field Duplicate 1a	T	Solid	8082A	360-70356
360-32606-23	Field Duplicate 1b	T	Solid	8082A	360-70356

Client: Envirosense

Job Number: 360-32606-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:360-70507					
360-32606-1	SC 2012	T	Solid	8082A	360-70355
360-32606-3	SC 2013	T	Solid	8082A	360-70355
360-32606-4	SC 2013C	T	Solid	8082A	360-70355
360-32606-5	SC 2014	T	Solid	8082A	360-70355
360-32606-6	SC 2014 Ca	T	Solid	8082A	360-70355
360-32606-8	SC 2015	T	Solid	8082A	360-70355
360-32606-11	SR 2007	T	Solid	8082A	360-70356
360-32606-14	SR 2008	T	Solid	8082A	360-70356
360-32606-15	SR 2008C	T	Solid	8082A	360-70356
360-32606-16	SR 2004C	T	Solid	8082A	360-70356
360-32606-17	BR 2005	T	Solid	8082A	360-70356
360-32606-18	GR 2001C	T	Solid	8082A	360-70356
360-32606-19	GR 2007	T	Solid	8082A	360-70356
360-32606-20	GR 2007C	T	Solid	8082A	360-70356
360-32606-21	OD 2008	T	Solid	8082A	360-70356
Analysis Batch:360-70523					
LCS 360-70304/2-A	Lab Control Sample	T	Water	8082A	360-70304
LCSD 360-70304/3-A	Lab Control Sample Duplicate	T	Water	8082A	360-70304
MB 360-70304/1-A	Method Blank	T	Water	8082A	360-70304
360-32606-25	Equipment Blank 1	T	Water	8082A	360-70304
360-32606-27	Equipment Blank 2	T	Water	8082A	360-70304
360-32606-31	Equipment Blank	T	Water	8082A	360-70304
Analysis Batch:360-70526					
LCS 360-70355/2-ARA	Lab Control Sample	T	Solid	8082A	360-70355
LCSD 360-70355/3-ARA	Lab Control Sample Duplicate	T	Solid	8082A	360-70355
MB 360-70355/1-ARA	Method Blank	T	Solid	8082A	360-70355
LCS 360-70356/2-ARA	Lab Control Sample	T	Solid	8082A	360-70356
LCSD 360-70356/3-ARA	Lab Control Sample Duplicate	T	Solid	8082A	360-70356
MB 360-70356/1-ARA	Method Blank	T	Solid	8082A	360-70356
360-32606-2	SC 2012C	T	Solid	8082A	360-70355
360-32606-7	SC 2014 Cb	T	Solid	8082A	360-70355
360-32606-10	SR 2002C	T	Solid	8082A	360-70356
360-32606-12	SR 2007C	T	Solid	8082A	360-70356
360-32606-13	SR 2003C	T	Solid	8082A	360-70356
360-32606-24	PR 2008	T	Solid	8082A	360-70356
360-32606-26	MR 2024	T	Solid	8082A	360-70356
360-32606-28	Field Duplicate 2	T	Solid	8082A	360-70356
360-32606-29	SC 2016	T	Solid	8082A	360-70356
360-32606-30	Field Duplicate 3	T	Solid	8082A	360-70356

Client: Envirosense

Job Number: 360-32606-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:360-70613					
LCS 360-70620/2-A	Lab Control Sample	T	Water	8082A	360-70620
LCSD 360-70620/3-A	Lab Control Sample Duplicate	T	Water	8082A	360-70620
MB 360-70620/1-A	Method Blank	T	Water	8082A	360-70620
360-32606-31	Equipment Blank	T	Water	8082A	360-70620
Prep Batch: 360-70620					
LCS 360-70620/2-A	Lab Control Sample	T	Water	3510C	
LCSD 360-70620/3-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 360-70620/1-A	Method Blank	T	Water	3510C	
360-32606-31	Equipment Blank	T	Water	3510C	

Report Basis

T = Total

Client: Envirosense

Job Number: 360-32606-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:360-70291					
360-32606-1	SC 2012	T	Solid	Moisture	
360-32606-2	SC 2012C	T	Solid	Moisture	
360-32606-3	SC 2013	T	Solid	Moisture	
360-32606-4	SC 2013C	T	Solid	Moisture	
360-32606-5	SC 2014	T	Solid	Moisture	
360-32606-6	SC 2014 Ca	T	Solid	Moisture	
360-32606-7	SC 2014 Cb	T	Solid	Moisture	
360-32606-8	SC 2015	T	Solid	Moisture	
360-32606-9	SC 2015C	T	Solid	Moisture	
360-32606-10	SR 2002C	T	Solid	Moisture	
360-32606-10DU	Duplicate	T	Solid	Moisture	
360-32606-11	SR 2007	T	Solid	Moisture	
360-32606-12	SR 2007C	T	Solid	Moisture	
360-32606-13	SR 2003C	T	Solid	Moisture	
360-32606-14	SR 2008	T	Solid	Moisture	
360-32606-15	SR 2008C	T	Solid	Moisture	
360-32606-16	SR 2004C	T	Solid	Moisture	
360-32606-17	BR 2005	T	Solid	Moisture	
360-32606-18	GR 2001C	T	Solid	Moisture	
360-32606-19	GR 2007	T	Solid	Moisture	
360-32606-20	GR 2007C	T	Solid	Moisture	
360-32606-21	OD 2008	T	Solid	Moisture	
360-32606-22	Field Duplicate 1a	T	Solid	Moisture	
360-32606-23	Field Duplicate 1b	T	Solid	Moisture	
360-32606-24	PR 2008	T	Solid	Moisture	
360-32606-26	MR 2024	T	Solid	Moisture	
360-32606-28	Field Duplicate 2	T	Solid	Moisture	
360-32606-29	SC 2016	T	Solid	Moisture	
360-32606-30	Field Duplicate 3	T	Solid	Moisture	

Report Basis

T = Total

Client: Envirosense

Job Number: 360-32606-1

Surrogate Recovery Report

8082A Polychlorinated Biphenyls (GC/ECD)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TCX1 %Rec	TCX2 %Rec	DCB1 %Rec	DCB2 %Rec
360-32606-1	SC 2012	0X D	0X D	0X D	0X D
360-32606-2	SC 2012C	0X D	0X D	0X D	0X D
360-32606-3	SC 2013	0X D	0X D	0X D	0X D
360-32606-4	SC 2013C	0X D	0X D	0X D	0X D
360-32606-5	SC 2014	0X D	0X D	0X D	0X D
360-32606-6	SC 2014 Ca	0X D	0X D	0X D	0X D
360-32606-7	SC 2014 Cb	43p	74	79	71
360-32606-8	SC 2015	120	95	100	98
360-32606-9	SC 2015C	99	101	80	75
360-32606-10	SR 2002C	0X D	0X D	0X D	0X D
360-32606-11	SR 2007	0X D	0X D	0X D	0X D
360-32606-12	SR 2007C	0X D	0X D	0X D	0X D
360-32606-13	SR 2003C	-4X	59	96	39p
360-32606-14	SR 2008	0X D	0X D	0X D	0X D
360-32606-15	SR 2008C	0X D	0X D	0X D	0X D
360-32606-16	SR 2004C	0X D	0X D	0X D	0X D
360-32606-17	BR 2005	107	116	139	107
360-32606-18	GR 2001C	94	103	135	107
360-32606-19	GR 2007	0X D	0X D	0X D	0X D
360-32606-20	GR 2007C	91	47p	146	111
360-32606-21	OD 2008	0X D	0X D	0X D	0X D
360-32606-22	Field Duplicate 1a	108	118	63	51
360-32606-23	Field Duplicate 1b	142	161X	119	82
360-32606-24	PR 2008	0X D	0X D	0X D	0X D
360-32606-26	MR 2024	48p	73	61p	97
360-32606-28	Field Duplicate 2	0X D	0X D	0X D	0X D
360-32606-29	SC 2016	0X D	0X D	0X D	0X D
360-32606-30	Field Duplicate 3	38p	64	71	66
MB 360-70355/1-A		22X	21X	88	89

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	30-150
DCB = DCB Decachlorobiphenyl	30-150

Client: Envirosense

Job Number: 360-32606-1

Surrogate Recovery Report

8082A Polychlorinated Biphenyls (GC/ECD)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TCX1 %Rec	TCX2 %Rec	DCB1 %Rec	DCB2 %Rec
MB 360-70355/1-A RA		12X	15X	79	76
MB 360-70356/1-A		107	106	89	89
MB 360-70356/1-A RA		71	81	88	86
LCS 360-70355/2-A		93	96	91	90
LCS 360-70355/2-A RA		93	89	98	92
LCS 360-70356/2-A		115	112	93	94
LCS 360-70356/2-A RA		81	87	89	88
LCSD 360-70355/3-A		90	92	89	88
LCSD 360-70355/3-A RA		67	70	82	82
LCSD 360-70356/3-A		108	102	89	86
LCSD 360-70356/3-A RA		81	85	93	89

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	30-150
DCB = DCB Decachlorobiphenyl	30-150

Client: Envirosense

Job Number: 360-32606-1

Surrogate Recovery Report

8082A Polychlorinated Biphenyls (GC/ECD)

Client Matrix: Water

Lab Sample ID	Client Sample ID	TCX1 %Rec	TCX2 %Rec	DCB1 %Rec	DCB2 %Rec
360-32606-25	Equipment Blank 1	79	86	58	52
360-32606-27	Equipment Blank 2	81	89	46	39
360-32606-31	Equipment Blank	83	83	40	39
360-32606-31	Equipment Blank	84	87	26X	23X
MB 360-70304/1-A		80	87	95	91
MB 360-70620/1-A		86	96	89	89
LCS 360-70304/2-A		78	80	83	76
LCS 360-70620/2-A		80	84	71	73
LCSD 360-70304/3-A		77	79	69	61
LCSD 360-70620/3-A		78	81	70	71

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	30-150
DCB = DCB Decachlorobiphenyl	30-150

Client: Envirosense

Job Number: 360-32606-1

Method Blank - Batch: 360-70304

Method: 8082A
Preparation: 3510C

Lab Sample ID: MB 360-70304/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/14/2011 1640
Date Prepared: 03/09/2011 1511

Analysis Batch: 360-70523
Prep Batch: 360-70304
Units: ug/L

Instrument ID: Inst. P
Lab File ID: P7638.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 5.0 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	ND		0.25
PCB-1221	ND		0.25
PCB-1232	ND		0.25
PCB-1242	ND		0.25
PCB-1248	ND		0.25
PCB-1254	ND		0.25
PCB-1260	ND		0.25
PCB-1262	ND		0.25
PCB-1268	ND		0.25

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	87	30 - 150
DCB Decachlorobiphenyl	95	30 - 150

Method Blank - Batch: 360-70304

Method: 8082A
Preparation: 3510C

Lab Sample ID: MB 360-70304/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/14/2011 1640
Date Prepared: 03/09/2011 1511

Analysis Batch: 360-70523
Prep Batch: 360-70304
Units: ug/L

Instrument ID: Inst. P
Lab File ID: P7638.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 5.0 mL
Injection Volume: 2 uL
Column ID: SECONDARY

Analyte	Result	Qual	RL
PCB-1016	ND		0.25
PCB-1221	ND		0.25
PCB-1232	ND		0.25
PCB-1242	ND		0.25
PCB-1248	ND		0.25
PCB-1254	ND		0.25
PCB-1260	ND		0.25
PCB-1262	ND		0.25
PCB-1268	ND		0.25

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	80	30 - 150
DCB Decachlorobiphenyl	91	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70304

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 360-70304/2-A	Analysis Batch:	360-70523	Instrument ID:	Inst. P
Client Matrix:	Water	Prep Batch:	360-70304	Lab File ID:	P7639.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	03/14/2011 1705			Final Weight/Volume:	5.0 mL
Date Prepared:	03/09/2011 1511			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 360-70304/3-A	Analysis Batch:	360-70523	Instrument ID:	Inst. P
Client Matrix:	Water	Prep Batch:	360-70304	Lab File ID:	P7640.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	03/14/2011 1729			Final Weight/Volume:	5.0 mL
Date Prepared:	03/09/2011 1511			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	87	95	40 - 140	8	20		
PCB-1260	91	84	40 - 140	8	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	80	79	30 - 150
DCB Decachlorobiphenyl	83	69	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70304

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 360-70304/2-A	Analysis Batch:	360-70523	Instrument ID:	Inst. P
Client Matrix:	Water	Prep Batch:	360-70304	Lab File ID:	P7639.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	03/14/2011 1705			Final Weight/Volume:	5.0 mL
Date Prepared:	03/09/2011 1511			Injection Volume:	2 uL
				Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 360-70304/3-A	Analysis Batch:	360-70523	Instrument ID:	Inst. P
Client Matrix:	Water	Prep Batch:	360-70304	Lab File ID:	P7640.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	03/14/2011 1729			Final Weight/Volume:	5.0 mL
Date Prepared:	03/09/2011 1511			Injection Volume:	2 uL
				Column ID:	SECONDARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	86	74	40 - 140	15	20		
PCB-1260	86	80	40 - 140	8	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	78	77	30 - 150
DCB Decachlorobiphenyl	76	61	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Method Blank - Batch: 360-70355

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70355/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/10/2011 1643
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70375
Prep Batch: 360-70355
Units: ug/Kg

Instrument ID: Inst. U
Lab File ID: U15183.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	ND		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec		Acceptance Limits
Tetrachloro-m-xylene	22	X	30 - 150
DCB Decachlorobiphenyl	89		30 - 150

Method Blank - Batch: 360-70355

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70355/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/10/2011 1643
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70375
Prep Batch: 360-70355
Units: ug/Kg

Instrument ID: Inst. U
Lab File ID: U15183.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: SECONDARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	ND		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec		Acceptance Limits
Tetrachloro-m-xylene	21	X	30 - 150
DCB Decachlorobiphenyl	88		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Method Blank - Batch: 360-70355

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70355/1-ARA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/15/2011 0040
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70526
Prep Batch: 360-70355
Units: ug/Kg
Run Type: RA

Instrument ID: Inst. U
Lab File ID: U15280.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	ND		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec		Acceptance Limits
Tetrachloro-m-xylene	15	X	30 - 150
DCB Decachlorobiphenyl	79		30 - 150

Method Blank - Batch: 360-70355

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70355/1-ARA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/15/2011 0040
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70526
Prep Batch: 360-70355
Units: ug/Kg
Run Type: RA

Instrument ID: Inst. U
Lab File ID: U15280.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: SECONDARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	ND		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec		Acceptance Limits
Tetrachloro-m-xylene	12	X	30 - 150
DCB Decachlorobiphenyl	76		30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70355

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70355/2-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15184.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/10/2011 1704			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 360-70355/3-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15185.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/10/2011 1725			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	109	107	40 - 140	2	30		
PCB-1260	113	113	40 - 140	0	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	96	92	30 - 150
DCB Decachlorobiphenyl	91	89	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70355

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70355/2-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15184.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/10/2011 1704			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 360-70355/3-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15185.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/10/2011 1725			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	107	105	40 - 140	2	30		
PCB-1260	109	110	40 - 140	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	93	90	30 - 150
DCB Decachlorobiphenyl	90	88	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70355

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70355/2-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15281.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/15/2011 0101	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 360-70355/3-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15282.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/15/2011 0122	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	98	85	40 - 140	15	30		
PCB-1260	102	99	40 - 140	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	93	70	30 - 150
DCB Decachlorobiphenyl	98	82	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70355

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70355/2-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15281.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/15/2011 0101	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 360-70355/3-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70355	Lab File ID:	U15282.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/15/2011 0122	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	96	82	40 - 140	16	30		
PCB-1260	101	97	40 - 140	4	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	89	67	30 - 150
DCB Decachlorobiphenyl	92	82	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Method Blank - Batch: 360-70356

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70356/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/11/2011 0026
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70375
Prep Batch: 360-70356
Units: ug/Kg

Instrument ID: Inst. U
Lab File ID: U15206.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	229		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	107	30 - 150
DCB Decachlorobiphenyl	89	30 - 150

Method Blank - Batch: 360-70356

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70356/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/11/2011 0026
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70375
Prep Batch: 360-70356
Units: ug/Kg

Instrument ID: Inst. U
Lab File ID: U15206.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: SECONDARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	183		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	106	30 - 150
DCB Decachlorobiphenyl	89	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Method Blank - Batch: 360-70356

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70356/1-ARA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/15/2011 0308
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70526
Prep Batch: 360-70356
Units: ug/Kg
Run Type: RA

Instrument ID: Inst. U
Lab File ID: U15287.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	ND		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	81	30 - 150
DCB Decachlorobiphenyl	88	30 - 150

Method Blank - Batch: 360-70356

Method: 8082A
Preparation: 3540C

Lab Sample ID: MB 360-70356/1-ARA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/15/2011 0308
Date Prepared: 03/09/2011 1400

Analysis Batch: 360-70526
Prep Batch: 360-70356
Units: ug/Kg
Run Type: RA

Instrument ID: Inst. U
Lab File ID: U15287.D
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.00 mL
Injection Volume: 2 uL
Column ID: SECONDARY

Analyte	Result	Qual	RL
PCB-1016	ND		100
PCB-1221	ND		100
PCB-1232	ND		100
PCB-1242	ND		100
PCB-1248	ND		100
PCB-1254	ND		100
PCB-1260	ND		100
PCB-1262	ND		100
PCB-1268	ND		100

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	71	30 - 150
DCB Decachlorobiphenyl	86	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70356

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70356/2-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70356	Lab File ID:	U15207.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/11/2011 0047			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 360-70356/3-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70356	Lab File ID:	U15208.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/11/2011 0109			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	117	117	40 - 140	1	30		
PCB-1260	121	121	40 - 140	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	115	108	30 - 150
DCB Decachlorobiphenyl	94	89	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70356

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70356/2-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70356	Lab File ID:	U15207.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/11/2011 0047			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 360-70356/3-A	Analysis Batch:	360-70375	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70356	Lab File ID:	U15208.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/11/2011 0109			Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	117	113	40 - 140	4	30		
PCB-1260	117	114	40 - 140	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	112	102	30 - 150
DCB Decachlorobiphenyl	93	86	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70356

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70356/2-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70356	Lab File ID:	U15288.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/15/2011 0329	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 360-70356/3-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70356	Lab File ID:	U15289.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/15/2011 0350	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	93	93	40 - 140	1	30		
PCB-1260	96	97	40 - 140	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	87	85	30 - 150
DCB Decachlorobiphenyl	89	93	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70356

Method: 8082A
Preparation: 3540C

LCS Lab Sample ID:	LCS 360-70356/2-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70356	Lab File ID:	U15288.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/15/2011 0329	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 360-70356/3-ARA	Analysis Batch:	360-70526	Instrument ID:	Inst. U
Client Matrix:	Solid	Prep Batch:	360-70356	Lab File ID:	U15289.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	10.00 g
Date Analyzed:	03/15/2011 0350	Run Type:	RA	Final Weight/Volume:	10.00 mL
Date Prepared:	03/09/2011 1400			Injection Volume:	2 uL
				Column ID:	SECONDARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	86	88	40 - 140	2	30		
PCB-1260	93	96	40 - 140	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	81	81	30 - 150
DCB Decachlorobiphenyl	88	89	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Method Blank - Batch: 360-70620

Method: 8082A
Preparation: 3510C

Lab Sample ID: MB 360-70620/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/17/2011 2312
Date Prepared: 03/16/2011 1500

Analysis Batch: 360-70613
Prep Batch: 360-70620
Units: ug/L

Instrument ID: Inst. M
Lab File ID: M26901.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 5.0 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	ND		0.25
PCB-1221	ND		0.25
PCB-1232	ND		0.25
PCB-1242	ND		0.25
PCB-1248	ND		0.25
PCB-1254	ND		0.25
PCB-1260	ND		0.25
PCB-1262	ND		0.25
PCB-1268	ND		0.25

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	96	30 - 150
DCB Decachlorobiphenyl	89	30 - 150

Method Blank - Batch: 360-70620

Method: 8082A
Preparation: 3510C

Lab Sample ID: MB 360-70620/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/17/2011 2312
Date Prepared: 03/16/2011 1500

Analysis Batch: 360-70613
Prep Batch: 360-70620
Units: ug/L

Instrument ID: Inst. M
Lab File ID: M26901.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 5.0 mL
Injection Volume: 2 uL
Column ID: SECONDARY

Analyte	Result	Qual	RL
PCB-1016	ND		0.25
PCB-1221	ND		0.25
PCB-1232	ND		0.25
PCB-1242	ND		0.25
PCB-1248	ND		0.25
PCB-1254	ND		0.25
PCB-1260	ND		0.25
PCB-1262	ND		0.25
PCB-1268	ND		0.25

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	86	30 - 150
DCB Decachlorobiphenyl	89	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70620

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 360-70620/2-A	Analysis Batch:	360-70613	Instrument ID:	Inst. M
Client Matrix:	Water	Prep Batch:	360-70620	Lab File ID:	M26902.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	03/17/2011 2334			Final Weight/Volume:	5.0 mL
Date Prepared:	03/16/2011 1500			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 360-70620/3-A	Analysis Batch:	360-70613	Instrument ID:	Inst. M
Client Matrix:	Water	Prep Batch:	360-70620	Lab File ID:	M26903.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	03/17/2011 2356			Final Weight/Volume:	5.0 mL
Date Prepared:	03/16/2011 1500			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	101	100	40 - 140	1	20		
PCB-1260	85	87	40 - 140	3	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	84	81	30 - 150
DCB Decachlorobiphenyl	73	71	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-70620

Method: 8082A
Preparation: 3510C

LCS Lab Sample ID:	LCS 360-70620/2-A	Analysis Batch:	360-70613	Instrument ID:	Inst. M
Client Matrix:	Water	Prep Batch:	360-70620	Lab File ID:	M26902.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	03/17/2011 2334			Final Weight/Volume:	5.0 mL
Date Prepared:	03/16/2011 1500			Injection Volume:	2 uL
				Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 360-70620/3-A	Analysis Batch:	360-70613	Instrument ID:	Inst. M
Client Matrix:	Water	Prep Batch:	360-70620	Lab File ID:	M26903.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	03/17/2011 2356			Final Weight/Volume:	5.0 mL
Date Prepared:	03/16/2011 1500			Injection Volume:	2 uL
				Column ID:	SECONDARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	94	95	40 - 140	2	20		
PCB-1260	82	85	40 - 140	3	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	80	78	30 - 150
DCB Decachlorobiphenyl	71	70	30 - 150

Client: Envirosense

Job Number: 360-32606-1

Duplicate - Batch: 360-70291

Method: Moisture
Preparation: N/A

Lab Sample ID: 360-32606-10
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/09/2011 1143
Date Prepared: N/A

Analysis Batch: 360-70291
Prep Batch: N/A
Units: %

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	0.00	0.00	NC	20	
Percent Solids	100	100	0	20	

State Accreditation Matrix

Method Name	Description	State where Primary Accreditation is Carried				
		New Hampshire (NELAC) prim.	Mass	Conn	Florida (NELAC)	North Carolina
821-R-02-012	Toxicity, Acute (48-Hour)(list upon request)	NP			NP	
SM 4500 Cl F	Chlorine, Residual		NP			
SM 9215E	Heterotrophic Plate Count (SimPlate)		P			
SM 9222D	Coliforms, Fecal (Membrane Filter)		P/NP			
SM 9223	Coliforms, Total, and E.Coli (Colilert-P/A)		P			
SM 9224	Coliforms, Total, and E.Coli (Enumeration)		P			
1103.1	E.coli		ambient/ source			
Enterolert	Enterococcus					
200.8 Rev 5.4	Metals (ICP/MS) (list upon request)	NP/P	NP/P	NP/P		
200.7 Rev 4.4	Metals (ICP)(list upon request)	NP/P	NP/P	NP/P		
6010B	Metals (ICP)(list upon request)	NP/SW		NP/SW		
245.1	Mercury (CVAA)	NP/P	NP	NP/P		
7470A	Mercury (CVAA)	NP		NP		
7471A	Mercury (CVAA)	SW		SW		
SM 2340B	Total Hardness (as CaCO3) by calculation	NP/P	NP	NP/P		
3005A	Preparation, Total Recoverable or Dissolved Metals	NP/P		NP/P		
3010A	Preparation, Total Metals	NP/P		NP/P		
3020A	Preparation, Total Metals	NP/P/SW		NP/P/SW		
3050B	Preparation, Metals	SW		SW		
504.1	EDB, DBCP and 1,2,3-TCP (GC)	P	P	P		
608	Organochlorine Pest/PCBs (list upon request)	NP	NP	NP		
625	Semivolatile Org Comp (GC/MS)(list upon request)	NP		NP		
3546	Microwave Extraction	SW				
3510C	Liquid-Liquid Extraction (Separatory Funnel)	NP		NP		
3540C	Soxhlet Extraction	SW				
3550B	Ultrasonic Extraction	SW		SW		
600/4-81-045	Polychlorinated Biphenyls (PCBs) (GC)		NP	NP		
8081A	Organochlorine Pesticides (GC)(list upon request)	NP/SW		NP/SW		
8082	PCBs by Gas Chromatography(list upon request)	NP/SW		NP/SW		
8270C	Semivolatile Comp.(GC/MS)(list upon request)	NP/SW		NP/SW		
CT ETPH	Conn - Ext. Total petroleum Hydrocarbons (GC)			NP/SW		
MA-EPH	Mass - Extractable Petroleum Hydrocarbons (GC)			NP/SW		NP/SW
524.2	Volatile Org Comp (GC/MS)(list upon request)	P	P	P		
524.2	Trihalomethane compounds	P	P	P		
624	Volatile Org Comp (GC/MS)(list upon request)	NP	NP	NP		
5035	Closed System Purge and Trap	SW		SW		
5030B	Purge and Trap	NP		NP		
8260B	Volatile Org Comp. (GC/MS)(list upon request)	NP/SW		NP/SW		
MAVPH	Mass - Volatile Petroleum Hydrocarbons (GC)			NP/SW		NP/SW
180.1	Turbidity, Nephelometric	P	P	P		
300	Anions, Ion Chromatography	NP/P	NP/P	NP/P		
410.4	COD	NP	NP	NP		
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW		SW		
10-107-06-2	Nitrogen, Total Kjeldahl	NP	NP	NP		
7196A	Chromium, Hexavalent	NP/SW		NP/SW		
9012A	Cyanide, Total and/or Amenable	NP/SW		NP/SW		
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	NP		NP		
9040B	pH	NP		NP		
9045C	pH	SW		SW		
L107041C	Nitrogen, Nitrate	NP	P	NP/P		
L107-06-1B	Nitrogen Ammonia	NP	NP	NP/P		
L204001A CN	Cyanide, Total	P	NP/P	NP/P		
L210-001A	Phenolics, Total Recoverable	NP	NP	NP		
SM 2320B	Alkalinity	NP/P	NP/P	NP/P		
SM 2510B	Conductivity, Specific Conductance	NP/P	NP/P	NP/P		
SM 2540C	Solids, Total Dissolved (TDS)	NP/P	NP/P	NP/P		
SM 2540D	Solids, Total Suspended (TSS)	NP	NP	NP		
SM 3500 CR D	Chromium, Hexavalent	NP		NP		
SM 4500 H+ B	pH	NP/P	NP/P	NP/P		
SM 4500 NO2 B	Nitrogen, Nitrite	NP	P	NP/P		
SM 4500 P E	Phosphorus, Orthophosphate	NP/P	NP	NP/P		
SM 4500 P E	Phosphorus, Total	NP	NP	NP		
SM 4500 S2 D	Sulfide, Total	NP		NP		
SM 5210B	BOD, 5-Day	NP	NP	NP		
SM 5310B	Organic Carbon, Total (TOC)	NP/P	NP	NP/P		

Not all organic compounds are accreditied under NELAC
For methods with multiple compounds all compounds may not meet NELAC criteria, listing should be obtained from the laboratory
The lab carries additional accreditations with several states. This is the laboratories typcial listing but is subject to change based on the laboratories current certification standing.

Login Sample Receipt Checklist

Client: Envirosense

Job Number: 360-32606-1

Login Number: 32606

List Source: TestAmerica Westfield

List Number: 1

Creator: Ard, Vanessa L

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
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.	False	
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.	False	Sample 31: No Sample Time provided on COC. Taken from bottle.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

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Chain of Custody Form

004803

•53 Southampton Road
Westfield, MA 01085
(P) 413-572-4000
(F) 413-572-3707
Westfield

•148 Rangeway Road
N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871
Boston - Service Center

Client: EnviroSense
Address: 1F Commons Drive Suite 34
Londonderry NH 03053
Phone: 603 4378227 Fax: 603 4370500

Client Project #: 07757-08/014
Site ID & State: Alewife Pmp Sta - MA
Reports Sent To: Russ Lagueux
Email: rlagueux@enviroSense.com Email Rpt: ☒

Job#: 320-32606 Quote# PO#

Shaded areas for office use.
Invoice same as Report to? ☐
If Invoice contact or address different, note in *Comments*

Comments *(Special Instructions)*

Please print legibly. If the analytical requests are not clearly defined on the chain-of-custody, the turnaround time will begin after all questions have been satisfactorily answered.

Requested Turnaround Time (PLEASE SPECIFY)
STANDARD X RUSH ____ *(Lab Approval Required)*

Regulatory Programs/Presumptive Certainty/QC Forms
MADEP MCP ☐ GW1/S1 ☐ PWS DEP Forms ☐
CTDEP RCP ☐ CT RSR ☐ EDD Required ☐
QA Rpt: No QC ☐ Std QC Rpt ☒ CLP QC Rpt: ☐

500-series for drinking water
600-series for waste water, NPDES
6000-series for groundwater, soil, waste
8000-series for groundwater, soil, waste
Use comments section to further define.

Sample Type Codes: WW-Wastewater, DW-Drinking Water, SW-Surface Water, GW-Groundwater, LW Lab Water, A-Air, "Z"-Other (please specify) Z=Solid

Sample I.D.	Sample Type	Sampler's Initials	Date / Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	Preservative: NaHSO4/MeOH	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH <2	NaOH to pH >12	Na2S2O3	None / 4° C	524 / 624 / 8260	525 / 625 / 8270	PCB / Pest / Herbicide	EPH / VPH	DRO / GRO / ETPH	Metals (Please Specify)	Mercury	General Chemistry	Bacteriological	Toxicity
SC2012	Z	MBG TTO	3-3-11 1318	X		1	G										X							
SC2012C	Z	MBG TTO	3-4-11 1040	X		1	G										X							
SC2013	Z	MBG TTO	3/3/11 1331	X		1	G										X							
SC2013C	Z	MBG TTO	3-4-11 1049	X		1	G										X							
SC2014	Z	MBG TTO	3/3/11 1333	X		1	G										X							
SC2014Ca	Z	MBG TTO	3/4/11 1048	X		1	G										X							
SC2014Cb	Z	MBG TTO	3/4/11 1055	X		1	G										X							
SC2015	Z	MBG TTO	3/4/11 0933	X		1	G										X							
SC2015C	Z	MBG TTO	3/4/11 1008	X		1	G										X							
~~SR2002C~~ SR2002C	Z	MBG TTO	3-4-11 1149	X		1	G										X							

Comments:
All PCB Analysis:
8082 w/Soxhlet via 3540C

Sampled by (print):
Signature:

Cooler ? Y / N
MADEP Requirement Samples Iced? Y / N

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Tom O'Donnell	3-4-11	1610	ESI Secure Storage	3-4-11	1610
ESI Cold Storage	3-8-11	1120	Jerry Ouch	3-8-11	1120
Jerry Ouch	3-8-11	1610	[illegible]	3/8/11	1610

Temp @ receipt: 12.0 °C
Preservation / pH checked? Y / N N/A
By: JB Date: 3/9/11

WESTFIELD

Page 4 of 7

White = Lab file Yellow = Report copy Pink = Customer copy

TAL-8245(1007)

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Chain of Custody Form

004804

•53 Southampton Road, Westfield, MA 01085, (P) 413-572-4000, (F) 413-572-3707 — **Westfield**

•148 Rangeway Road, N. Billerica, MA 01862, (P) 978-667-1400, (F) 978-667-7871 — Boston - Service Center

Client: EnviroSense
Address: 1F Common Drive Suite 34, Londonderry NH 03053
Phone: 603 437 8227 Fax: 603 437 0500

Client Project #: 07757-08/014
Site ID & State: Alewife Pump Sta - MA
Reports Sent To: Russ Lagueux
Email: rlagueux@enviroSense.com Email Rpt: [X]

Job#: 360-32606 Quote# PO#

Shaded areas for office use

Invoice same as Report to? [ ]

If Invoice contact or address different, note in *Comments*

Comments *(Special Instructions)*

Requested Turnaround Time (PLEASE SPECIFY)

STANDARD [X] RUSH [ ] *(Lab Approval Required)*

Regulatory Programs/Presumptive Certainty/QC Forms

MADEP MCP [ ] GW1/S1 [ ] PWS DEP Forms [ ]
CTDEP RCP [ ] CT RSR [ ] EDD Required [ ]
QA Rpt: No QC [ ] Std QC Rpt [X] CLP QC Rpt: [ ]

500-series for drinking water
600-series for waste water, NPDES
6000-series for groundwater, soil, waste
8000-series for groundwater, soil, waste
Use comments section to further define.

Please print legibly. If the analytical requests are not clearly defined on the chain-of-custody, the turnaround time will begin after all questions have been satisfactorily answered.

Sample Type Codes: WW-Wastewater, DW-Drinking Water, SW-Surface Water, GW-Groundwater, LW Lab Water, A-Air, "Z"-Other (please specify) Z = Solid

Sample I.D.	Sample Type	Sampler's Initials	Date / Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	NaHSO4/MeOH	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH <2	NaOH to pH >12	Na2S2O3	None / 4° C	524 / 624 / 8260	525 / 625 / 8270	PCB / Pest / Herbicide	EPH / VPH	DRO / GRO / ETPH	Metals (Please Specify)	Mercury	General Chemistry	Bacteriological	Toxicity
SR2007	Z	MBG TTO	3-4-11 0915	X		1	G										X							
SR2007C	Z	MBG TTO	3-4-11 1155	X		1	G										X							
~~SR1003C~~ SR2003C	Z	MBG TTO	3-4-11 1133	X		1	G										X							
SR 2008	Z	MBG TTO	3-4-11 0933	X		1	G										X							
SR 2008C	Z	MBG TTO	3-4-11 ~~0933~~ 1139	X		1	G										X							
~~SR1004C~~ SR2004C	Z	MBG TTO	3-4-11 1159	X		1	G										X							
~~SR 2009~~	~~Z~~	~~MBG TTO~~	~~3-4-11 0959~~	X		1											X							
~~SR 2009C~~	~~Z~~	~~MBG TTO~~	~~3-4-11 1220~~	X		1	G										X							
BR 2005	Z	MBG TTO	3-4-11 1228	X		1	G										X							
~~GR1001C~~ GR2001C	Z	MBG TTO	3-4-11 1310	X		1	G										X							

Comments: All PCB Analysis: 8082 w/Soxhlet via 3540C

Sampled by (print): Signature:

Cooler Y / N MADEP Requirement Samples Iced? Y / N

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Tom O'Donnell	3-4-11	1610	FST Secure Storage	3-4-11	1610
FST Cold Storage	3-8-11	1120	Jerry Dach	3-8-11	1120
Jerry Dach	3-8-11	1610	[illegible]	1610 3/8/11	

Temp @ receipt: 1.20 °C

Preservation / pH checked? Y / N N/A

By: JB Date: 3/9/11

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Westfield

•148 Rangeway Road
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Boston - Service Center

Client: EnviroSense
Address: 1F Commons Drive Suite 34
Londonderry NH 03053
Phone: 603 437 8227 Fax: 603 437 0500

Client Project #: 07757-08 /014
Site ID & State: Alewife Rlp Sta - MA
Reports Sent To: Russ Lagueux
Email: rlagueux@enviroSense.com Email Rpt: ☒

Job# 320-32606 Quote# PO#

Shaded areas for office use
Invoice same as Report to? ☐
If Invoice contact or address different, note in *Comments*

Comments (*Special Instructions*)

Please print legibly. If the analytical requests are not clearly defined on the chain-of-custody, the turnaround time will begin after all questions have been satisfactorily answered.

Requested Turnaround Time (PLEASE SPECIFY)
STANDARD X
RUSH ____ (*Lab Approval Required*)

Regulatory Programs/Presumptive Certainty/QC Forms
MADEP MCP ☐ GW1/S1 ☐ PWS DEP Forms ☐
CTDEP RCP ☐ CT RSR ☐ EDD Required ☐
QA Rpt: No QC ☒ Std QC Rpt ☐ CLP QC Rpt: ☐

500-series for drinking water
600-series for waste water, NPDES
6000-series for groundwater, soil, waste
8000-series for groundwater, soil, waste
Use comments section to further define.

Sample Type Codes: WW-Wastewater, DW-Drinking Water, SW-Surface Water, GW-Groundwater, LW Lab Water, A-Air, "Z"-Other (please specify) Z = Solid

Sample I.D.	Sample Type	Sampler's Initials	Date Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	NaHSO4/MeOH	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH <2	NaOH to pH >12	Na2S2O3	None / 4° C	524 / 624 / 8260	525 / 625 / 8270	PCB / Pest / Herbicide	EPH / VPH	DRO / GRO / ETPH	Metals (Please Specify)	Mercury	General Chemistry	Bacteriological	Toxicity
GR 2007	Z	MBG TTO	3/9/11 1255	X		1	G										X							
GR 2007C	Z	MBG TTO	3-4-11 1316	X		1	G										X							
OD 2008	Z	MBG TTO	3-4-11 1030	X		1	G										X							
Field Duplicate 1a	Z	MBG TTO	3/2/11 1030	X		1	G										X							
Field Duplicate 1b	Z	MBG TTO	3-2-11 1107	X		1	G										X							
PR 2008	Z	MBG TTO	3-2-11 1335	X		1	G										X							
Equipment Blank 1	LW		3-2-11 1355	X		2	G										X							
MR 2024	Z	MBG TTO	3-3-11 1246	X		1	G										X							
Equipment Blank 2	LW	MBG TTO	3/3/11 1345	X		2	G										X							
Field Duplicate 2	Z	MBG TTO	3-4-11 0917	X		1	G										X							

Comments:
All PCB Analysis:
8082 w/Soxhlet 3540C

Sampled by (print):
Signature:

Cooler? Y / N
MADEP Requirement Samples Iced? Y / N

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Tom O'Donnell	3-4-11	1610	ESI Secure Storage	3-4-11	1610
ESI Cold Storage	3-8-11	1120	Jerry Pach	3-8-11	1120
Jerry Pach	3-8-11	1410	[illegible]	3/9/11	1410

Temp @ receipt: 12.0 °C
Preservation / pH checked? Y N
By: JB Date: 3/9/11

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(F) 413-572-3707
Westfield

• 148 Rangeway Road
N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871
Boston - Service Center

Client: EnviroSense, Inc
Address: 1F Commons Drive Suite 34
Londonderry NH 03053
Phone: Fax:

Client Project #: 07757-08 / 014
Site ID & State: Alewife Pmp Sta - MA
Reports Sent To: Russ Lagueux
Email: rlagueux@enviroserse.com Email Rpt: ☒

Job# 360-32606 Quote# PO#

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Invoice same as Report to? ☐
If Invoice contact or address different, note in Comments

Comments (Special Instructions)
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Requested Turnaround Time (PLEASE SPECIFY)
STANDARD X RUSH ____ (Lab Approval Required)

Regulatory Programs/Presumptive Certainty/QC Forms
MADEP MCP ☐ GW1/S1 ☐ PWS DEP Forms ☐
CTDEP RCP ☐ CT RSR ☐ EDD Required ☐
QA Rpt: No QC ☐ Std QC Rpt ☒ CLP ☐

500-series for drinking water
600-series for waste water, NPDES
6000-series for groundwater, soil, waste
8000-series for groundwater, soil, waste
Use comments section to further define.

Sample Type Codes: WW-Wastewater, DW-Drinking Water, SW-Surface Water, GW-Groundwater, LW Lab Water, A-Air, S-Solids, "Z"- Other (please specify)

Sample I.D.	Sample Type	Sampler's Initials	Date / Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	NaHSO4/MeOH	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH <2	NaOH to pH >12	Na2S2O3	None / 4º C	524 / 624 / 8260	525 / 625 / 8270	PCB / Pest / Herbicide	EPH / VPH	DRO / GRO / ETPH	Metals (Please Specify)	Mercury	General Chemistry	Bacteriological	Toxicity
SC2016	Z	MBG TTO	3/4/11 1025	X		1	G							X										
Field Duplicate 3	Z	MBG TTO	3-4-11 1316	X		1	G							X										
Equipment Blank	LW	MBG TTO	3-4-11	X			G							X										

Comments:
Dec PCB samples analyzed w/ 8082 & Soxhlet via 3540C

3/9/11
JB

Sampled by (print): Signature:

Cooler? (Y) N MADEP Requirement Samples Iced? (Y) / N

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Tom O'Donnell	3-4-11	1610	EST Secure Storage	3-4-11	1610
EST Cold Storage	3-8-11	1120	Jerry Pah	3-8-11	1120
Jerry Pah	3-8-11	1610	Vanbell	1610	3/9/11

Temp @ receipt: 12.0 ºC
Preservation / pH checked? (Y) N
By: JB Date: 3/9/11

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WI-QA-010-REV 4A

TAL-8245-360 (0408)

ATTACHMENT 5

GEOSPHERE ENVIRONMENTAL MANAGEMENT, INC. ANALYTICAL LAB REPORTS

GEOSPHERE
ENVIRONMENTAL MANAGEMENT INC.

Mr. John Nelson
Massachusetts Water Resources Authority
Charlestown Navy Yard, 100 First Avenue, Bldg. 39-1
Boston, MA 02129

May 23, 2012

RE: Phase III Assessment of PCBs in Paint, Concrete Substrate and Wipe Samples
Alewife Brook Pump Station
Somerville, MA

Dear Mr. Nelson,

Geosphere Environmental Management, Inc. (GEOSPHERE) is pleased to submit this PCB Assessment report for the Massachusetts Water Resources Authority (MWRA) Alewife Brook Pump Station, located at 392 Alewife Brook Parkway, Somerville, MA (the "site" or "facility"). This report summarizes GEOSPHERE's sampling and analysis activities conducted on site in June 2011, November 2011, December 2011, March 2012, and April 2012, and provides laboratory analysis results regarding the presence of polychlorinated biphenyls (PCBs) in paint, shallow and deep substrate samples, and porous concrete wipe samples following mechanical paint removal at discrete sampling locations. The purpose of the sampling and analysis activities was to further delineate the extent of PCBs in paint and substrate (primarily concrete) on site and fill in data gaps following previous PCB assessment sampling and analysis activities performed by others (EnviroSense, January and March, 2011).

BACKGROUND

The site is the Alewife Brook Pump Station located at 392 Alewife Brook Parkway in Somerville, MA. Rehabilitation and renovations efforts are planned for the facility in the near future. Previous assessment (Phase I, Phase II) activities have identified the presence of polychlorinated biphenyls (PCBs) at concentrations above United States Environmental Protection Agency (EPA) authorized use concentrations in paint and in the underlying painted masonry surfaces (brick, concrete) throughout the facility. Based upon the results of the previous assessment activities, MWRA engaged GEOSPHERE to collect additional samples of paint, shallow (< ½ inch deep) and deep (½ to 1 inch deep) substrate samples, and substrate wipe samples (following paint removal) at select locations for PCB analysis.

SAMPLING METHODOLOGY

Sampling of masonry surfaces was conducted by GEOSPHERE in general accordance with the Region 1, EPA New England: *Standard Operation Procedure for Sampling Concrete in the Field*. Sampling was conducted at various locations throughout the facility including the main room, screen room, store room, pump room, boiler room, generator room and generator room

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entrance hallway, as well as at multiple locations outside of the building. For all shallow concrete samples, GEOSPHERE advanced holes to depths of approximately one-half inch deep utilizing a hammer drill with a one-inch diameter masonry bit to collect the necessary volume for laboratory analysis. Before collecting the shallow concrete samples, the overlying paint was mechanically removed.

Paint samples were collected by scraping the paint layer with a paint scraper until the substrate was exposed; scarifying the paint layer with a disposable razor blade or corner edge of the scraper was sometimes necessary begin the paint removal process. Disposable foil trays were used to collect the paint chips and pulverized concrete dust samples from wall and ceiling locations by holding the foil tray directly beneath the sampling location. Following paint removal, and prior to the collection of all concrete samples, the porous concrete surface was prepared for sampling utilizing a wire brush and a HEPA vacuum to remove loose paint and loose concrete from the surface.

Following the collection of the shallow masonry samples, or where shallow samples had already been collected, deep masonry samples were collected by advancing holes at those locations utilizing a hammer drill with a one-half inch diameter masonry bit to depths of approximately one inch deep. Care was taken to prevent shallow depth masonry materials from entering the deep masonry samples. Disposable foil trays and stainless steel scupulas were used to carefully collect the concrete samples from the borehole and the drill bits. Before proceeding to the next sample, all sampling equipment including the masonry bits was decontaminated using Hexane and rinsed with de-ionized water in order to prevent cross-contamination during sampling. On all floor samples where disposable foil trays were not effective for sampling, GEOSPHERE lined the sample area with foil, including the shallow 1-inch diameter drill holes outside the ½-inch diameter drill bit when performing the deep sample collections, and taped the foil to the outer perimeter of the sample area in order to prevent any foreign paint or concrete dust from entering the area being sampled.

Wipe samples were, in general, collected in accordance with "Wipe Sampling and Double Wash/Rinse Cleanup as Recommended by the Environmental Protection Agency PCB Spill Cleanup Policy", dated June 23, 1987, Revised and Clarified April 18, 1991. Sample jars provided by the laboratory were filled with filter paper saturated with hexane. Cotton gauze was not utilized, as some of the concrete surfaces contained slight depressions which tear or snag the gauze, leading to a loss of sample. Sample locations were collected proximate to the paint sampling location identified in the sample ID. After the paint layers were removed manually using a paint scraper and the area was vacuumed with a HEPA vacuum to remove dust and paint particles, a 10 cm x 10 cm area for wipe sampling was marked and taped-off. Using uniform pressure, the area was wiped from left to right in rows and from the top to the bottom in columns within the taped-off sampling area. The filter paper was air-dried, folded with the sample side inward, placed back into the sample jar, and the jar was sealed. Sample ID and time of collection were immediately recorded in field notes, on the sample jar label, and on the chain of custody, and gloves were removed and placed with in the waste PPE container for disposal. Care was taken to not cross-contaminate media during the sampling; disposable nitrile gloves were replaced during each step of the sampling process.

As discussed with MWRA, temporary containment structures were not required to complete the sampling activities. However, GEOSPHERE personnel were equipped with Modified Level D and/or Level C (respirator, eye protection, and chemically resistant gloves) personal protective equipment (PPE) when appropriate during the sampling procedures in accordance with GEOSPHERE's site-specific Health and Safety Plan. Where needed, staging was installed for the collection of ceiling samples. Excess paint and concrete debris, used HEPA filters, foil trays, used rags, and any decontamination liquids generated during the sampling process were placed into a 30-gallon, labeled drum for subsequent transportation under a hazardous waste manifest and disposal as PCB waste at a licensed facility.

FIELD ACTIVITIES

June 10, 2011 Sample Collection

On June 10, 2011 GEOSPHERE visited the facility to collect paint and bulk concrete samples. During the June 10th facility visit, MWRA provided a tour of the facility to better identify sample locations as well as to identify previous locations sampled by EnviroSense, Inc. during their January 2011 and March 2011 Phase I and Phase II sampling events.

Following the tour of the facility, GEOSPHERE and MWRA decided on eleven (11) sample locations. These sample locations were divided into a total of sixteen (16) samples including: twelve (12) deep (½ to 1 inch deep) concrete (Cb) samples, two (2) shallow (< ½ inch deep) concrete (Ca) samples, and two (2) paint (P) samples. In addition, GEOSPHERE submitted one (1) duplicate sample, and one (1) equipment blank sample for laboratory analysis. Eighteen (18) samples were submitted for PCB analysis.

The sample locations and sample IDs are provided in **Table 1**. All samples were placed into laboratory-prepared glassware and shipped in a cooler with ice under chain-of-custody, to R.I. Analytical Laboratories, Inc., of Warwick, Rhode Island for PCB analysis via United States Environmental Protection Agency (USEPA) Method 8082A, following manual Soxhlet extraction (USEPA Method 3540). One field duplicate sample (DUP) was collected adjacent to sample SC 2012Cb. One equipment blank sample (EQBLK) (a de-ionized rinsate water collected following decontamination of drill bit procedures) was collected for quality control of decontamination procedures. However, the equipment blank sample was destroyed during transfer at the laboratory (see chain of custody included in the attached **Laboratory Report**).

November and December 2011 Sample Collection

On November 21 – 23, 2011 GEOSPHERE collected paint and bulk concrete samples at twelve (12) sample locations. Thirty-two (32) samples were collected and submitted for bulk PCB analysis: 10 paint (P, PR) samples, 10 shallow (< ½ inch deep) concrete (Ca) samples, and 12 deep (½ to 1 inch deep) concrete (Cb) samples. Paint samples were collected in the Main Room (MR), Pump Room (PR), Screen Room (SC), Generator Room/Generator Room Entrance Hallway (GR), and the Store Room (SR). An extra Primer Paint (PR) sample was also collected from the Store Room ceiling.

On December 12, 2011 GEOSPHERE collected paint and bulk substrate samples at eleven (11) sample locations. Twenty-two (22) samples were collected and submitted for bulk PCB analysis: 9 paint (P, PR) samples, 6 shallow (< ½ inch deep) concrete (Ca) samples, one shallow sheetrock (G) sample, and 6 deep (1/2 to 1 inch deep) concrete (Cb) samples. Samples were collected from the Main Room Hallway (HL), Boiler Room (BR), Generator Room, Boiler/Generator Room Entrance Hallway (GR), and outside on the Outdoor Wet Well (OD), Outdoor Gate Valve (OG), and Outdoor Side Hatches (OD).

The sample locations and sample IDs are provided in **Table 2**. All samples were placed into laboratory-prepared glassware and shipped in a cooler with ice under chain-of-custody, to R.I. Analytical Laboratories, Inc., of Warwick, Rhode Island for PCB analysis via United States Environmental Protection Agency (USEPA) Method 8082A, following manual Soxhlet extraction (USEPA Method 3540). One equipment blank sample (QC WIPE), a hexane wipe sample of the drill bit following decontamination procedures, was collected on November 23, 2011, for quality control of decontamination procedures (See chain of custody included in the attached **Laboratory Report**).

March 2012 Wipe Screening

On March 2, 2012, GEOSPHERE collected thirteen (13) wipe samples of the porous concrete substrate surface at 12 locations, following manual paint removal in order to simulate PCB contaminated paint removal activities. The 12 locations were chosen based on the distribution and concentrations of PCBs detected in the paint and shallow concrete samples. In the Main Room (MR), wipe samples MR2022W and MR1009W were collected proximate to previously collected paint samples MR2022 and MR1009. In the Pump Room, wipe samples PR1001W and PR1002W, were collected proximate to paint samples PR1001 and 1002. A duplicate wipe sample (DUP) to PR1001W was collected immediately adjacent to PR1001W. In the Store Room, wipe samples SR1003W, SR1004W, and SR2007W were collected proximate to paint samples SR1003, SR1004, and SR2007, respectively. In the Screen Room, wipe samples SC2012W, SC2013W, and SC3012W were collected proximate to paint samples SC2012, SC2013, and SC3012, respectively. In the Generator Room Entrance Hallway, wipe samples GR1001W and GR3009W were collected proximate to paint samples GR1001 and GR3009. Finally, a wipe sample trip blank (TRIP BLANK) was collected at the end of the sampling session by removing a hexane-saturated filter paper from a laboratory-prepared sample jar, letting the filter paper air-dry, and placing the filter paper back into the sample container for laboratory analysis.

The sample locations and sample IDs are provided in **Table A**. The fourteen (14) wipe samples were placed in a cooler with ice and shipped under chain-of-custody, to R.I. Analytical Laboratories, Inc., of Warwick, Rhode Island for PCB analysis via United States Environmental Protection Agency (USEPA) Method 8082A, following manual Soxhlet extraction (USEPA Method 3540) (See chain of custody included in the attached **Laboratory Report**).

April 2012 Paint Sampling

On April 25 and 27, 2012, GEOSPHERE collected paint samples at fourteen (14) sample locations, representing one painted metal floor plate and various painted metal conduits and piping located throughout the facility. Fourteen (14) paint samples were collected and submitted for bulk PCB analysis: 4 samples were collected from the Main Room (MR), 2 samples were collected from the Pump Room (PR), 4 samples were collected from the Screen Room (SC), one sample was collected from the Store Room (SR), 2 samples were collected from the Generator Room Entrance Hallway (GR), and one sample was collected from an outdoor roof drain (OD).

The sample locations and sample IDs are provided in **Table 4**. All samples were placed into laboratory-prepared glassware and delivered under chain-of-custody to R.I. Analytical Laboratories, Inc., of Warwick, Rhode Island for PCB analysis via United States Environmental Protection Agency (USEPA) Method 8082A, following manual Soxhlet extraction (USEPA Method 3540) (See chain of custody included in the attached **Laboratory Report**).

No QA/QC samples were collected during this sampling round.

ANALYTICAL RESULTS

June 10, 2011

According to the laboratory analysis report for the paint samples collected on June 10, 2011, summarized in **Table 1**, Aroclor 1254 was detected in sample OG 1099P, collected from the surface of the outside gate valve enclosure, at a concentration of 0.6 mg/kg. No PCB concentrations exceeding the laboratory detection limit of 0.1 mg/kg were detected in sample OH 1098P, collected from the surface of the outside hatch enclosure.

According to the laboratory analysis report for the concrete samples collected on June 10, 2011, Aroclor 1254 was detected in ten (10) of the fourteen (14) concrete samples. The 4 samples that did not exhibit detectable PCB concentrations were collected from the hatch enclosure and gate valve enclosure located outside the facility (OH 2098 Ca, OH 2098 Cb, OG 2099 Ca, and OG 2099 Cb). These included 2 deep concrete samples and 2 shallow concrete samples, one at each location.

Concentrations of Aroclor 1254 detected in the deep concrete samples (MR 2015 Cb, SC 2012 Cb, SC 2002 Cb, SC 2013 Cb, SR 2002 Cb, SR 2007 Cb, SR 2004 Cb, SR 2008 Cb, and GR 2007 Cb) and one remaining shallow concrete sample (GR 2007 C DUP) collected inside the facility ranged from 0.1 mg/kg in sample MR 2015 Cb to 11.0 mg/kg in sample SC 2002 Cb.

<u>Data Usability and QA/QC</u>

Sample GR 2007 C DUP was a nearby, shallow concrete sample collected as a duplicate to samples GR2007C and Field Dup 3 (GR 2007C), which were collected by EnviroSense in January and March 2011. Analysis of Sample GR 2007 C DUP indicated Aroclor 1254 was

detected at a concentration of 1.3 mg/kg, compared to 13 mg/kg and 8.0 mg/kg detected in samples GR2007C and Field Dup 3 (GR 2007C), respectively.

Analysis of the field duplicate (DUP) to sample SC 2012 Cb, indicated no PCB concentrations were detected above laboratory detection limits of 0.1 mg/kg. Aroclor 1254 was detected at a concentration of 0.9 mg/kg in sample SC 2012 Cb. Sample heterogeneity, slight variations in sample depth and sampling technique, sampling personnel change, and concentration gradients likely play a significant role in the observed variability of the PCB analysis results for the above duplicate samples. Although variability exists, all samples obtained during this sampling event are considered usable, and valid.

Surrogate recoveries from samples OG2099CA, OG2099CB, and DUP were significantly elevated, which would result in a high bias for these samples. However, no PCBs were detected in any of these samples, so the elevated surrogate recoveries would not impact the overall data quality for these samples. Insufficient sample volume was collected to determine percent moisture for sample OG1099P and results were reported as wet weight. This would result in a low bias for the sample results (true PCB content may be higher than reported), however given the low expected moisture content of concrete and paint samples (< 4%), this would not be expected to significantly impact data quality for this sample. A matrix spike/matrix spike duplicate performed on sample OH 2098 Ca resulted in recoveries within the acceptable QC range. Acceptable QC parameters were also obtained for the laboratory method blank sample, laboratory control samples, and laboratory control sample duplicate.

November 21-23, 2011

According to the laboratory report for the paint samples collected on November 21-23, 2011, summarized in **Table 2**, Aroclor 1254 was detected in samples PR3013P, PR3014P, SC3017P, SC3018P, SC3020P, SC3021P, SC3022P, GR3008P, SR3009P, and SR3009PR. The highest detections occurred in the Pump Room ceiling samples PR3013P and PR3014P at concentrations of 21,000 mg/kg and 19,000 mg/kg respectively.

According to the laboratory report for the concrete samples collected on November 21-23, 2011, Aroclor 1254 was detected in thirteen (13) of the twenty-two (22) concrete samples. The nine (9) samples that did not exhibit detectable PCB concentrations were collected from the floor and ceiling of the Screen Room, the column of the Generator Room, the ceiling of the Store Room, and the stairs in the Generator Room Entrance Hallway (SC3017Ca, SC3017Cb, SC3018Ca, SC3017Cb, SC3020Cb, GR3008Ca, GR3008Cb, SR3009Cb, and GR3001Cb). These included six (6) deep concrete samples and three (3) shallow concrete samples.

Concentrations of Aroclor 1254 detected in the deep concrete samples (MR3008Cb, PR3013Cb, PR3014Cb, SC3001Cb, SC3021Cb, and SC3022Cb) and shallow concrete samples (PR3013Ca, PR3014Ca, SC3001Ca, SC3020Ca, SC3021Ca, SC3022Ca, and SR3009Ca) collected inside the facility ranged from 0.4 mg/kg in sample MR3008Cb to 190 mg/kg in sample SC3022Ca.

Data Usability and QA/QC

Insufficient sample volume was collected to determine percent moisture for the following samples: PR3013CA, PR3013CB, PR3014CA, PR3014CB, SC3017P, SC3017CA, SC3017CB, SC3018P, SC3018CA, SC3018CB, SD3001CB, SC30200, SC3020CB, SC3021CB, SC3022P, SC3022CB, GR3008P, SR3009PR, AND GR3007CB. Results were reported as wet weight for these samples. This would result in a low bias for the sample results (true PCB content may be higher than reported), however given the low expected moisture content of concrete and paint samples (< 4%), this would not be expected to significantly impact data quality for these samples. Detection limits were 1000 times greater for samples PR3013P and PR3014P than other samples due to the elevated concentrations of Aroclor 1254; this resulted in the inability to detect surrogate recoveries as the surrogates were diluted to the point of non-detection. All other surrogate recoveries were within allowable QC parameters.

A field equipment blank (QC WIPE) wipe sample was collected by GEOSPHERE from the 1-inch diameter drill bit following sampling and decontamination procedures with Hexane. PCBs were non-detect (<1 ug/wipe), indicating that decontamination procedures followed by GEOSPHERE during substrate sampling were adequate.

All samples obtained during this sampling event are considered usable, and valid.

December 12, 2011

According to the laboratory report for the paint samples collected on December 12, 2011, summarized in **Table 2**, Aroclor 1254 was detected in samples BR3002PR, GR3002PR, GR3009P, OD3004P, OG3099AP, OG3099BP, OG3099CP, OD3005P, and OD3005P. The highest detections occurred in the Generator Room Entrance Hallway sample GR3009P at 11,000 mg/kg, as well as the Outdoor Gate Valve Steel Hatch sample at 550 mg/kg and Outdoor Side Hatches Steel Hatch sample at 520 mg/kg.

According to the laboratory report for the concrete samples collected on December 12, 2011, Aroclor 1254 was detected in three (3) of the twelve (12) concrete samples. The nine (9) samples that did not exhibit detectable PCB concentrations were collected from the Main Room Hallway Ceiling, Boiler Room Wall, Generator Room Ceiling, Outdoor Wet Well Hatch, and Outdoor Side Hatches Concrete Base (HL3001Cb, BR3002Ca, BR3002Cb, GR3002Ca, GR3002Cb, OD3004Ca, OD3004Cb, OD3006Ca, and OD3006Cb). These included five (5) deep concrete samples and four (4) shallow concrete samples.

Concentrations of Aroclor 1254 detected in the deep concrete sample (GR3009CB) and shallow concrete samples (HL3001Ca and GR3009Ca) collected inside/outside the facility ranged from 0.4 mg/kg in sample HL3001Ca to 46 mg/kg in sample GR3009Ca.

One sample collected from the ceiling of the Boiler Room did not consist of concrete; a gypsum sheetrock layer was discovered and sampled. Results from this shallow gypsum layer (< ½ inch) (BR3001G) indicated a presence of Aroclor 1254 of 1.0 mg/kg. No concrete was present below the gypsum layer therefore no deep substrate sample was collected.

Data Usability

There were no QC issues for this data set. All surrogate recoveries were within allowable QC parameters and percent moisture was obtained for all samples. No separate field QC samples were submitted with this sample batch.

All samples obtained during this sampling event are considered usable, and valid.

March 2, 2012

According to the laboratory report for the twelve (12) concrete substrate wipe samples collected on March 2, 2012, summarized in **Table 3**, the detected concentrations of Aroclor 1254 ranged from non-detect (< 1 ug/wipe) to 10 ug/wipe. Wipe sample SC2012W, collected from Screen Room sample location SC2012 after scraping the paint from the concrete surface, contained the highest PCB concentration (10 ug/wipe). Three wipe samples (SR2007W, SR1004W, and SC3021W) were non-detect, and three samples (MR2022W, GR1001W, and GR3009W) exhibited PCB concentrations of only 1 ug/wipe. The remainder of the samples (SR1003W, SC2013W, PR1001W, PR1002W, and MW1009W) exhibited PCB concentrations in the range of 2-7 ug/wipe. All twelve (12) wipe screening samples exhibited concentrations of less than or equal to 10 ug/wipe.

Data Usability and QA/QC

The wipe samples collected on March 2, 2012 were collected to represent post-abatement substrate conditions. Because the exact method of paint removal and abatement is not known, the wipe samples are being considered as screening samples only; additional sampling may be necessary once the method of abatement is determined. Mechanical paint removal was performed using a paint scraper only.

There were no QC issues for this data set. All surrogate recoveries were within allowable QC parameters for all samples. The trip blank (TRIP BLANK) wipe sample was non-detect. The duplicate wipe sample (DUP), a duplicate of sample PR1001W, which contained a PCB concentration of 3 ug/wipe, exhibited a PCB concentration of 6 ug/wipe. It must be noted that a field duplicate of a wipe sample is not an exact duplicate as the duplicate sample is collected adjacent to the original sample.

All samples obtained during this sampling event are considered usable, and valid.

As demonstrated in previous QA/QC sampling efforts described within this report, the sampling methodologies utilized during this project allow for a greater degree of variability and uncertainty than other media sampling techniques. The use of maximum concentrations for risk analysis and/or remedial action goals is recommended to be conservative and to reduce uncertainty.

April 25-27, 2012

According to the laboratory report for the paint samples collected on April 25 and 27, 2012, summarized in **Table 4**, Aroclor 1254 was detected in twelve (12) of the fourteen (14) samples collected. Two samples were non-detect for PCBs: MR 4027 collected from a hot water pipe in the Main Room; and SC 4026, collected from a hot water pipe in the adjacent Screen Room. Three samples exhibited PCB concentrations less than 50 mg/kg: SC 4025 (copper water line in Screen Room), SR 4011 (electrical conduit in Store Room), and GR 4011 (electrical conduit in Generator Room Entrance Hallway). The remaining nine (9) paint samples contained PCB concentrations ranging from 69 mg/kg to 3,400 mg/kg, with sample SC 4023 (stair hand rail in Screen Room) exhibiting the highest PCB concentration.

Data Usability and QA/QC

There were no QC issues for this data set. All surrogate recoveries were within allowable QC parameters for all samples. No field blank or duplicate samples were collected during this paint sampling event. The degree of sample integrity was high; multiple paint layers were easily removed and collected using a paint scraper and aluminum foil trays. Little to no cross-contamination from the underlying metal substrate (metal plate, and iron, copper, stainless steel or galvanized steel piping) is expected. The efficacy of GEOSPHERE's decontamination procedures for sampling equipment (i.e. hexane solvent wipe/rinse on metal paint scrapers and drill bits) as determined through a previous field equipment blank wipe analysis, was also confirmed to be very high (i.e. QC Wipe was non-detect for PCBs).

All samples obtained during this sampling event are considered usable, and valid.

CONCLUSIONS

The wipe screening results indicate that reductions in PCB concentrations to </= 10µg/100 cm^2 can be achieved through mechanical paint scraping, as performed by GEOSPHERE prior to testing the concrete substrate. The use of more aggressive and more thorough removal methods (i.e. chemical stripping, power washing, etc.) would likely increase source removal efficiency.

If you have any questions regarding this report, please contact David Niemeyer at 603-773-0075.

Sincerely,
GEOSPHERE ENVIRONMENTAL MANAGEMENT, INC.

David Niemeyer, P.G.
Director of Environmental Compliance

Attachments

TABLES

TABLE 1

Detected Polychlorinated Biphenyls (PCBs)
Paint and Substrate Samples Collected June 10, 2011
MWRA Alewife Brook Pumping Station Somerville, MA.

Room	Location	Paint Color	Substrate	Sample ID	Bulk Sample Type	Aroclor 1254 Results (mg/kg)
Main Room	Wet Well Foundation	Blue	Concrete	MR 2015 Cb	Deep Concrete	0.1
Screen Room	Wall	Blue	Concrete	SC 2012 Cb	Deep Concrete	0.9
				DUP (SC 2012 Cb)	Deep Concrete	< 0.1
				SC 2002 Cb	Deep Concrete	11
				SC 2013 Cb	Deep Concrete	0.7
Store Room	Wall	Dark Gray	Concrete	SR 2002 Cb	Deep Concrete	0.6
				SR 2007 Cb	Deep Concrete	0.4
	Column	Blue	Concrete	SR 2004 Cb	Deep Concrete	3.2
	Floor	Dark Gray	Concrete	SR 2008 Cb	Deep Concrete	1.0
Generator Room Entrance Hallway	Wall at Base of Stairs	Dark Gray/Blue	Concrete	GR 2007 C DUP	Shallow Concrete	1.3
				GR 2007 Cb	Deep Concrete	0.4
Outside	Sidewall of Hatch Enclosure	Light Gray	Concrete	OH 1098 P	Paint	< 0.1
				OH 2098 Ca	Shallow Concrete	< 0.1
				OH 2098 Cb	Deep Concrete	< 0.1
	Sidewall of Gate Valve Enclosure	Light Gray	Concrete	OG 1099 P	Paint	0.6
				OG 2099 Ca	Shallow Concrete	< 0.1
				OG 2099 Cb	Deep Concrete	< 0.1

Notes:

Samples collected by GEOSPHERE on June 10, 2011

Samples analyzed by Rhode Island Analytical of Warwick, RI using manual Soxhlet Extraction Method (Report ID: 1106-11164, dated 6/21/11)

Concentrations in mg/kg

Aroclor 1254 detected only; all other arochlors were non-detect

P = Paint bulk sample, C = Concrete bulk sample

Ca denotes shallow concrete sample (0-0.5 in)

Cb denotes deep concrete sample (0.5-1 in)

GR 2007 C DUP - Shallow concrete sample collected proximate to GR 2007 C, Field Dup 3, collected by others

TABLE 2

Detected Polychlorinated Biphenyls (PCBs)
Paint and Substrate Samples Collected November - December 2011
MWRA Alewife Brook Pumping Station Somerville, MA.

Room	Location	Height (ft)	Paint Color	Substrate	Sample ID	Aroclor 1254 Results (mg/kg)		
						Paint (P) / Primer (PR) Sample	Shallow Concrete (Ca) 0 - 0.5 in.	Deep Concrete (Cb) 0.5 - 1.0 in.
Main Room	Stairs	0	Gray	Concrete	MR3008Cb	---	---	0.4
	Hallway Ceiling	8	White		HL3001 (Ca/Cb)	---	0.4	<0.3
Pump Room	Ceiling	21	White	Concrete	PR3013 (P/Ca/Cb)	**21,000***	16*	13*
		21	White		PR3014 (P/Ca/Cb)	**19,000***	34*	2.7*
Screen Room	Ceiling	22	Gray	Concrete	SC3017 (P/Ca/Cb)	22*	< 0.4*	< 0.2*
		24	Gray		SC3018 (P/Ca/Cb)	32*	< 0.5*	< 0.8*
	Floor	0	Gray		SC3001 (Ca/Cb)	---	6.9	0.4*
		0	Gray		SC3020 (P/Ca/Cb)	12*	6.7	< 0.3*
		0	Gray		SC3021 (P/Ca/Cb)	**92**	14	0.9*
	Roof Access Platform	16	Gray		SC3022 (P/Ca/Cb)	**72***	**190**	8.8*
Store Room	Ceiling	13	White/Dk. Gray (P)	Concrete	SR3009 (P/Ca/Cb)	20	0.8	< 0.3
			Lt. Gray (PR)		SR3009 (PR/Ca/Cb)	**2,500***		
Boiler Room	Ceiling	9	White	Sheetrock	BR3001 (G)	---	1.0 (gypsum)	---
	Wall	6	Blue Base	Concrete	BR3002 (PR/Ca/Cb)	25	<0.2	<0.2
Generator Room	Column	2	Blue		GR3008 (P/Ca/Cb)	13*	< 0.3	< 0.3
	Ceiling	9	Lt. Gray Base		GR3002 (PR/Ca/Cb)	13	<0.2	<0.2
Generator Room Entrance Hallway	Ceiling	9	White		GR3009 (P/Ca/Cb)	**11,000**	46	5.2
	Stairs	0	Gray		GR3001 (Cb)	---	---	< 0.3*
Outdoor Wet Well	Wet Well Hatch	0	Lt. Gray	Metal	OD3004 (P,Ca/Cb)	1.4	<0.3	<0.3
Outdoor Gate Valve	Steel Hatch	0	Lt. Gray		OG3099A(P)	**550**	---	---
	Plastic Control Box	3	Lt. Gray		OG3099B(P)	2.4	---	---
	Steel Motor	4	Dark Gray		OG3099C (P)	1.1	---	---
Outdoor Side Hatches	Steel Hatch	0	Lt. Gray		OD3005 (P)	**520**	---	---
	Concrete Base	0	Lt. Gray	Concrete	OD3006 (P,Ca/Cb)	1.4	<0.3	<0.3

Notes:

Samples collected by GEOSPHERE on November 21 - 23, 2011, and December 12, 2011.
Samples analyzed by Rhode Island Analytical of Warwick, RI using manual Soxhlet Extraction Method (Report ID: 1111-23480, dated 12/9/11, and 1112-25261, dated 12/30/11)
Concentrations in mg/kg
Aroclor 1254 detected only; all other aroclors were non-detect
P = Paint bulk sample, C = concrete bulk sample
Ca denotes shallow concrete sample (0-0.5 in)
Cb denotes deep concrete sample (0.5-1 in)
PR = extra paint chip sample representing primer layer only
G = gypsum layer only, no concrete present
--- = No sample collected
Bold = > 50 mg/kg
As a result of low sample volume, moisture content could not be performed on 8 paint samples, 4 shallow concrete samples, and 9 deep concrete samples.
* = results not corrected for moisture content
Moisture content ranged from 0 - 4% on all other samples

TABLE 3

Detected Polychlorinated Biphenyls (PCBs)
Porous Surface Wipe Samples Collected March 2, 2012
MWRA Alewife Brook Pump Station

Room	Location	Paint Color	Sample No.	Aroclor 1254 Results		
				Paint (P)* (mg/kg)	Shallow Concrete (Ca)* 0-0.5" (mg/kg)	Shallow Concrete Wipe Sample (µg/100 cm^2)
Main Room	Stairway Treads	Gray	MR2022	7,810	13	1
	Stairway Walls	Light Blue	MR1009	5,400	6.7	4
Pump Room	Ceiling	White	PR1002	18,500	8.1	4
	Walls	Blue w/ White Beneath	PR1001	7,010	3.8	3*
Store Room	Walls	White	SR2007	110/160	26	<1
	Floor	Blue & White	SR1003	612	20	2
	Column	Blue	SR1004	1,480	25	<1
Screen Room	Floor	Gray	SC3021	92	14	<1
	Lower Walls	Blue	SC2012	1,700	62	10
	Lower Walls	Blue	SC2013	1,100	540	7
Gen. Room Entrance Hallway	Hallway Ceiling	White	GR3009	11,000	46	1
	Hallway Floor/Stairs	Dark Gray	GR1001	356/193	3.2	1

Notes:
Wipe samples collected by GEOSPHERE on March 2, 2012
Samples analyzed by Rhode Island Analytical of Warwick, RI using manual Soxhlet Extraction Method (Report ID: 1203-04404, dated 3/9/12)
Concentrations in ug/wipe (100 cm^2)
Aroclor 1254 detected only; all other aroclors were non-detect
* = Previous test results

TABLE 4

Detected Polychlorinated Biphenyls (PCBs)
Paint Samples Collected April 2012
MWRA Alewife Brook Pumping Station Somerville, MA.

Room	Location	Substrate	Paint Color	Sample ID	Aroclor 1254 Results (mg/kg)
					Paint (P) Sample
Main Room	Rain Leader Pipe	Cast Iron	Dark Blue/Light Blue	MR 4024	**200**
	Water Line N. Wall	Copper	Light Blue	MR 4025	**100**
	Water Line N. Wall	Copper	Dark Blue/Light Blue	MR 4026	**100**
	Heat Loop Pipe S. Wall	Iron	Light Blue/Yellow	MR 4027	<1
Pump Room	Electrical Conduit	Galvanized Steel	Light Blue/Light Blue	PR 4015	**610**
	Water Line	Copper	Light Blue	PR 4016	**400**
Screen Room	Stair Hand Rail	Steel	Blue/Orange/Gray/Cream	SC 4023	**3400**
	Center Floor Plate	Steel	Light Blue/White/Rust/Cream	SC 4024	**630**
	Water Line	Copper	Light Blue	SC 4025	19
	W. Wall 2'' Hot Water Pipe	Iron	Light Blue	SC 4026	<1
Store Room	1'' Electrical Conduit Ceiling	Galvanized Steel	White	SR 4011	4.3
Generator Room Entrance Hallway	1'' Water Line	Copper	White/Light Blue	GR 4010	**69**
	1'' Electrical Conduit	Galvanized Steel	White	GR 4011	20
Outdoor	W. Wall Downspout Drain	Cast Iron	Gray/Light Blue	OD 4009	2.3

Notes:

Samples collected by GEOSPHERE on April 25 and April 27, 2012.

Samples analyzed by Rhode Island Analytical of Warwick, RI using manual Soxhlet Extraction Method (Work Order # 1204-08467 Dated 5/7/12)

Concentrations in mg/kg (ppm), dry weight (moisture content not analyzed)

Aroclor 1254 detected only; all other aroclors were non-detect

Bold = > 50 mg/kg

Paint Color = / denotes multiple layers; top layer on left

LABORATORY REPORTS

R.I. Analytical Laboratories Report
Work Order # 1106-11164, June 21, 2011
Samples collected by GEOSPHERE – June 10, 2011

R.I. ANALYTICAL
Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Attn: Mr. David Niemeyer
51 Portsmouth Avenue
Exeter, NH 03833

Date Received: 6/13/11
Date Reported: 6/21/11
P.O. #: 09313
Work Order #: 1106-11164

DESCRIPTION: MWRA ALEWIFE

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.

Date Received: 6/13/11
Work Order #: 1106-11164
MWRA ALEWIFE

Sample # 001
SAMPLE DESCRIPTION: MR2015CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 10:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1254	0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Surrogate			RANGE	SW-846 8082	6/15/11	JEB
Tetrachloro-m-xylene (TCMX)	65		30-150%	SW-846 8082	6/15/11	JEB
Decachlorobiphenyl	69		30-150%	SW-846 8082	6/15/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	<1		%	SM2540 G.	6/14/11	BJK

Sample # 002
SAMPLE DESCRIPTION: SC2012CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 10:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1254	0.9	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Surrogate			RANGE	SW-846 8082	6/15/11	JEB
Tetrachloro-m-xylene (TCMX)	93		30-150%	SW-846 8082	6/15/11	JEB
Decachlorobiphenyl	118		30-150%	SW-846 8082	6/15/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	7		%	SM2540 G.	6/14/11	BJK

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.

Date Received: 6/13/11
Work Order #: 1106-11164
MWRA ALEWIFE

Sample # 003
SAMPLE DESCRIPTION: SC2002CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 11:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1254	11	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Surrogate			RANGE	SW-846 8082	6/15/11	JEB
Tetrachloro-m-xylene (TCMX)	84		30-150%	SW-846 8082	6/15/11	JEB
Decachlorobiphenyl	82		30-150%	SW-846 8082	6/15/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	4		%	SM2540 G.	6/14/11	BJK

Sample # 004
SAMPLE DESCRIPTION: SC2013CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 11:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1254	0.7	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Surrogate			RANGE	SW-846 8082	6/15/11	JEB
Tetrachloro-m-xylene (TCMX)	49		30-150%	SW-846 8082	6/15/11	JEB
Decachlorobiphenyl	52		30-150%	SW-846 8082	6/15/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	2		%	SM2540 G.	6/14/11	BJK

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.

Date Received: 6/13/11
Work Order #: 1106-11164
MWRA ALEWIFE

Sample # 005
SAMPLE DESCRIPTION: SR2002CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1254	0.6	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Surrogate			RANGE	SW-846 8082	6/15/11	JEB
Tetrachloro-m-xylene (TCMX)	92		30-150%	SW-846 8082	6/15/11	JEB
Decachlorobiphenyl	104		30-150%	SW-846 8082	6/15/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	2		%	SM2540 G.	6/14/11	BJK

Sample # 006
SAMPLE DESCRIPTION: SR2007CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 11:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1254	0.4	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Surrogate			RANGE	SW-846 8082	6/15/11	JEB
Tetrachloro-m-xylene (TCMX)	88		30-150%	SW-846 8082	6/15/11	JEB
Decachlorobiphenyl	110		30-150%	SW-846 8082	6/15/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	2		%	SM2540 G.	6/14/11	BJK

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.

Date Received: 6/13/11

Work Order #: 1106-11164

MWRA ALEWIFE

Sample # 007
SAMPLE DESCRIPTION: SR2004CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1254	3.2	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Surrogate			RANGE	SW-846 8082	6/15/11	JEB
Tetrachloro-m-xylene (TCMX)	82		30-150%	SW-846 8082	6/15/11	JEB
Decachlorobiphenyl	76		30-150%	SW-846 8082	6/15/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	1		%	SM2540 G.	6/14/11	BJK

Sample # 008
SAMPLE DESCRIPTION: SR2008CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 12:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/17/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/17/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/17/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/17/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/17/11	JEB
Aroclor-1254	1.0	0.1	mg/kg dry	SW-846 8082	6/17/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/17/11	JEB
Surrogate			RANGE	SW-846 8082	6/17/11	JEB
Tetrachloro-m-xylene (TCMX)	91		30-150%	SW-846 8082	6/17/11	JEB
Decachlorobiphenyl	85		30-150%	SW-846 8082	6/17/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	3		%	SM2540 G.	6/14/11	BJK

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.

Date Received: 6/13/11
Work Order #: 1106-11164
MWRA ALEWIFE

Sample # 009
SAMPLE DESCRIPTION: GR2007CDUP
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 13:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1254	1.3	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Surrogate			RANGE	SW-846 8082	6/15/11	JEB
Tetrachloro-m-xylene (TCMX)	66		30-150%	SW-846 8082	6/15/11	JEB
Decachlorobiphenyl	74		30-150%	SW-846 8082	6/15/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	1		%	SM2540 G.	6/14/11	BJK

Sample # 010
SAMPLE DESCRIPTION: GR2007CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 13:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1254	0.4	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Surrogate			RANGE	SW-846 8082	6/15/11	JEB
Tetrachloro-m-xylene (TCMX)	68		30-150%	SW-846 8082	6/15/11	JEB
Decachlorobiphenyl	78		30-150%	SW-846 8082	6/15/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	1		%	SM2540 G.	6/14/11	BJK

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.

Date Received: 6/13/11
Work Order #: 1106-11164
MWRA ALEWIFE

Sample # 011
SAMPLE DESCRIPTION: OH1098P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 13:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1254	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Surrogate			RANGE	SW-846 8082	6/15/11	JEB
Tetrachloro-m-xylene (TCMX)	67		30-150%	SW-846 8082	6/15/11	JEB
Decachlorobiphenyl	64		30-150%	SW-846 8082	6/15/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	2		%	SM2540 G.	6/14/11	BJK

Sample # 012
SAMPLE DESCRIPTION: OH2098CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 13:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1254	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/15/11	JEB
Surrogate			RANGE	SW-846 8082	6/15/11	JEB
Tetrachloro-m-xylene (TCMX)	84		30-150%	SW-846 8082	6/15/11	JEB
Decachlorobiphenyl	117		30-150%	SW-846 8082	6/15/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	10		%	SM2540 G.	6/14/11	BJK

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.

Date Received: 6/13/11
Work Order #: 1106-11164
MWRA ALEWIFE

Sample # 013
SAMPLE DESCRIPTION: OH2098CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 14:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1254	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Surrogate			RANGE	SW-846 8082	6/16/11	JEB
Tetrachloro-m-xylene (TCMX)	50		30-150%	SW-846 8082	6/16/11	JEB
Decachlorobiphenyl	76		30-150%	SW-846 8082	6/16/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	6		%	SM2540 G.	6/14/11	BJK

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.

Date Received: 6/13/11
Work Order #: 1106-11164
MWRA ALEWIFE

Sample # 014
SAMPLE DESCRIPTION: OG1099P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 14:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.2	0.2	mg/kg	SW-846 8082	6/16/11	JEB
Aroclor-1221	<0.2	0.2	mg/kg	SW-846 8082	6/16/11	JEB
Aroclor-1232	<0.2	0.2	mg/kg	SW-846 8082	6/16/11	JEB
Aroclor-1242	<0.2	0.2	mg/kg	SW-846 8082	6/16/11	JEB
Aroclor-1248	<0.2	0.2	mg/kg	SW-846 8082	6/16/11	JEB
Aroclor-1254	0.6	0.1	mg/kg	SW-846 8082	6/16/11	JEB
Aroclor-1260	<0.2	0.2	mg/kg	SW-846 8082	6/16/11	JEB
Surrogate			RANGE	SW-846 8082	6/16/11	JEB
Tetrachloro-m-xylene (TCMX)	72		30-150%	SW-846 8082	6/16/11	JEB
Decachlorobiphenyl	72		30-150%	SW-846 8082	6/16/11	JEB
Extraction date	Extracted			SW846 3540	6/14/11	KAC
Moisture	Not Applicable		%	SM2540 G.	6/14/11	KAC

Method 8082:
Detection limit increased due to low initial sample volume. This sample is also reported on a "sample as received" basis. It appeared to be 100% solids, however insufficient volume of sample was received for a moisture analysis.

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.

Date Received: 6/13/11
Work Order #: 1106-11164
MWRA ALEWIFE

Sample # 015
SAMPLE DESCRIPTION: OG2099CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 14:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1254	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Surrogate			RANGE	SW-846 8082	6/16/11	JEB
Tetrachloro-m-xylene (TCMX)	244*		30-150%	SW-846 8082	6/16/11	JEB
Decachlorobiphenyl	279*		30-150%	SW-846 8082	6/16/11	JEB
Extraction date	Extracted			SW846 3540	6/15/11	KAC
Moisture	6		%	SM2540 G.	6/14/11	BJK

Method 8082:
* Surrogate is outside QC Range. Both surrogates exhibited high recovery and there were no detected target compounds in the sample.

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.

Date Received: 6/13/11
Work Order #: 1106-11164
MWRA ALEWIFE

Sample # 016
SAMPLE DESCRIPTION: OG2099CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011 @ 14:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/19/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/19/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/19/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/19/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/19/11	JEB
Aroclor-1254	<0.1	0.1	mg/kg dry	SW-846 8082	6/19/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/19/11	JEB
Surrogate			RANGE	SW-846 8082	6/19/11	JEB
Tetrachloro-m-xylene (TCMX)	231*		30-150%	SW-846 8082	6/19/11	JEB
Decachlorobiphenyl	232*		30-150%	SW-846 8082	6/19/11	JEB
Extraction date	Extracted			SW846 3540	6/15/11	KAC
Moisture	8		%	SM2540 G.	6/14/11	BJK

Method 8082:
* Surrogate is outside QC Range. Both surrogates exhibited high recovery and there were no detected target compounds in the sample.

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.

Date Received: 6/13/11

Work Order #: 1106-11164

MWRA ALEWIFE

Sample # 017
SAMPLE DESCRIPTION: DUP
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 6/10/2011

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1254	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082	6/16/11	JEB
Surrogate			RANGE	SW-846 8082	6/16/11	JEB
Tetrachloro-m-xylene (TCMX)	263*		30-150%	SW-846 8082	6/16/11	JEB
Decachlorobiphenyl	287*		30-150%	SW-846 8082	6/16/11	JEB
Extraction date	Extracted			SW846 3540	6/15/11	KAC
Moisture	4		%	SM2540 G.	6/14/11	BJK

Method 8082:
* Surrogate is outside QC Range. Both surrogates exhibited high recovery and there were no detected target compounds in the sample.

Client: Geosphere Environmental Mgt.
WO #: 1106-11164
Date: 6/21/11

Description : MWRA ALEWIFE

-Method Blanks Results-

Parameter	Units	Results	Date Analyzed
PCB's Method 8082			
Aroclor-1016	mg/kg dry	<0.1	6/15/2011
Aroclor-1221	mg/kg dry	<0.1	6/15/2011
Aroclor-1232	mg/kg dry	<0.1	6/15/2011
Aroclor-1242	mg/kg dry	<0.1	6/15/2011
Aroclor-1248	mg/kg dry	<0.1	6/15/2011
Aroclor-1254	mg/kg dry	<0.1	6/15/2011
Aroclor-1260	mg/kg dry	<0.1	6/15/2011
Surrogate	RANGE		6/15/2011
Tetrachloro-m-xylene (TCMX)	30-150%	66	6/15/2011
Decachlorobiphenyl	30-150%	70	6/15/2011
Aroclor-1016	mg/kg dry	<0.1	6/16/2011
Aroclor-1221	mg/kg dry	<0.1	6/16/2011
Aroclor-1232	mg/kg dry	<0.1	6/16/2011
Aroclor-1242	mg/kg dry	<0.1	6/16/2011
Aroclor-1248	mg/kg dry	<0.1	6/16/2011
Aroclor-1254	mg/kg dry	<0.1	6/16/2011
Aroclor-1260	mg/kg dry	<0.1	6/16/2011
Surrogate	RANGE		6/16/2011
Tetrachloro-m-xylene (TCMX)	30-150%	106	6/16/2011
Decachlorobiphenyl	30-150%	101	6/16/2011

-LCS/LCS Duplicate Data Results-

Parameter	Spike Conc	LCS Conc	LCS % Rec	LCS Dup Conc	LCS DUP % Rec	% RPD	Date Analyzed
PCB's Method 8082							
Aroclor-1016	2.5	2.69	108				6/15/2011
Aroclor-1260	2.5	2.38	95				6/15/2011
Surrogate							6/15/2011
Tetrachloro-m-xylene (TCMX)		70					6/15/2011
Decachlorobiphenyl		69					6/15/2011
Aroclor-1016	2.5	2.75	110				6/16/2011
Aroclor-1260	2.5	2.90	116				6/16/2011
Surrogate							6/16/2011
Tetrachloro-m-xylene (TCMX)		95					6/16/2011
Decachlorobiphenyl		93					6/16/2011

Client: Geosphere Environmental Mgt.
WO #: 1106-11164
Date: 6/21/11

Description : MWRA ALEWIFE

-MS / MSD Sample Results-

Parameter	Sample #	Sample Conc.	Spike Conc	MS Conc	MS % Rec	MSD Conc	MSD % Rec	% RPD	Date Analyzed
PCB's Method 8082									
Aroclor-1016	1106-11164-012	<0.1	2.70	1.45	53.7	1.43	53.8	0	6/16/2011
Aroclor-1260	1106-11164-012	<0.1	2.70	1.71	63.3	1.79	67.3	6	6/15/2011
Surrogate									6/15/2011
Tetrachloro-m-xylene (TCMX)	1106-11164-012	84		44		52			6/16/2011
Decachlorobiphenyl	1106-11164-012	117		65		69			6/16/2011

CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580
Fax: 401-738-1970

131 Coolidge St, Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580
Fax: 978-568-0078

06-02-11

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type C	Preservation Code P	Matrix Code M	PCBs, (MDL 1.0-10.0 mg/l)
6/10/11	10:10	MR2015Cb	G	1G		B	X
	10:45	SC 2012 Cb	G				X
	11:00	SC 2002 Cb	G				X
	11:15	SC 2013 Cb	G				X
	11:30	SR 2002 Cb	G				X
	11:45	SR 2007 Cb	G				X
	12:00	SR 2004 Cb	G				X
	12:30	SR 2008 Cb	G				X
	1:00	GR 2007 CDUP	G				X
	1:15	GR 2007 Cb	G				X
	1:30	OH 1098P	G				X
	1:45	OH 2098Ca	C				X
	2:00	OH 2098Cb	G				X
	2:10	OG 1099P	G				X

G.

Client Information		Project Information	
Company Name:	Geosphere Environmental Management, Inc.	Project Name:	MWRA Alewife
Address:	51 Portsmouth Avenue	P.O. Number:	09313
City / State / Zip:	Exeter, NH 03833	Project Number:	
Telephone:	(603) 773-0075 x 12 Fax: (603) 773-0077	Report To:	David Niemeyer
Contact Person:	David Niemeyer	Phone:	603-475-2977 Fax: 603-773-0077
		Sampled by:	C. Hanson / D. Niemeyer
		Quote No:	
		Email report to these addresses:	dniemeyer@geospherenh.com

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
David C Niemeyer	6/13/11	2:15	John Sullivan	6/13/11	14:15
John Sullivan	6/13/11	1530		6.13.11	1530
	6.13.11	1705		6/13/11	1705

Turn Around Time			
	Normal	X	EMAIL Report
X	5 Business days.		
	Rush – Date Due: ___/___/___		

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes (No)

EPA Method 8082A with manual soxhlet extraction (3540)
Extra sample volume provided for MS/MSD on sample OH2098Ca

* Pb/Cd in analysis per B. Fitzhenry 6/14/11

Temp. Upon Receipt 10.6 °C

Lab Use Only	
	Sample Pick Up Only
	RIAL sampled; attach field hours
	Shipped on ice
Workorder No:	1106-1167

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SB=$NaHSO_4$, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580
Fax: 401-738-1970

131 Coolidge St, Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580
Fax: 978-568-0078

06-02-11

H.

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type C	Preservation Code P	Matrix Code M	PCBs, (MDL 1.0-10.0 mg/l)
6/10/11	2:20	OG2099Ca	G	16		B	X
↓	2:40	OG2099Cb	G	16		B	X
	—	DUP	G	16		B	X
	~~2:50~~	~~EQBLK~~	~~G~~	~~1AG~~		~~W~~	~~X~~

Sample Broke During transfer - Client Notified 6/15
[signature] 6/20

4 gal.

Client Information		Project Information	
Company Name:	Geosphere Environmental Management, Inc.	Project Name:	MWRA Alewife
Address:	51 Portsmouth Avenue	P.O. Number:	09313
City / State / Zip:	Exeter, NH 03833	Project Number:	
Telephone:	(603) 773-0075 x 12	Report To:	David Niemeyer
Fax:	(603) 773-0077	Phone:	603-475-2977
Contact Person:	David Niemeyer	Fax:	603-773-0077
		Sampled by:	C. Hanson / D. Niemeyer
		Quote No:	
		Email report to these addresses:	dniemeyer@geospherenh.com

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
[signature]	6/13/11	2:15	[signature]	6/13/11	14:15
[signature]	6/13/11	1530	[signature]	6.13.11	1530
[signature]	6.13.11	1705	[signature]	6/13/11	1705

Turn Around Time			
	Normal	X	EMAIL Report
X	5 Business days.		
	Rush – Date Due: ___/___/___		

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes (No)

Temp. Upon Receipt 1D.L °C

Lab Use Only	
✓	Sample Pick Up Only
	RIAL sampled; attach field hours
✓	Shipped on ice
Workorder No	1106-11164

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SB=$NaHSO_4$, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

R.I. Analytical Laboratories Report
Work Order # 1111-23480, December 9, 2011
Samples collected by GEOSPHERE – November 2011

R.I. ANALYTICAL
Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Attn: Mr. David Niemeyer
51 Portsmouth Avenue
Exeter, NH 03833

Date Received: 11/29/11
Date Reported: 12/9/11
P.O. #:
Work Order #: 1111-23480

DESCRIPTION: PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analytsis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Sharon Baker
MIS / Data Reporting Manager

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 001
SAMPLE DESCRIPTION: MR3008CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 08:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1254	0.4	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	87		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	102		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	3		%	SM2540 G.	12/1/11	BJK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 002
SAMPLE DESCRIPTION: PR3013P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/21/2011 @ 11:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1221	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1232	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1242	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1248	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1254	21000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1260	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	DL		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	DL		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:
DL = Surrogates diluted out.

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 003
SAMPLE DESCRIPTION: PR3013CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/21/2011 @ 11:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.5	0.5	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1221	<0.5	0.5	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1232	<0.5	0.5	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1242	<0.5	0.5	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1248	<0.5	0.5	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1254	16	0.5	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1260	<0.5	0.5	mg/kg	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	80		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	91		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 004
SAMPLE DESCRIPTION: PR3013CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/21/2011 @ 11:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1221	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1232	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1242	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1248	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1254	13	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1260	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	80		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	92		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 005
SAMPLE DESCRIPTION: PR3014P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/21/2011 @ 13:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1221	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1232	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1242	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1248	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1254	19000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1260	<1000	1000	mg/kg	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	DL		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	DL		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:
DL = Surrogates diluted out.

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 006
SAMPLE DESCRIPTION: PR3014CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/21/2011 @ 13:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<2.6	2.6	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1221	<2.6	2.6	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1232	<2.6	2.6	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1242	<2.6	2.6	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1248	<2.6	2.6	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1254	34	2.6	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1260	<2.6	2.6	mg/kg	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	79		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	82		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 007
SAMPLE DESCRIPTION: PR3014CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/21/2011 @ 13:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1254	2.7	0.3	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg	SW-846 8082	12/2/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	66		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	73		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 008
SAMPLE DESCRIPTION: SC3017P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/22/2011 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.9	0.9	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1221	<0.9	0.9	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1232	<0.9	0.9	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1242	<0.9	0.9	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1248	<0.9	0.9	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1254	22	0.9	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1260	<0.9	0.9	mg/kg	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	77		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	85		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 009
SAMPLE DESCRIPTION: SC3017CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/22/2011 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1221	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1232	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1242	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1248	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1254	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1260	<0.4	0.4	mg/kg	SW-846 8082	12/2/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	86		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	100		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 010
SAMPLE DESCRIPTION: SC3017CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/22/2011 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1221	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1232	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1242	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1248	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1254	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1260	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	86		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	94		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 011
SAMPLE DESCRIPTION: SC3018P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/22/2011 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<3.8	3.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1221	<3.8	3.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1232	<3.8	3.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1242	<3.8	3.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1248	<3.8	3.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1254	32	3.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1260	<3.8	3.8	mg/kg	SW-846 8082	12/2/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	89		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	98		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 012
SAMPLE DESCRIPTION: SC3018CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/22/2011 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.5	0.5	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1221	<0.5	0.5	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1232	<0.5	0.5	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1242	<0.5	0.5	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1248	<0.5	0.5	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1254	<0.5	0.5	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1260	<0.5	0.5	mg/kg	SW-846 8082	12/2/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	85		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	96		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 013
SAMPLE DESCRIPTION: SC3018CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/22/2011 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.8	0.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1221	<0.8	0.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1232	<0.8	0.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1242	<0.8	0.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1248	<0.8	0.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1254	<0.8	0.8	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1260	<0.8	0.8	mg/kg	SW-846 8082	12/2/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	80		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	82		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 014
SAMPLE DESCRIPTION: SC3001CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 09:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1254	6.9	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/2/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	76		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	60		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	11		%	SM2540 G.	12/1/11	BJK

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 015
SAMPLE DESCRIPTION: SC3001CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 09:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1221	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1232	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1242	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1248	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1254	0.4	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1260	<0.2	0.2	mg/kg	SW-846 8082	12/2/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	72		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	80		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 016
SAMPLE DESCRIPTION: SC3020P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1.2	1.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1221	<1.2	1.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1232	<1.2	1.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1242	<1.2	1.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1248	<1.2	1.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1254	12	1.2	mg/kg	SW-846 8082	12/2/11	JEB
Aroclor-1260	<1.2	1.2	mg/kg	SW-846 8082	12/2/11	JEB
Surrogate			RANGE	SW-846 8082	12/2/11	JEB
Tetrachloro-m-xylene (TCMX)	76		30-150%	SW-846 8082	12/2/11	JEB
Decachlorobiphenyl	83		30-150%	SW-846 8082	12/2/11	JEB
Extraction date	Extracted			SW846 3540	11/30/11	BJK
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 017
SAMPLE DESCRIPTION: SC3020CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1254	6.7	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	97		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	98		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	4		%	SM2540 G.	12/1/11	BJK

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 018
SAMPLE DESCRIPTION: SC3020CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1254	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	85		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	103		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 019
SAMPLE DESCRIPTION: SC3021P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<2.9	2.9	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1221	<2.9	2.9	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1232	<2.9	2.9	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1242	<2.9	2.9	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1248	<2.9	2.9	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1254	92	2.9	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1260	<2.9	2.9	mg/kg dry	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	95		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	105		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	4		%	SM2540 G.	12/1/11	BJK

Sample # 020
SAMPLE DESCRIPTION: SC3021CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.5	0.5	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1221	<0.5	0.5	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1232	<0.5	0.5	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1242	<0.5	0.5	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1248	<0.5	0.5	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1254	14	0.5	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1260	<0.5	0.5	mg/kg dry	SW-846 8082	12/8/11	JEB
Surrogate			RANGE	SW-846 8082	12/8/11	JEB
Tetrachloro-m-xylene (TCMX)	82		30-150%	SW-846 8082	12/8/11	JEB
Decachlorobiphenyl	92		30-150%	SW-846 8082	12/8/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	2		%	SM2540 G.	12/1/11	BJK

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Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 021
SAMPLE DESCRIPTION: SC3021CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.2	0.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1221	<0.2	0.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1232	<0.2	0.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1242	<0.2	0.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1248	<0.2	0.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1254	0.9	0.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1260	<0.2	0.2	mg/kg	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	104		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	110		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 022
SAMPLE DESCRIPTION: SC3022P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<2.0	2.0	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1221	<2.0	2.0	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1232	<2.0	2.0	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1242	<2.0	2.0	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1248	<2.0	2.0	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1254	72	2.0	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1260	<2.0	2.0	mg/kg	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	98		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	109		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 023
SAMPLE DESCRIPTION: SC3022CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<2.5	2.5	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1221	<2.5	2.5	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1232	<2.5	2.5	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1242	<2.5	2.5	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1248	<2.5	2.5	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1254	190	5.0	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1260	<2.5	2.5	mg/kg dry	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	80		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	90		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	2		%	SM2540 G.	12/1/11	BJK

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 024
SAMPLE DESCRIPTION: SC3022CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1254	8.8	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	87		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	98		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 025
SAMPLE DESCRIPTION: GR3008P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1.2	1.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1221	<1.2	1.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1232	<1.2	1.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1242	<1.2	1.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1248	<1.2	1.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1254	13	1.2	mg/kg	SW-846 8082	12/6/11	JEB
Aroclor-1260	<1.2	1.2	mg/kg	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	102		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	106		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 026
SAMPLE DESCRIPTION: GR3008CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1254	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/6/11	JEB
Surrogate			RANGE	SW-846 8082	12/6/11	JEB
Tetrachloro-m-xylene (TCMX)	98		30-150%	SW-846 8082	12/6/11	JEB
Decachlorobiphenyl	105		30-150%	SW-846 8082	12/6/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	1		%	SM2540 G.	12/1/11	BJK

Sample # 027
SAMPLE DESCRIPTION: GR3008CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1254	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Surrogate			RANGE	SW-846 8082	12/7/11	JEB
Tetrachloro-m-xylene (TCMX)	109		30-150%	SW-846 8082	12/7/11	JEB
Decachlorobiphenyl	92		30-150%	SW-846 8082	12/7/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	<1		%	SM2540 G.	12/1/11	BJK

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CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 028
SAMPLE DESCRIPTION: SR3009P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 12:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.6	0.6	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1221	<0.6	0.6	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1232	<0.6	0.6	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1242	<0.6	0.6	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1248	<0.6	0.6	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1254	20	0.6	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1260	<0.6	0.6	mg/kg dry	SW-846 8082	12/7/11	JEB
Surrogate			RANGE	SW-846 8082	12/7/11	JEB
Tetrachloro-m-xylene (TCMX)	93		30-150%	SW-846 8082	12/7/11	JEB
Decachlorobiphenyl	98		30-150%	SW-846 8082	12/7/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	3		%	SM2540 G.	12/1/11	BJK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 029
SAMPLE DESCRIPTION: SR3009PR
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 12:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<15	15	mg/kg	SW-846 8082	12/7/11	JEB
Aroclor-1221	<15	15	mg/kg	SW-846 8082	12/7/11	JEB
Aroclor-1232	<15	15	mg/kg	SW-846 8082	12/7/11	JEB
Aroclor-1242	<15	15	mg/kg	SW-846 8082	12/7/11	JEB
Aroclor-1248	<15	15	mg/kg	SW-846 8082	12/7/11	JEB
Aroclor-1254	2500	150	mg/kg	SW-846 8082	12/8/11	JEB
Aroclor-1260	<15	15	mg/kg	SW-846 8082	12/7/11	JEB
Surrogate			RANGE	SW-846 8082	12/7/11	JEB
Tetrachloro-m-xylene (TCMX)	100		30-150%	SW-846 8082	12/7/11	JEB
Decachlorobiphenyl	120		30-150%	SW-846 8082	12/7/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 030
SAMPLE DESCRIPTION: SR3009CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 12:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1254	0.8	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/7/11	JEB
Surrogate			RANGE	SW-846 8082	12/7/11	JEB
Tetrachloro-m-xylene (TCMX)	103		30-150%	SW-846 8082	12/7/11	JEB
Decachlorobiphenyl	113		30-150%	SW-846 8082	12/7/11	JEB
Extraction date	Extracted			SW846 3540	12/1/11	KAC
Moisture	5		%	SM2540 G.	12/1/11	BJK

Sample # 031
SAMPLE DESCRIPTION: SR3009CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 12:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1254	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Surrogate			RANGE	SW-846 8082	12/8/11	JEB
Tetrachloro-m-xylene (TCMX)	103		30-150%	SW-846 8082	12/8/11	JEB
Decachlorobiphenyl	97		30-150%	SW-846 8082	12/8/11	JEB
Extraction date	Extracted			SW846 3540	12/2/11	THP
Moisture	3		%	SM2540 G.	12/1/11	BJK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 032
SAMPLE DESCRIPTION: GR3001CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1254	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/8/11	JEB
Surrogate			RANGE	SW-846 8082	12/8/11	JEB
Tetrachloro-m-xylene (TCMX)	96		30-150%	SW-846 8082	12/8/11	JEB
Decachlorobiphenyl	98		30-150%	SW-846 8082	12/8/11	JEB
Extraction date	Extracted			SW846 3540	12/2/11	THP
Moisture	Not Determined		%	SM2540 G.	12/1/11	KAC

Method 8082:

% Moisture could not be determined due to insufficient sample volume received.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 11/29/11
Work Order #: 1111-23480

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 033
SAMPLE DESCRIPTION: QC WIPE
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 11/23/2011 @ 08:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	12/8/11	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	12/8/11	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	12/8/11	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	12/8/11	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	12/8/11	JEB
Aroclor-1254	<1	1	ug/Wipe	SW-846 8082	12/8/11	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	12/8/11	JEB
Surrogate			RANGE	SW-846 8082	12/8/11	JEB
Tetrachloro-m-xylene (TCMX)	104		30-150%	SW-846 8082	12/8/11	JEB
Decachlorobiphenyl	102		30-150%	SW-846 8082	12/8/11	JEB
Extraction date	Extracted			SW846 3540	12/2/11	THP
Moisture	Not Applicable		%	SM2540 G.	12/1/11	KAC

CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580
Fax: 401-738-1970

131 Coolidge St, Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580
Fax: 978-568-0078

06-02-11

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type C	Preservation Code P	Matrix Code M	PCBs, ~~(MDL 1.0-10.0 mg/l)~~
11/23/11	8:20	MR 3008Cb	G	1G	NP	B	X
11/21/11	11:00	PR 3013P	G	1G	NP	B	X
11/21/11	11:00	PR 3013Ca	G	1G	NP	B	X
11/21/11	11:00	PR 3013Cb	G	1G	NP	B	X
11/21/11	1:30	PR 3014P	G	1G	NP	B	X
11/21/11	1:30	PR 3014Ca	G	1G	NP	B	X
11/21/11	1:30	PR 3014Cb	G	1G	NP	B	X
11/22/11	10:00	SC 3017P	G	1G	NP	B	X
11/22/11	10:00	SC 3017Ca	G	1G	NP	B	X
11/22/11	10:00	SC 3017Cb	G	1G	NP	B	X
11/22/11	12:00	SC 3018P	G	1G	NP	B	X
11/22/11	12:00	SC 3018Ca	G	1G	NP	B	X
11/22/11	12:00	SC 3018Cb	G	1G	NP	B	X
11/23/11	9:15	SC 3001Ca	G	1AG	NP	B	X

Client Information		Project Information	
Company Name:	Geosphere Environmental Management, Inc. (4RT)	Project Name:	MWRA Alewife PCB Survey
Address:	51 Portsmouth Avenue	P.O. Number: / Project Number:	09313
City / State / Zip:	Exeter, NH 03833	Report To:	David Niemeyer
Telephone:	(603) 773-0075 x 12 Fax: (603) 773-0077	Phone:	603-475-2977 Fax: 603-773-0077
Contact Person:	David Niemeyer	Sampled by:	CH/DN
		Quote No:	
		Email report to these addresses:	dniemeyer@geospherenh.com

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
[signature]	11/29/11	8:45	[signature]	11-29-11	08:45
[signature]	11-29-11	1630	[signature]	11/29/11	1630
[signature]	Nov 11	1815	[signature]	11/29/11	1815

Turn Around Time		
	Normal	X EMAIL Report
X	5 Business days.	
	Rush – Date Due: ___/___/___	

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes (No)

Soxhlet Extraction (Manual)
Best Effort to MDL of 0.1 mg/kg

Temp. Upon Receipt 2.0 °C

Lab Use Only	
✓	Sample Pick Up Only
	RIAL sampled, attach field hours
✓	Shipped on ice
Workorder No:	1111-234W

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SB=$NaHSO_4$, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580
Fax: 401-738-1970

131 Coolidge St, Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580
Fax: 978-568-0078

06-02-11

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type C	Preservation Code P	Matrix Code M	PCBs, ~~(MDL 1.0-10.0 mg/l)~~
11/23/11	9:15	SC 3001 Cb	G	1AG	NP	B	X
11/23/11	9:00	SC 3020 P	G	1G	NP	B	X
11/23/11	9:00	SC 3020 Ca	G	1G	NP	B	X
11/23/11	9:00	SC 3020 Cb	G	1G	NP	B	X
11/23/11	9:30	SC 3021 P	G	1G	NP	B	X
11/23/11	9:30	SC 3021 Ca	G	1G	NP	B	X
11/23/11	9:30	SC 3021 Cb	G	1G	NP	B	X
11/23/11	10:30	SC 3022 P	G	1G	NP	B	X
11/23/11	10:30	SC 3022 Ca	G	1G	NP	B	X
11/23/11	10:30	SC 3022 Cb	G	1AG	NP	B	X
11/23/11	11:30	GR 3008 P	G	1AG	NP	B	X
11/23/11	11:30	GR 3008 Ca	G	1AG	NP	B	X
11/23/11	11:30	GR 3008 Cb	G	1AG	NP	B	X
11/23/11	12:30	SR 3009 P	G	1AG	NP	B	X

Client Information

Company Name:	Geosphere Environmental Management, Inc.
Address:	51 Portsmouth Avenue
City / State / Zip:	Exeter, NH 03833
Telephone:	(603) 773-0075 x 12 Fax: (603) 773-0077
Contact Person:	David Niemeyer

14RP

Project Information

Project Name:	MWRA Alewife PCB Survey
P.O. Number:	Project Number: 09313
Report To:	David Niemeyer Phone: 603-475-2977 Fax: 603-773-0077
Sampled by:	CH/DN
Quote No:	Email report to these addresses: dniemeyer@geospherenh.com

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
[signature]	11/29/11	8:45	[signature]	11-29-11	08:45
[signature]	11-29-11	1630	[signature]	11/29/11	1630
[signature]	11/29/11	1815	[signature]	11/29/11	1815

Turn Around Time

	Normal	X	EMAIL Report
X	5 Business days.		
	Rush – Date Due: ___/___/___		

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes No

Soxhlet Extraction

B.E. MDL 0.1 mg/kg

Temp. Upon Receipt 2.0 °C

Lab Use Only

✓	Sample Pick Up Only
	RIAL sampled; attach field hours
✓	Shipped on ice
	Workorder No: 1111-2348

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SB=$NaHSO_4$, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580
Fax: 401-738-1970

131 Coolidge St, Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580
Fax: 978-568-0078

06-02-11

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type C	Preservation Code P	Matrix Code M	PCBs, ~~(MDL 1.0-10.0 mg/l)~~
11/23/11	12:30	SR 3009 PR	G	1G	NP	B	X
11/23/11	12:30	SR 3009 Ca	G	1AG	NP	B	X
11/23/11	12:30	SR 3009 Cb	G	1AG	NP	B	X
11/23/11	12:00	GR 3001 Cb	G	1AG	NP	B	X
11/23/11	8:30	QC WIPE	G	1G	Hexane	WP	X

STOP

Client Information		Project Information	
Company Name:	Geosphere Environmental Management, Inc.	Project Name:	MWRA Alewife PCB Survey
Address:	51 Portsmouth Avenue	P.O. Number:	Project Number: 09313
City / State / Zip:	Exeter, NH 03833	Report To:	David Niemeyer — Phone: 603-475-2977 Fax: 603-773-0077
Telephone:	(603) 773-0075 x 12 Fax: (603) 773-0077	Sampled by:	CH/DN
Contact Person:	David Niemeyer	Quote No.	Email report to these addresses: dniemeyer@geospherenh.com

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
[signature]	11/29/11	8:45	[signature]	11-29-11	08:45
[signature]	11-29-11	1630	[signature]	11/29/11	1630
[signature]	11/29/11	1815	[signature]	11/29/11	1815

Turn Around Time			
	Normal	X	EMAIL Report
X	5 Business days.		
	Rush – Date Due: ___/___/___		

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes No

Soxhlet Extraction

B.E. MDL of 0.1 mg/kg

Temp. Upon Receipt 2.0 °C

Lab Use Only	
✓	Sample Pick Up Only
	RIAL sampled; attach field hours
✓	Shipped on ice
	Workorder No: 1111-2348

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SB=$NaHSO_4$, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

R.I. Analytical Laboratories Report
Work Order # 1112-25261, December 30, 2011
Samples collected by GEOSPHERE – December 2011

R.I. ANALYTICAL
Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Attn: Mr. David Niemeyer
51 Portsmouth Avenue
Exeter, NH 03833

Date Received: 12/22/11
Date Reported: 12/30/11
P.O. #:
Work Order #: 1112-25261

DESCRIPTION: PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analytsis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Sharon Baker
MIS / Data Reporting Manager

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 12/22/11
Work Order #: 1112-25261

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 001
SAMPLE DESCRIPTION: OD3004P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1221	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1232	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1242	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1248	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1254	1.4	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1260	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Surrogate			RANGE	SW-846 8082	12/29/11	JEB
Tetrachloro-m-xylene (TCMX)	85		30-150%	SW-846 8082	12/29/11	JEB
Decachlorobiphenyl	79		30-150%	SW-846 8082	12/29/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	2		%	SM2540 G.	12/23/11	KAC

Sample # 002
SAMPLE DESCRIPTION: OG3099CP
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 10:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1221	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1232	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1242	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1248	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1254	1.1	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1260	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Surrogate			RANGE	SW-846 8082	12/29/11	JEB
Tetrachloro-m-xylene (TCMX)	76		30-150%	SW-846 8082	12/29/11	JEB
Decachlorobiphenyl	64		30-150%	SW-846 8082	12/29/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	4		%	SM2540 G.	12/23/11	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 12/22/11
Work Order #: 1112-25261

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 003
SAMPLE DESCRIPTION: OG3099BP
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 10:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1221	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1232	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1242	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1248	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1254	2.4	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1260	<1.3	1.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Surrogate			RANGE	SW-846 8082	12/29/11	JEB
Tetrachloro-m-xylene (TCMX)	90		30-150%	SW-846 8082	12/29/11	JEB
Decachlorobiphenyl	74		30-150%	SW-846 8082	12/29/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	0		%	SM2540 G.	12/23/11	KAC

Sample # 004
SAMPLE DESCRIPTION: OD3005P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 10:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<5.6	5.6	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1221	<5.6	5.6	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1232	<5.6	5.6	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1242	<5.6	5.6	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1248	<5.6	5.6	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1254	520	56	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1260	<5.6	5.6	mg/kg dry	SW-846 8082	12/29/11	JEB
Surrogate			RANGE	SW-846 8082	12/29/11	JEB
Tetrachloro-m-xylene (TCMX)	78		30-150%	SW-846 8082	12/29/11	JEB
Decachlorobiphenyl	73		30-150%	SW-846 8082	12/29/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	6		%	SM2540 G.	12/23/11	KAC

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Work Order #: 1112-25261

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 005
SAMPLE DESCRIPTION: OG3099AP
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<2.5	2.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1221	<2.5	2.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1232	<2.5	2.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1242	<2.5	2.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1248	<2.5	2.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1254	550	25	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1260	<2.5	2.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Surrogate			RANGE	SW-846 8082	12/28/11	JEB
Tetrachloro-m-xylene (TCMX)	68		30-150%	SW-846 8082	12/28/11	JEB
Decachlorobiphenyl	70		30-150%	SW-846 8082	12/28/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	4		%	SM2540 G.	12/23/11	KAC

Sample # 006
SAMPLE DESCRIPTION: OD3006P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1.2	1.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1221	<1.2	1.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1232	<1.2	1.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1242	<1.2	1.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1248	<1.2	1.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1254	1.4	1.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1260	<1.2	1.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Surrogate			RANGE	SW-846 8082	12/29/11	JEB
Tetrachloro-m-xylene (TCMX)	90		30-150%	SW-846 8082	12/29/11	JEB
Decachlorobiphenyl	92		30-150%	SW-846 8082	12/29/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	2		%	SM2540 G.	12/23/11	KAC

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Work Order #: 1112-25261

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 007
SAMPLE DESCRIPTION: OD3006CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 10:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1254	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Surrogate			RANGE	SW-846 8082	12/28/11	JEB
Tetrachloro-m-xylene (TCMX)	83		30-150%	SW-846 8082	12/28/11	JEB
Decachlorobiphenyl	83		30-150%	SW-846 8082	12/28/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	4		%	SM2540 G.	12/23/11	KAC

Sample # 008
SAMPLE DESCRIPTION: OD3006CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 11:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1254	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Surrogate			RANGE	SW-846 8082	12/28/11	JEB
Tetrachloro-m-xylene (TCMX)	95		30-150%	SW-846 8082	12/28/11	JEB
Decachlorobiphenyl	94		30-150%	SW-846 8082	12/28/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	4		%	SM2540 G.	12/23/11	KAC

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PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 009
SAMPLE DESCRIPTION: OD3004CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 11:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1254	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Surrogate			RANGE	SW-846 8082	12/28/11	JEB
Tetrachloro-m-xylene (TCMX)	92		30-150%	SW-846 8082	12/28/11	JEB
Decachlorobiphenyl	81		30-150%	SW-846 8082	12/28/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	3		%	SM2540 G.	12/23/11	KAC

Sample # 010
SAMPLE DESCRIPTION: OD3004CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1254	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Surrogate			RANGE	SW-846 8082	12/28/11	JEB
Tetrachloro-m-xylene (TCMX)	87		30-150%	SW-846 8082	12/28/11	JEB
Decachlorobiphenyl	78		30-150%	SW-846 8082	12/28/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	4		%	SM2540 G.	12/23/11	KAC

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Geosphere Environmental Mgt.
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PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 011
SAMPLE DESCRIPTION: HL3001CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1254	0.4	0.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/29/11	JEB
Surrogate			RANGE	SW-846 8082	12/29/11	JEB
Tetrachloro-m-xylene (TCMX)	78		30-150%	SW-846 8082	12/29/11	JEB
Decachlorobiphenyl	65		30-150%	SW-846 8082	12/29/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	1		%	SM2540 G.	12/22/11	KAC

Sample # 012
SAMPLE DESCRIPTION: HL3001CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 12:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1254	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/28/11	JEB
Surrogate			RANGE	SW-846 8082	12/28/11	JEB
Tetrachloro-m-xylene (TCMX)	81		30-150%	SW-846 8082	12/28/11	JEB
Decachlorobiphenyl	69		30-150%	SW-846 8082	12/28/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	2		%	SM2540 G.	12/22/11	KAC

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PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 013
SAMPLE DESCRIPTION: GR3002PR
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 13:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1.1	1.1	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1221	<1.1	1.1	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1232	<1.1	1.1	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1242	<1.1	1.1	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1248	<1.1	1.1	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1254	13	1.1	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1260	<1.1	1.1	mg/kg dry	SW-846 8082	12/29/11	JEB
Surrogate			RANGE	SW-846 8082	12/29/11	JEB
Tetrachloro-m-xylene (TCMX)	78		30-150%	SW-846 8082	12/29/11	JEB
Decachlorobiphenyl	76		30-150%	SW-846 8082	12/29/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	13		%	SM2540 G.	12/22/11	KAC

Sample # 014
SAMPLE DESCRIPTION: GR3002CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 13:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1221	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1232	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1242	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1248	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1254	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1260	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Surrogate			RANGE	SW-846 8082	12/28/11	JEB
Tetrachloro-m-xylene (TCMX)	88		30-150%	SW-846 8082	12/28/11	JEB
Decachlorobiphenyl	79		30-150%	SW-846 8082	12/28/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	4		%	SM2540 G.	12/22/11	KAC

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Sample # 015
SAMPLE DESCRIPTION: GR3002CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 13:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1221	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1232	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1242	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1248	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1254	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Aroclor-1260	<0.2	0.2	mg/kg dry	SW-846 8082	12/28/11	JEB
Surrogate			RANGE	SW-846 8082	12/28/11	JEB
Tetrachloro-m-xylene (TCMX)	88		30-150%	SW-846 8082	12/28/11	JEB
Decachlorobiphenyl	85		30-150%	SW-846 8082	12/28/11	JEB
Extraction date	Extracted			SW846 3540	12/27/11	KAC
Moisture	2		%	SM2540 G.	12/22/11	KAC

Sample # 016
SAMPLE DESCRIPTION: BR3002PR
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 13:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1.5	1.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1221	<1.5	1.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1232	<1.5	1.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1242	<1.5	1.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1248	<1.5	1.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1254	25	1.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1260	<1.5	1.5	mg/kg dry	SW-846 8082	12/29/11	JEB
Surrogate			RANGE	SW-846 8082	12/29/11	JEB
Tetrachloro-m-xylene (TCMX)	82		30-150%	SW-846 8082	12/29/11	JEB
Decachlorobiphenyl	71		30-150%	SW-846 8082	12/29/11	JEB
Extraction date	Extracted			SW846 3540	12/28/11	BJK
Moisture	5		%	SM2540 G.	12/22/11	KAC

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PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 017
SAMPLE DESCRIPTION: BR3002CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 14:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1221	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1232	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1242	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1248	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1254	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1260	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Surrogate			RANGE	SW-846 8082	12/29/11	JEB
Tetrachloro-m-xylene (TCMX)	81		30-150%	SW-846 8082	12/29/11	JEB
Decachlorobiphenyl	77		30-150%	SW-846 8082	12/29/11	JEB
Extraction date	Extracted			SW846 3540	12/28/11	BJK
Moisture	1		%	SM2540 G.	12/22/11	KAC

Sample # 018
SAMPLE DESCRIPTION: BR3002CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 14:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1221	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1232	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1242	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1248	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1254	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Aroclor-1260	<0.2	0.2	mg/kg dry	SW-846 8082	12/29/11	JEB
Surrogate			RANGE	SW-846 8082	12/29/11	JEB
Tetrachloro-m-xylene (TCMX)	85		30-150%	SW-846 8082	12/29/11	JEB
Decachlorobiphenyl	74		30-150%	SW-846 8082	12/29/11	JEB
Extraction date	Extracted			SW846 3540	12/28/11	BJK
Moisture	0		%	SM2540 G.	12/22/11	KAC

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Geosphere Environmental Mgt.
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Work Order #: 1112-25261

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 019
SAMPLE DESCRIPTION: GR3009P
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 14:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<360	360	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1221	<360	360	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1232	<360	360	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1242	<360	360	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1248	<360	360	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1254	11000	360	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1260	<360	360	mg/kg dry	SW-846 8082	12/30/11	JEB
Surrogate			RANGE	SW-846 8082	12/29/11	JEB
Tetrachloro-m-xylene (TCMX)	70		30-150%	SW-846 8082	12/29/11	JEB
Decachlorobiphenyl	36		30-150%	SW-846 8082	12/29/11	JEB
Extraction date	Extracted			SW846 3540	12/28/11	BJK
Moisture	4		%	SM2540 G.	12/22/11	KAC

Sample # 020
SAMPLE DESCRIPTION: BR3001G
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 14:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1254	1.0	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Surrogate			RANGE	SW-846 8082	12/30/11	JEB
Tetrachloro-m-xylene (TCMX)	75		30-150%	SW-846 8082	12/30/11	JEB
Decachlorobiphenyl	89		30-150%	SW-846 8082	12/30/11	JEB
Extraction date	Extracted			SW846 3540	12/28/11	BJK
Moisture	1		%	SM2540 G.	12/22/11	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 12/22/11
Work Order #: 1112-25261

PROJECT #09313 MWRA ALEWIFE PCB SURVEY

Sample # 021
SAMPLE DESCRIPTION: GR3009CA
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 15:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<2.5	2.5	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1221	<2.5	2.5	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1232	<2.5	2.5	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1242	<2.5	2.5	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1248	<2.5	2.5	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1254	46	2.5	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1260	<2.5	2.5	mg/kg dry	SW-846 8082	12/30/11	JEB
Surrogate			RANGE	SW-846 8082	12/30/11	JEB
Tetrachloro-m-xylene (TCMX)	90		30-150%	SW-846 8082	12/30/11	JEB
Decachlorobiphenyl	130		30-150%	SW-846 8082	12/30/11	JEB
Extraction date	Extracted			SW846 3540	12/28/11	BJK
Moisture	3		%	SM2540 G.	12/22/11	KAC

Sample # 022
SAMPLE DESCRIPTION: GR3009CB
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/21/2011 @ 15:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1221	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1232	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1242	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1248	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1254	5.2	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Aroclor-1260	<0.3	0.3	mg/kg dry	SW-846 8082	12/30/11	JEB
Surrogate			RANGE	SW-846 8082	12/30/11	JEB
Tetrachloro-m-xylene (TCMX)	83		30-150%	SW-846 8082	12/30/11	JEB
Decachlorobiphenyl	110		30-150%	SW-846 8082	12/30/11	JEB
Extraction date	Extracted			SW846 3540	12/28/11	BJK
Moisture	0		%	SM2540 G.	12/22/11	KAC

CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888
Tel: 800-937-2580
Fax: 401-738-1970

131 Coolidge St, Bldg. 2
Hudson, MA 01749
Tel: 888-228-3334
Fax: 978-568-0078

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Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type T	Preservation Code P	Matrix Code M	PCBs
12-21-11	9:30	OD3004P	G	1V	NP	B	X
12-21-11	10:05	OG3099CP	G	1V	NP	B	X
12-21-11	10:15	OG3099BP	G	1V	NP	B	X
12-21-11	10:25	OD3005P	G	1V	NP	B	X
12-21-11	10:30	OG3099AP	G	1V	NP	B	X
12-21-11	10:30	OD3006P	G	1V	NP	B	X
12-21-11	10:50	OD3006Ca	G	1V	NP	B	X
12-21-11	11:10	OD3006Cb	G	1V	NP	B	X
12-21-11	11:20	OD3004Ca	G	1V	NP	B	X
12-21-11	11:30	OD3004Cb	G	1V	NP	B	X
12-21-11	12:00	HL3001Ca	G	1V	NP	B	X
12-21-11	12:10	HL3001Cb	G	1V	NP	B	X
12-21-11	1:00	GR3002PR	G	1V	NP	B	X
12-21-11	1:20	GR3002Ca	G	1V	NP	B	X

Client Information		Project Information	
Company Name:	Geosphere Environmental Management, Inc. (GPE)	Project Name:	MWRA Alewife PCB Survey
Address:	51 Portsmouth Ave	P.O. Number:	Project Number: 09313
City / State / Zip:	Exeter, NH 03833	Report To:	David Niemeyer Phone: 603-475-2977 Fax: 603-773-0077
Telephone:	603 773 0075 Fax: 603 773 0077	Sampled by:	CH/DN
Contact Person:	David Niemeyer	Quote No:	Email address: dniemeyer@geospherenh.com

Relinquished By	Date	Time	Received By	Date	Time
[signature]	12/22/11	2:52	[signature]	12-22-11	14:52
[signature]	12/22/11	16:36	[signature]	12/22	16:36
[signature]	12/22	18:0	[signature]	12/22/11	18:0

Turn Around Time		
	Normal	X EMAIL Report
X	5 Business days. Possible surcharge.	
	Rush ____ (business days)	

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes (No)

Soxhlet Extraction (manual)
B.E. MDL of 0.1 mg/kg

3.0°C

Lab Use Only	
✓	Sample Pick Up Only
	RIAL sampled; attach field hours
✓	Shipped on ice
Workorder No:	1112-25261

Container Types: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile

Preservation Codes: NP=None, N=HNO_3, H=HCl, S=H_2SO_4, SH=NaOH, SB=$NaHSO_4$, M=MeOH, T=Na_2S_2C Z=ZnOAc, I=Ice

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, Sl=Sludge, A=Air, B=Bulk/Solid, O=_____

CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888
Tel: 800-937-2580
Fax: 401-738-1970

131 Coolidge St, Bldg. 2
Hudson, MA 01749
Tel: 888-228-3334
Fax: 978-568-0078

10

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type T	Preservation Code P	Matrix Code M	PCBs
12-21-11	1:30	GR3002Cb	G	IV	NP	B	X
12-21-11	1:30	BR3002PR	G	IV	NP	B	X
12-21-11	2:00	BR3002Ca	G	IV	NP	B	X
12-21-11	2:10	BR3002Cb	G	IV	NP	B	X
12-21-11	2:30	GR3009P	G	IV	NP	B	X
12-21-11	2:45	BR3001G	G	IV	NP	B	X
12-21-11	3:10	GR3009Ca	G	IV	NP	B	X
12-21-11	3:20	GR3009Cb	G	IV	NP	B	X

Client Information

Company Name: Geosphere Environmental Management, Inc.
Address: 51 Portsmouth Ave
City / State / Zip: Exeter, NH 03833
Telephone: 603 773 0075 Fax: 603 773 0077
Contact Person: David Niemeyer

Project Information

Project Name: MLWRA Alewife PCB Survey
P.O. Number:
Project Number: 09313
Report To: David Niemeyer Phone: 603 775 2977 Fax: 603 773 0077
Sampled by: CH/DN
Quote No:
Email address: dniemeyer@geospherenh.com

Relinquished By	Date	Time	Received By	Date	Time
[illegible]	12/22/11	2:52	[illegible]	12-22-11	14:52
[illegible]	12-22-11	1630	[illegible]	12/22	1630
[illegible]	12/22	1800	[illegible]	12/22/11	1800

Turn Around Time

	Normal	X	EMAIL Report
X	5 Business days. Possible surcharge.		
	Rush ____ (business days)		

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes (No)

Soxhlet Extraction (manual)

B.E. MDL of 0.1 mg/kg

3.0'

Lab Use Only

- ✓ Sample Pick Up Only
- RIAL sampled; attach field hours
- ✓ Shipped on ice

Workorder No: 1112-5261

Container Types: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile
Preservation Codes: NP=None, N=HNO_3, H=HCl, S=H_2SO_4, SH=NaOH, SB=$NaHSO_4$, M=MeOH, T=Na_2S_2C Z=ZnOAc, I=Ice
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, Sl=Sludge, A=Air, B=Bulk/Solid, O=_____

R.I. Analytical Laboratories Report
Work Order # 1203-04404, March 9, 2012
Samples collected by GEOSPHERE – March 2, 2012

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Attn: Mr. David Niemeyer
51 Portsmouth Avenue
Exeter, NH 03833

Date Received: 3/5/12
Date Reported: 3/9/12
P.O. #: 09313
Work Order #: 1203-04404

DESCRIPTION: PROJECT# 09313 MWRA ALEWIFE PCB SURVEY

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analytsis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Sharon Baker
MIS / Data Reporting Manager

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 3/5/12
Work Order #: 1203-04404

PROJECT# 09313 MWRA ALEWIFE PCB SURVEY

Sample # 001
SAMPLE DESCRIPTION: SR2007W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 11:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	82		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	96		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

Sample # 002
SAMPLE DESCRIPTION: SR1004W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 12:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	89		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	106		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 3/5/12
Work Order #: 1203-04404

PROJECT# 09313 MWRA ALEWIFE PCB SURVEY

Sample # 003
SAMPLE DESCRIPTION: SR1003W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 12:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	2	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	81		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	101		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

Sample # 004
SAMPLE DESCRIPTION: SC3021W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 13:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	52		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	63		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 3/5/12
Work Order #: 1203-04404

PROJECT# 09313 MWRA ALEWIFE PCB SURVEY

Sample # 005
SAMPLE DESCRIPTION: SC2013W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 13:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	7	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	83		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	92		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

Sample # 006
SAMPLE DESCRIPTION: SC2012W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 13:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	10	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	93		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	109		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 3/5/12
Work Order #: 1203-04404

PROJECT# 09313 MWRA ALEWIFE PCB SURVEY

Sample # 007
SAMPLE DESCRIPTION: PR1001W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 14:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	3	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	91		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	106		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

Sample # 008
SAMPLE DESCRIPTION: PR1002W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 14:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	4	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	87		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	97		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 3/5/12
Work Order #: 1203-04404

PROJECT# 09313 MWRA ALEWIFE PCB SURVEY

Sample # 009
SAMPLE DESCRIPTION: MR2022W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 14:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	101		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	113		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

Sample # 010
SAMPLE DESCRIPTION: MR1009W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 14:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	4	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	92		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	118		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 3/5/12
Work Order #: 1203-04404

PROJECT# 09313 MWRA ALEWIFE PCB SURVEY

Sample # 011
SAMPLE DESCRIPTION: GR1001W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 14:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	99		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	103		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

Sample # 012
SAMPLE DESCRIPTION: GR3009W
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 15:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	85		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	101		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 3/5/12
Work Order #: 1203-04404

PROJECT# 09313 MWRA ALEWIFE PCB SURVEY

Sample # 013
SAMPLE DESCRIPTION: TRIP BLANK
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012 @ 15:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	97		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	109		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

Sample # 014
SAMPLE DESCRIPTION: DUP
SAMPLE TYPE: Wipe **SAMPLE DATE/TIME:** 3/02/2012

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1221	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1232	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1242	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1248	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1254	6	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Aroclor-1260	<1	1	ug/Wipe	SW-846 8082	3/8/12	JEB
Surrogate			RANGE	SW-846 8082	3/8/12	JEB
Tetrachloro-m-xylene (TCMX)	82		30-150%	SW-846 8082	3/8/12	JEB
Decachlorobiphenyl	98		30-150%	SW-846 8082	3/8/12	JEB
Extraction date	Extracted			SW846 3540	3/7/12	BJK
Moisture	Not Applicable		%	SM2540 G.	3/6/12	BJK

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
800-937-2580 • Fax: 401-738-1970

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
800-937-2580 • Fax: 978-568-0078

A.

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type C	Preservation Code P	Matrix Code M	PCB (Soxhlet)
3/2/12	11:15	SR2007W	G	1G	Hexane	WP	X
	12:40	SR1004W	G	1G	Hexane	WP	X
	12:45	SR1003W	G	1G	Hexane	WP	X
	1:20	SC3021W	G	1G	Hexane	WP	X
	1:30	SC2013W	G	1G	Hexane	WP	X
	1:40	SC2012W	G	1G	Hexane	WP	X
	2:00	PR1001W	G	1G	Hexane	WP	X
	2:20	PR1002W	G	1G	Hexane	WP	X
	2:30	MR2022W	G	1G	Hexane	WP	X
	2:35	MR1009W	G	1G	Hexane	WP	X
	2:45	GR1001W	G	1G	Hexane	WP	X
	3:00	GR3009W	G	1G	Hexane	WP	X
	3:00	TRIP BLANK	G	1G	Hexane	WP	X
	—	DUP	G	1G	Hexane	WP	X

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Client Information

Company Name: Geosphere Environmental Management, Inc.
Address: 51 Portsmouth Ave
City / State / Zip: Exeter, NH 03833
Telephone: 603-773-0075 x12 Fax: 603-773-0077
Contact Person: David Niemeyer

Project Information

Project Name: MWRA Alewife PCB Survey
P.O. Number: 09313 Project Number: 09313
Report To: D. Niemeyer Phone: 603-773-0075 Fax 603-773-0077
Sampled By: D Niemeyer
Quote No:
Email report to these addresses: dniemeyer@geosphereenh.com

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
[signature]	3/5/12	9:30	[signature]	3/5/12	9:30
[signature]	3/5/12	1630	[signature]	3/5	1630
[signature]	3/5	1800	[signature]	3/5	18:00

Turn Around Time

X	Normal		EMAIL Report
X	5 Business days. Possible surcharge		
	Rush – Date Due: ___/___/___		

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes (No)

Temp. Upon Receipt 2.2 °C

Lab Use Only

- Sample Pick-Up Only
- RIAL sampled; attach field hours
- Shipped on ice

Workorder No: 1203-0440

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SB=$NaHSO_4$, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

R.I. Analytical Laboratories Report
Work Order # 1204-08467, May 7, 2012
Samples collected by GEOSPHERE – April 2012

R.I. ANALYTICAL
Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Attn: Mr. David Niemeyer
51 Portsmouth Avenue
Exeter, NH 03833

Date Received: 4/27/12
Date Reported: 5/7/12
P.O. #: 09313
Work Order #: 1204-08467

DESCRIPTION: PROJECT# 09313 MWRA ALEWIFE

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analytsis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Sharon Baker
MIS / Data Reporting Manager

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 4/27/12
Work Order #: 1204-08467

PROJECT# 09313 MWRA ALEWIFE

Sample # 001
SAMPLE DESCRIPTION: MR 4024
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	200	10	mg/kg dry	SW-846 8082	5/4/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	74		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	101		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/1/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

Sample # 002
SAMPLE DESCRIPTION: MR 4025
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 09:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	100	5	mg/kg dry	SW-846 8082	5/4/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	82		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	107		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/1/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 4/27/12
Work Order #: 1204-08467

PROJECT# 09313 MWRA ALEWIFE

Sample # 003
SAMPLE DESCRIPTION: MR 4026
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 09:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	100	5	mg/kg dry	SW-846 8082	5/5/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	80		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	101		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/1/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

Sample # 004
SAMPLE DESCRIPTION: MR 4027
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	98		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	140		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/1/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 4/27/12
Work Order #: 1204-08467

PROJECT# 09313 MWRA ALEWIFE

Sample # 005
SAMPLE DESCRIPTION: PR 4015
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 10:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	610	50	mg/kg dry	SW-846 8082	5/5/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	63		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	94		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/1/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

Sample # 006
SAMPLE DESCRIPTION: PR 4016
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 10:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	400	20	mg/kg dry	SW-846 8082	5/5/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	73		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	102		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/1/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 4/27/12
Work Order #: 1204-08467

PROJECT# 09313 MWRA ALEWIFE

Sample # 007
SAMPLE DESCRIPTION: SC 4023
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/25/2012 @ 14:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	3400	200	mg/kg dry	SW-846 8082	5/7/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	60		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	99		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/1/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

Sample # 008
SAMPLE DESCRIPTION: SC 4024
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/25/2012 @ 13:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	630	50	mg/kg dry	SW-846 8082	5/5/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	66		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	102		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/1/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 4/27/12
Work Order #: 1204-08467

PROJECT# 09313 MWRA ALEWIFE

Sample # 009
SAMPLE DESCRIPTION: SC 4025
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 11:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	19	2	mg/kg dry	SW-846 8082	5/5/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	68		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	96		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/1/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

Sample # 010
SAMPLE DESCRIPTION: SC 4026
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 11:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	81		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	107		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/1/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 4/27/12
Work Order #: 1204-08467

PROJECT# 09313 MWRA ALEWIFE

Sample # 011
SAMPLE DESCRIPTION: OD 4009
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 10:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	2.3	1	mg/kg dry	SW-846 8082	5/5/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	63		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	69		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/2/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

Sample # 013
SAMPLE DESCRIPTION: SR 4011
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 10:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	4.3	1	mg/kg dry	SW-846 8082	5/5/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	77		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	80		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/2/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Geosphere Environmental Mgt.
Date Received: 4/27/12
Work Order #: 1204-08467

PROJECT# 09313 MWRA ALEWIFE

Sample # 014
SAMPLE DESCRIPTION: GR 4010
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	69	5	mg/kg dry	SW-846 8082	5/5/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	71		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	81		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/2/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

Sample # 015
SAMPLE DESCRIPTION: GR 4011
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 4/27/2012 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Aroclor-1254	20	1	mg/kg dry	SW-846 8082	5/5/12	JEB
Aroclor-1260	<1	1	mg/kg dry	SW-846 8082	5/3/12	JEB
Surrogate			RANGE	SW-846 8082	5/3/12	JEB
Tetrachloro-m-xylene (TCMX)	74		30-150%	SW-846 8082	5/3/12	JEB
Decachlorobiphenyl	97		30-150%	SW-846 8082	5/3/12	JEB
Extraction date	Extracted			SW846 3540	5/2/12	THP
Moisture	N/A		%	SM2540 G.	5/7/12	MLC

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
800-937-2580 • Fax: 401-738-1970

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
800-937-2580 • Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type C	Preservation Code P	Matrix Code M	PCBs (Soxhlet)*
4/27	9:00	MR 4024	X	1V	NP	B	X
4/27	9:20	MR 4025	X				X
4/27	9:40	MR 4026	X				X
4/27	10:00	MR 4027	X				X
4/27	10:10	PR 4015	X				X
4/27	10:50	PR 4016	X				X
4/25	2:00	SC 4023	X				X
4/25	1:45	SC 4024	X				X
4/27	11:00	SC 4025	X				X
4/27	11:10	SC 4026	X				X
4/27	10:20	OD 4009	X				X
4/25	1:40	SR 4010	X				X
4/27	10:40	SR 4011	X				X
4/27	11:30	GR 4010	X				X
4/27	12:00	GR 4011	X				X
				15 AF			

Client Information

Company Name: Geosphere Environmental Management, Inc.
Address: 51 Portsmouth Avenue
City / State / Zip: Exeter, NH 03833
Telephone: (603) 773-0075 Fax: (603) 773-0077
Contact Person: D. Niemeyer

Project Information

Project Name: MWRA ALEWIFE
P.O. Number: 09313 Project Number: 09313
Report To: D. Niemeyer Phone: Fax:
Sampled by: D. Niemeyer Email report to these addresses: dniemeyer@geosphereenh.com
Quote No:

Relinquished By	Date	Time	Received By	Date	Time
[signature]	4/27/12	2:45	[signature]	4/27/12	14:45
[signature]		1550	[signature]	4/27/12	1550
[signature]	4/27/12		[signature]	4/27/12	1745

Turn Around Time

~~X~~	~~Normal~~	X	EMAIL Report
X	5 Business days.		
	Rush – Date Due: ___/___/___		

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes (No)

2009 MWRA Contract Pricing
Please Bill no later than 4/30/12

* MDL = 1 PPM required AF

AF

Temp. Upon Receipt 22 °C

Lab Use Only

	Sample Pick Up Only
	RIAL sampled; attach field hours
	Shipped on ice
Workorder No:	1207 - 8567

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SB=$NaHSO_4$, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, O=_____

ATTACHMENT 6

ENVIRONMENTAL HEALTH AND ENGINEERING ANALYTICAL LAB REPORTS

Environmental Health
& Engineering, Inc.
117 Fourth Avenue
Needham, MA
02494-2725
TEL 800-825-5343
781-247-4300
FAX 781-247-4305
www.eheinc.com

June 21, 2011

Mr. Russell P. Lagueux
President
EnviroSense, Inc.
1F Commons Drive, Suite 34
Londonderry, NH 03053

RE: Preliminary Risk Characterization, Massachusetts Water Resources Authority Alewife Pumping Station, 393 Alewife Brook Parkway, West Somerville, Massachusetts (EH&E 17548)

Dear Mr. Lagueux:

As requested by EnviroSense, Inc. (EnviroSense) on behalf of the Massachusetts Water Resource Authority (MWRA), Environmental Health & Engineering, Inc. (EH&E) completed sampling and analysis of air and surfaces at the MWRA Alewife Pumping Station (the Facility) located in West Somerville, Massachusetts. Based upon the results of testing, EH&E also completed a preliminary human health risk characterization to evaluate current risks for employees at the station. This report provides the results of testing and preliminary risk characterization.

INTRODUCTION

It is EH&E's understanding that polychlorinated biphenyls (PCBs) were detected in building materials at regulated concentrations at the pumping station. These materials include paint at various locations.

EH&E worked with representatives of MWRA and EnviroSense to develop the scope of work for this assessment. Specifically, EH&E conducted air and surface testing for total PCBs to provide a preliminary evaluation of potential current hazards to workers at the station. As such, EH&E applied exposure assumptions to evaluate current worker schedules and activities at the Facility. Exposure assumptions are discussed in more detail in subsequent sections of this report. This is not a retrospective analysis of prior exposures at the Facility.

DATA COLLECTION AND EVALUATION

Samples were collected at Alewife to determine the total concentration of PCBs in the air and on surfaces, if any. The following sections detail the air and surface sampling program conducted by EH&E in December of 2010.

AIR SAMPLING

On December 6, 2010, EH&E began collection of twenty-four hour time integrated air samples at a flow rate of approximately one liter per minute. Samples were shipped under chain of custody and analyzed for total PCBs using National Institute for Occupational Safety and Health Method 5503. Sample locations are indicated on Figure C.1 in Appendix C. Table 1 details air sample results for total PCBs in air. The laboratory report is included in Appendix B.

Table 1 Results of Polychlorinated Biphenyl Analysis of Air Samples, MWRA Alewife Brook Pumping Station, 393 Alewife Brook Parkway, West Somerville, Massachusetts, December 6 through December 7, 2010

Sample ID	Description	Aroclor 1254[1] ($\mu g/m^3$)
120656	Lower level, by stairway	0.094
120657	Operating room, west center	0.04
120658	Duplicate, 120657	<0.04
120659	Operating room, office	<0.04
120660	Outdoors, by screen room entry door	<0.03
120661	Screen room, middle	<0.03
120662	Boiler room, west	<0.05
120663	Generator room, north center	<0.04
120664	Field blank	ND

MWRA Massachusetts Water Resources Authority
$\mu g/m^3$ micrograms per cubic meter
ND none detected
< less than

[1] Aroclor 1016, 1221, 1232, 1242, 1248, 1260 and 1268 also tested.

PCB analysis performed by Galson Laboratories, East Syracuse, NY using National Institute for Occupational Safety and Health (NIOSH) Method 5503 by GC/ECD.

As indicated in Table 1, for the majority of the samples collected at the Facility PCBs were not detected above the laboratory quantification levels. However, the samples collected on the lower level by the stairway and one of the samples collected in the Operating Room (west) contained Aroclor 1254 at concentrations above the quantification levels.

SURFACE SAMPLING

On December 7, 2010, EH&E collected wipe samples from four locations at the Facility. Sample locations are indicated on Figure C.1 in Appendix C. Wipe samples were collected from interior surfaces including stair handrail, stair tread, floor and desk surfaces. The desk was selected for sampling based on information provided by MWRA personnel indicating that the desk is rarely, if ever, cleaned and has been there for many years. The wipe sample media was wiped across the sample area in orthagonol passes, horizontally, vertically, and diagonally to ensure complete coverage of the sample area. The sample area was measured using a 100 square centimeter template. Samples were delivered under chain of custody to Groundwater Analytical in Buzzards Bays, Massachusetts. The samples were analyzed using U.S. Environmental Protection Agency (EPA) Method 8082 for PCBs. Table 2 details the results from the wipe samples collected at the Facility on December 7, 2010. The laboratory report is included in Appendix B.

Table 2 Results of Polychlorinated Biphenyl Analysis of Wipe Samples, MWRA Alewife Brook Pumping Station, 393 Alewife Brook Parkway, West Somerville, Massachusetts, December 7, 2010

Sample ID	Description	Aroclor 1254[1] (µg/100cm^2)	Notes
120665	Stairway to lower level, handrail	BRL <1	–
120666	Replicate 12065	BRL <1	–
120667	Stairway to lower level, stair tread	12	1C(11)
120668	Screen room, floor	BRL <1	–
120669	Operating room, desk	BRL <1	–
120670	Field blank	BRL <1	–

MWRA Massachusetts Water Resources Authority
µg/100cm^2 micrograms per 100 square centimeters
BRL below recording limit

1C: Confirmation concentration reported from first column quantification.

[1] Aroclor 1016, 1221, 1232, 1242, 1248, and 1260 also tested. All results below reporting levels, unless noted.

PCB analysis performed by Groundwater Analytical, Inc., using U.S. Environmental Protection Agency (EPA) method 8082 (GC/ECD).

As indicated in Table 2, for the majority of the samples collected at the Facility PCBs were not detected at concentrations above the laboratory quantification level of one microgram per 100 square centimeters (µg/100cm^2). Aroclor 1254 was detected in one sample (120667) collected from the lower level stair way tread.

HUMAN HEALTH RISK CHARACTERIZATION

The results of EH&E's preliminary risk characterization are summarized in the following paragraphs. Exposure assumptions and toxicity values are provided in Appendix D.

Exposure Assessment

Under current site conditions, employees could be exposed to PCBs via inhalation of volatilized PCBs in indoor air and through incidental ingestion of and dermal contact with PCBs on contaminated surfaces. Exposure scenarios evaluated include a baseline scenario involving exposure to air and contaminated surfaces. Based upon communication with MWRA representatives, it was assumed that a current worker spent half of his or her work week at the Facility (250 days per year/4 hours per day). Cancer risk was evaluated for a 5 year exposure period, which reflects a conservative estimate of the timeline for abatement of PCBs in paint at the Facility.

Detailed exposure assumptions and equations are provided in Appendix D. These assumptions, with the exception of the overall duration of exposures, are generally consistent with assumptions used to support baseline human health risk characterization by EH&E at other MWRA facilities. This preliminary assessment does not include specialty task or individual employee exposure scenarios.

Exposure Point Concentrations

Two Exposure Point Concentrations (EPCs) for PCBs were used to represent the range of PCB concentrations that a worker could be exposed to at the Alewife Pumping Station. This included using both the average and maximum concentrations detected. Where PCBs were not detected, EH&E used a value of half the detection limit for the calculation of average exposure. Because these calculations are based upon a single round of data and therefore temporal variations cannot be evaluated, EH&E developed two EPCs to provide risk estimates for a greater range of observed concentrations. These values are summarized in Table 3.

Table 3 Exposure Point Concentrations, Massachusetts Water Resources Authority, Alewife Brook Pumping Station, 393 Alewife Brook Parkway, West Somerville, Massachusetts

Sample Type	Units	Maximum	Average
Wipe	$mg/100cm^2$	0.012	0.0028
Air	mg/m^3	0.000094	0.00003

$mg/100cm^2$ milligrams per 100 square centimeters
mg/m^3 milligrams per cubic meter

PCBs on contaminated surfaces were quantified in terms of milligrams of PCBs per 100 square centimeter ($mg/100cm^2$), and are referred to as a surface loading. PCBs in air were quantified in terms of milligram of PCBs per cubic meter of air (mg/m^3).

Toxicity Assessment

Cancer risks for total PCBs were quantified using the Cancer Slope Factor (CSF) and Inhalation Unit Risk (IUR) listed in the EPA Integrated Risk Information System (IRIS) database. For PCBs, IRIS lists CSFs for high, low, and lowest risk and persistence scenarios, based on exposure potential and presence of dioxin-like congeners. For this assessment, cancer risks were quantified using the CSF and IUR for the high risk and persistence scenario. The CSF for PCBs is based on increased incidence of liver tumors in female rats exposed to high concentrations of PCBs (as Aroclor mixtures) in the diet.[1]

Non-cancer hazards due to oral and dermal exposures are characterized by a reference dose (RfD), which is a dose, in milligrams per kilograms mg/kg-day, at which adverse biological effects are not expected to occur, including in susceptible populations (e.g., young children, elderly), for a specified duration. Similarly, for non-cancer hazards due to inhalation exposures, toxicity is characterized by a reference concentration (RfC), which is an air concentration, in mg/m^3, at which adverse biological effects are not expected to occur, including in susceptible subpopulations, for a specified duration.[2]

Toxicity values used for this assessment are provided in Appendix D.

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1 EPA. 1997. EPA 40 CFR Part 50. National Ambient Air Quality Standards for Particulate Matter; Final Rule. *Federal Register.* Washington, DC: U.S. Environmental Protection Agency. July 18, 1997.

2 Barnes DG and Dourson ML. 1988. Reference Dose (RfD): Description and Use in Health Risk Assessments. *Regulatory Toxicology and Pharmacology.* 8(4):471-86.

PRELIMINARY RISK CHARACTERIZATION

Cancer risks and non-cancer hazards for workers at the Facility were estimated according to EPA guidance, using the exposure and toxicity information described in previous sections. This assessment is considered preliminary because it only included a single round of results of site characterization and evaluated a limited number of exposure scenarios. Conservative assumptions were applied.

Cancer Risk

Following EPA guidance, cancer risks for PCBs are characterized as the incremental probability that an individual will develop cancer during his or her lifetime due to exposure to chemical contaminants under the specific exposure scenarios evaluated. The term "incremental" refers to the risk above the background cancer risk that is present for all individuals in the course of daily life. Cancer risks are expressed as a unitless probability (e.g., one in a 100,000, or 10^{-5}) that an individual will develop cancer over a lifetime.

Cancer risks for both oral and dermal exposures are calculated using the lifetime average daily dose (i.e., LADD) and CSF, as follows:[3]

$$Cancer\ Risk = LADD\left(\frac{mg}{kg-day}\right) \times CSF\left(\frac{mg}{kg-day}\right)^{-1}$$

Cancer risks for inhalation exposures are calculated using the lifetime average exposure concentration (i.e., LADE) and IUR, as follows:

$$Cancer\ Risk = LADE\left(\frac{\mu g}{m^3}\right) \times IUR\left(\frac{mg}{m^3}\right)^{-1}$$

Cancer risks are typically estimated for a hypothetical individual who may be exposed to chemicals in air, soil, or water at a contaminated site. If cancer risks exceed specified risk levels, then remedial actions may be taken to reduce exposure levels, either by establishing

[3] EPA. 1989. *Survey of Indoor Air Quality Diagnostic and Mitigation Firms.* Washington, DC: U.S. Environmental Protection Agency, Office of Air and Radiation.

land use restrictions, or through site cleanup. EPA considers that cancer risks ranging up to 1 x 10^{-4} (i.e., 0.0001 or 1 in 10,000) are acceptable.[4] Circumstances under which higher risks (i.e., closer to 1 x 10^{-4}) would be acceptable include presence of a single contaminant at the site, absence of other exposure pathways at the site and absence of potentially susceptible individuals (such as young children, elderly individuals, or individuals with pre-existing diseases). For hazardous waste sites, MADEP[5] considers that cancer risks of 1 x 10^{-5} (i.e., 0.00001 or 1 in 100,000) are acceptable and do not require implementation of land use restrictions or cleanup activities.[6] Although not directly applicable to this site, these levels provide general guidance on acceptable risk.

Non-cancer Risk

Non-cancer risks are estimated using a hazard quotient, which compares the estimated exposure (average daily dose [ADD]) to a reference exposure. For oral and dermal exposures, the hazard quotient is calculated as:

$$Hazard\ Quotient = \frac{ADD\left(\frac{mg}{kg-day}\right)}{RfD\left(\frac{mg}{kg-day}\right)}$$

For inhalation exposures, the hazard quotient is calculated by comparing the average daily exposure (ADE) to the RfC:

$$Hazard\ Quotient = \frac{ADE\left(\frac{\mu g}{m^3}\right)\times 0.001 mg/\mu g}{RfC\left(\frac{mg}{m^3}\right)}$$

---

4 EPA. 1990. *Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS); Capillary Column Technique.* Washington, D.C.: U.S. Environmental Protection Agency.

5 MADEP, 1995. *Guidance for Disposal Site Risk Characterization—In Support of the Massachusetts Contingency Plan. Interim Final Policy #WSC/ORS-95-141*. Boston, MA: Massachusetts Department of Environmental Protection.

6 MADEP 310 CMR 40.0000: Massachusetts Contingency Plan, Subpart I: Risk Characterization. *Code of Massachusetts Regulations.* Title 310 Section 40, Subpart I. Boston, MA: Massachusetts Department of Environmental Protection.

For each exposure scenario hazard quotients each exposure pathway were summed to calculate a scenario-specific hazard index, which were then summed to calculate a total hazard index. If the total hazard index is less than one, adverse health effects are not expected, and there is no need for further evaluation. If the total hazard index is greater than one, there may be concern for potential non-cancer health effects, and further evaluation of exposures relative to non-cancer toxicity criteria is warranted, to determine the likelihood that adverse health effects may occur. Massachusetts Department of Environmental Protection sets the limit for short-term (typically less than 5 years) Imminent Hazard non-cancer risk at 10. Factors to consider for further evaluation include the nature and severity of the adverse effect on which the RfD or RfC is based, whether effects are readily reversible, and whether sensitive individuals may be exposed to the chemicals under evaluation.

SUMMARY OF CANCER RISKS AND NON-CANCER HAZARDS

Cancer risks and non-cancer hazards for the exposure scenarios evaluated at the Facility are presented in Table 4. Risk calculations are included in Appendix D.

Table 4 Risk Summary, Massachusetts Water Resources Authority Alewife Brook Pumping Station Employees, 393 Alewife Brook Parkway, West Somerville, Massachusetts

EPC Used	HI	ELCR
Average	0.6	1.8 E-06
Maximum	2.4	7.0 E-06

EPC exposure point concentration
HI hazard index
ELCR excess lifetime cancer risk

As illustrated in the risk summary tables in Appendix D and in Table 4, short-term risks posed to workers at the Facility are generally within the range of acceptable values developed by regulatory agencies. In general, dermal and incidental ingestion exposures contribute the most to total risk at the Facility. Estimated cancer risks are consistently below 1 E-5. Using the average values for the EPCs, non-cancer risk is below a Hazard Index of one, and with the maximum values, it is below 10. The maximum values provide a conservative estimate of risk.

If you have any questions regarding this evaluation, please feel free to contact me at 1-781-247-4300.

Sincerely,

Cynthia D. Campisano, M.S., P.G., C.H.M.M.
Senior Scientist/Project Manager

Appendix A Limitations
Appendix B Laboratory Reports
Appendix C Figure
Appendix D Risk Characterization Summary

APPENDIX A
LIMITATIONS

1. Environmental Health & Engineering, Inc.'s (EH&E) indoor environmental quality assessment described in the attached report number 17548, *Preliminary Risk Characterization, Massachusetts Water Resources Authority Alewife Pumping Station, 393 Alewife Brook Parkway, West Somerville, Massachusetts* (hereafter "the Report"), was performed in accordance with generally accepted practices employed by other consultants undertaking similar studies at the same time and in the same geographical area; and EH&E observed that degree of care and skill generally exercised by such other consultants under similar circumstances and conditions. The observations described in the Report were made under the conditions stated therein. The conclusions presented in the Report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services.

2. Observations were made of the site as indicated within the Report. Where access to portions of the site was unavailable or limited, EH&E renders no opinion as to the condition of that portion of the site.

3. The observations and recommendations contained in the Report are based on limited environmental sampling and visual observation and were arrived at in accordance with generally accepted standards of industrial hygiene practice. The sampling and observations conducted at the site were limited in scope and, therefore, cannot be considered representative of areas not sampled or observed.

4. When an outside laboratory conducted sample analyses, EH&E relied upon the data provided and did not conduct an independent evaluation of the reliability of these data.

5. The purpose of the Report was to assess the characteristics of the subject site as stated within the Report. No specific attempt was made to verify compliance by any party with all federal, state, or local laws and regulations.

APPENDIX B
LABORATORY REPORTS

GALSON
LABORATORIES

Data Coordinator
Environmental Health & Engineering
117 Fourth Avenue
Needham Heights, MA 02494

December 29, 2010

DOH ELAP# 11626 Account# 12151 Login# L230032

Dear Data Coordinator:

Enclosed are the revised analytical results for the samples received by our laboratory on December 08, 2010. Per your request, all sample volumes have been corrected. Please note that this revision replaces the previous version of this report. All test results meet the quality control requirements of AIHA and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory.

Please contact Amanda Frateschi at (877) 482-5227, if you would like any additional information regarding this report.

Thank you for using Galson Laboratories.

Sincerely,

Galson Laboratories

Mary G Unangst

Mary G. Unangst
Laboratory Director

Enclosure(s)

GALSON LABORATORIES

LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.galsonlabs.com

Client : Environmental Health & Engineering
Site : NS
Project No. : 17548

Date Sampled : NS
Date Received : 08-DEC-10
Date Analyzed : 10-DEC-10 - 14-DEC-10
Report ID : 675267

Account No.: 12151
Login No. : L230032

Polychlorinated Biphenyls

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3
120656	L230032-1	2008	0.17	<0.05	0.19	0.000094
120657	L230032-2	1727	0.07	<0.05	0.08	0.00004
120658	L230032-3	1445	<0.05	<0.05	<0.06	<0.00004
120659	L230032-4	1587	<0.05	<0.05	<0.06	<0.00004
120660	L230032-5	1876	<0.05	<0.05	<0.06	<0.00003
120661	L230032-6	1734	<0.05	<0.05	<0.06	<0.00003
120662	L230032-7	1158	<0.05	<0.05	<0.06	<0.00005
120663	L230032-8	1306	<0.05	<0.05	<0.06	<0.00004
120664	L230032-9	NA	<0.05	<0.05	<0.06	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 0.05 ug
Analytical Method : mod. NIOSH 5503; GC-ECD
OSHA PEL (TWA) : NA
Collection Media : Filter & Tube

Submitted by: MLN
Approved by : kld/nkp
Date : 29-DEC-10 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

GALSON LABORATORIES

LABORATORY FOOTNOTE REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.galsonlabs.com

Client Name : Environmental Health & Engineering
Site :
Project No. : 17548

Date Sampled :
Date Received: 08-DEC-10
Date Analyzed: 11-DEC-10 - 14-DEC-10

Account No.: 12151
Login No. : L230032

Unless otherwise noted below, all quality control results associated with the samples were within established control limits.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

L230032 (Report ID: 675267):
Total ug corrected for a desorption efficiency of 89%.
Samples were analyzed for the following 8 Aroclors: 1016, 1221, 1232, 1242, 1248, 1254, 1260 and 1268.
SOPs: GC-SOP-18(5)

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: 12/7/10

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

96

TO: Galson Labs

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17548

The cost of this analysis will be covered by EH&E Purchase Order # 1001568

For EH & E Data Coordinator - URGENT DATA ☐ 226-391 fitte

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
120656	Air	NIOSH 5503 (for PCBs)	2,008 Liters
120657			1,727
120658			1,445
120659			1,587
120660			1,876
120661			1,734
120662			1,158
120663			1,306
120664			∅

Special instructions:

☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES** ☒ Electronic transfer - datacoordinator@eheinc.com

☒ Additional report recipient sletourneau@eheinc.com

Each signatory please return one copy of this form to the above address

Relinquished by: [signature] of Environmental Health & Engineering, Inc. Date: 12/7/10

Received by: [signature] of (company name) Galson Date: 12/8/10 1109

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 1 of 1

WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY

Groundwater Analytical, Inc.
P.O. Box 1200
228 Main Street
Buzzards Bay, MA 02532

Telephone (508) 759-4441
FAX (508) 759-4475
www.groundwateranalytical.com

December 22, 2010

Mr. Scot Letourneau
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

LABORATORY REPORT

Project: **17548**
Lab ID: **138485**
Received: **12-08-10**

Dear Scot:

Enclosed are the analytical results for the above referenced project. The project was processed for Standard turnaround.

This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. The analytical results relate only to the samples received. This report may only be used or reproduced in its entirety.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,

Eric H. Jensen
Operations Manager

EHJ/elm
Enclosures

GROUNDWATER ANALYTICAL

Sample Receipt Report

Project:	**17548**	Delivery:	**GWA Courier**	Temperature:	**2.0ºC**
Client:	**Environmental Health & Engineering, Inc.**	Airbill:	**n/a**	Chain of Custody:	**Present**
Lab ID:	**138485**	Lab Receipt:	**12-08-10**	Custody Seal(s):	**n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
138485-1	120665		Wipe	12/7/10 13:00	EPA 8082 PCBs				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1308921	60 mL Glass	Proline	BX37580	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
138485-2	120666		Wipe	12/7/10 13:00	EPA 8082 PCBs				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1308919	60 mL Glass	Proline	BX37580	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
138485-3	120667		Wipe	12/7/10 13:00	EPA 8082 PCBs				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1308920	60 mL Glass	Proline	BX37580	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
138485-4	120668		Wipe	12/7/10 13:00	EPA 8082 PCBs				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1308927	60 mL Glass	Proline	BX37580	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
138485-5	120669		Wipe	12/7/10 13:00	EPA 8082 PCBs				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1308926	60 mL Glass	Proline	BX37580	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
138485-6	120670		Wipe	12/7/10 13:00	EPA 8082 PCBs				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1308929	60 mL Glass	Proline	BX37580	None	n/a	n/a	n/a		

GROUNDWATER ANALYTICAL

EPA Method 8082
Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID:	**120665**	Matrix:	**Wipe**
Project:	**17548**	Container:	**60 mL Glass**
Client:	**Environmental Health & Engineering, Inc.**	Preservation:	**Cool**
Laboratory ID:	**138485-01**	QC Batch ID:	**PB-3650-X**
Sampled:	**12-07-10 13:00**	Instrument ID:	**GC-13 Agilent 6890**
Received:	**12-08-10 18:00**	Sample Weight:	**n/a**
Extracted:	**12-10-10 16:30**	Final Volume:	**10 mL**
Cleaned Up:	**12-14-10 16:30**	Percent Solids:	**n/a**
Analyzed:	**12-14-10 23:16**	Dilution Factor:	**1**
Analyst:	**CRL**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Wipe	1.0
11104-28-2	Aroclor 1221	BRL		ug/Wipe	1.0
11141-16-5	Aroclor 1232	BRL		ug/Wipe	1.0
53469-21-9	Aroclor 1242	BRL		ug/Wipe	1.0
12672-29-6	Aroclor 1248	BRL		ug/Wipe	1.0
11097-69-1	Aroclor 1254	BRL		ug/Wipe	1.0
11096-82-5	Aroclor 1260	BRL		ug/Wipe	1.0
37324-23-5	Aroclor 1262 †	BRL		ug/Wipe	1.0
11100-14-4	Aroclor 1268 †	BRL		ug/Wipe	1.0

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro-*m*-xylene	0.20	0.18	**88** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.27	**136** %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.18	**90** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.24	**118** %	30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations:

BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

GROUNDWATER ANALYTICAL

EPA Method 8082
Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID:	**120666**	Matrix:	**Wipe**
Project:	**17548**	Container:	**60 mL Glass**
Client:	**Environmental Health & Engineering, Inc.**	Preservation:	**Cool**
Laboratory ID:	**138485-02**	QC Batch ID:	**PB-3650-X**
Sampled:	**12-07-10 13:00**	Instrument ID:	**GC-13 Agilent 6890**
Received:	**12-08-10 18:00**	Sample Weight:	**n/a**
Extracted:	**12-10-10 16:30**	Final Volume:	**10 mL**
Cleaned Up:	**12-14-10 16:30**	Percent Solids:	**n/a**
Analyzed:	**12-14-10 23:40**	Dilution Factor:	**1**
Analyst:	**CRL**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Wipe	1.0
11104-28-2	Aroclor 1221	BRL		ug/Wipe	1.0
11141-16-5	Aroclor 1232	BRL		ug/Wipe	1.0
53469-21-9	Aroclor 1242	BRL		ug/Wipe	1.0
12672-29-6	Aroclor 1248	BRL		ug/Wipe	1.0
11097-69-1	Aroclor 1254	BRL		ug/Wipe	1.0
11096-82-5	Aroclor 1260	BRL		ug/Wipe	1.0
37324-23-5	Aroclor 1262 †	BRL		ug/Wipe	1.0
11100-14-4	Aroclor 1268 †	BRL		ug/Wipe	1.0

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro-*m*-xylene	0.20	0.19	**93** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.29	**145** %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.19	**94** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.25	**124** %	30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations:

BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

GROUNDWATER ANALYTICAL

EPA Method 8082
Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID:	**120667**	Matrix:	**Wipe**
Project:	**17548**	Container:	**60 mL Glass**
Client:	**Environmental Health & Engineering, Inc.**	Preservation:	**Cool**
Laboratory ID:	**138485-03**	QC Batch ID:	**PB-3650-X**
Sampled:	**12-07-10 13:00**	Instrument ID:	**GC-13 Agilent 6890**
Received:	**12-08-10 18:00**	Sample Weight:	**n/a**
Extracted:	**12-10-10 16:30**	Final Volume:	**10 mL**
Cleaned Up:	**12-14-10 16:30**	Percent Solids:	**n/a**
Analyzed:	**12-15-10 00:04**	Dilution Factor:	**1**
Analyst:	**CRL**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Wipe	1.0
11104-28-2	Aroclor 1221	BRL		ug/Wipe	1.0
11141-16-5	Aroclor 1232	BRL		ug/Wipe	1.0
53469-21-9	Aroclor 1242	BRL		ug/Wipe	1.0
12672-29-6	Aroclor 1248	BRL		ug/Wipe	1.0
11097-69-1	Aroclor 1254	**12**	1C (11)*	ug/Wipe	1.0
11096-82-5	Aroclor 1260	BRL		ug/Wipe	1.0
37324-23-5	Aroclor 1262 †	BRL		ug/Wipe	1.0
11100-14-4	Aroclor 1268 †	BRL		ug/Wipe	1.0

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro-*m*-xylene	0.20	0.17	**87** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.27	**133** %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.17	**85** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.22	**108** %	30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations:

BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

* Confirmatory column quantification.

1C Concentration reported from first column.

GROUNDWATER ANALYTICAL

EPA Method 8082
Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID:	**120668**	Matrix:	**Wipe**
Project:	**17548**	Container:	**60 mL Glass**
Client:	**Environmental Health & Engineering, Inc.**	Preservation:	**Cool**
Laboratory ID:	**138485-04**	QC Batch ID:	**PB-3650-X**
Sampled:	**12-07-10 13:00**	Instrument ID:	**GC-13 Agilent 6890**
Received:	**12-08-10 18:00**	Sample Weight:	**n/a**
Extracted:	**12-10-10 16:30**	Final Volume:	**10 mL**
Cleaned Up:	**12-14-10 16:30**	Percent Solids:	**n/a**
Analyzed:	**12-15-10 00:27**	Dilution Factor:	**1**
Analyst:	**CRL**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Wipe	1.0
11104-28-2	Aroclor 1221	BRL		ug/Wipe	1.0
11141-16-5	Aroclor 1232	BRL		ug/Wipe	1.0
53469-21-9	Aroclor 1242	BRL		ug/Wipe	1.0
12672-29-6	Aroclor 1248	BRL		ug/Wipe	1.0
11097-69-1	Aroclor 1254	BRL		ug/Wipe	1.0
11096-82-5	Aroclor 1260	BRL		ug/Wipe	1.0
37324-23-5	Aroclor 1262 †	BRL		ug/Wipe	1.0
11100-14-4	Aroclor 1268 †	BRL		ug/Wipe	1.0

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro-*m*-xylene	0.20	0.20	**102** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.28	**141** %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.19	**94** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.26	**130** %	30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations:

BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

GROUNDWATER ANALYTICAL

EPA Method 8082
Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID:	**120669**	Matrix:	**Wipe**
Project:	**17548**	Container:	**60 mL Glass**
Client:	**Environmental Health & Engineering, Inc.**	Preservation:	**Cool**
Laboratory ID:	**138485-05**	QC Batch ID:	**PB-3650-X**
Sampled:	**12-07-10 13:00**	Instrument ID:	**GC-13 Agilent 6890**
Received:	**12-08-10 18:00**	Sample Weight:	**n/a**
Extracted:	**12-10-10 16:30**	Final Volume:	**10 mL**
Cleaned Up:	**12-14-10 16:30**	Percent Solids:	**n/a**
Analyzed:	**12-15-10 00:51**	Dilution Factor:	**1**
Analyst:	**CRL**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Wipe	1.0
11104-28-2	Aroclor 1221	BRL		ug/Wipe	1.0
11141-16-5	Aroclor 1232	BRL		ug/Wipe	1.0
53469-21-9	Aroclor 1242	BRL		ug/Wipe	1.0
12672-29-6	Aroclor 1248	BRL		ug/Wipe	1.0
11097-69-1	Aroclor 1254	BRL		ug/Wipe	1.0
11096-82-5	Aroclor 1260	BRL		ug/Wipe	1.0
37324-23-5	Aroclor 1262 †	BRL		ug/Wipe	1.0
11100-14-4	Aroclor 1268 †	BRL		ug/Wipe	1.0

QC Surrogate Compound		Spiked	Measured	Recovery		QC Limits
First Column	Tetrachloro-*m*-xylene	0.20	0.16	**81** %		30 - 150 %
	Decachlorobiphenyl	0.20	0.31	**155** %	m	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.16	**81** %		30 - 150 %
	Decachlorobiphenyl	0.20	0.28	**138** %		30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations:

BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

m Surrogate recovery outside recommended limits due to sample matrix interference.

GROUNDWATER ANALYTICAL

EPA Method 8082
Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID:	**120670**	Matrix:	**Wipe**
Project:	**17548**	Container:	**60 mL Glass**
Client:	**Environmental Health & Engineering, Inc.**	Preservation:	**Cool**
Laboratory ID:	**138485-06**	QC Batch ID:	**PB-3650-X**
Sampled:	**12-07-10 13:00**	Instrument ID:	**GC-13 Agilent 6890**
Received:	**12-08-10 18:00**	Sample Weight:	**n/a**
Extracted:	**12-10-10 16:30**	Final Volume:	**10 mL**
Cleaned Up:	**12-14-10 16:30**	Percent Solids:	**n/a**
Analyzed:	**12-15-10 01:15**	Dilution Factor:	**1**
Analyst:	**CRL**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Wipe	1.0
11104-28-2	Aroclor 1221	BRL		ug/Wipe	1.0
11141-16-5	Aroclor 1232	BRL		ug/Wipe	1.0
53469-21-9	Aroclor 1242	BRL		ug/Wipe	1.0
12672-29-6	Aroclor 1248	BRL		ug/Wipe	1.0
11097-69-1	Aroclor 1254	BRL		ug/Wipe	1.0
11096-82-5	Aroclor 1260	BRL		ug/Wipe	1.0
37324-23-5	Aroclor 1262 †	BRL		ug/Wipe	1.0
11100-14-4	Aroclor 1268 †	BRL		ug/Wipe	1.0

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro-*m*-xylene	0.20	0.15	**77** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.26	**132** %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.15	**75** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.24	**122** %	30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations:

BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

GROUNDWATER ANALYTICAL

Project Narrative

Project:	**17548**	Lab ID:	**138485**
Client:	**Environmental Health & Engineering, Inc.**	Received:	**12-08-10 18:00**

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1 . No documentation discrepancies, changes, or amendments were noted.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1 . EPA 8082 Non-conformance: Sample 138485-5. Sample had surrogate Decachlorobiphenyl above recommended recovery limits due to sample matrix interference. The surrogate was within criteria on the secondary column.

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: 12/8/10

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: GWA

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17548

The cost of this analysis will be covered by EH&E Purchase Order #

For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
120665	Wipe	EPA 8082 for PCBs	100cm2 wipe area
120666	↓	Soxhlet extraction	↓
120667	↓	↓	↓
120668	↓	↓	↓
120669	↓	↓	↓
120670	↓	↓	↓
		Samples collected: 12/7/10	
		@ 1300	

Special instructions:

☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____

☐ Fax results 781-247-4305

2.0°C ☐ **RETURN SAMPLES** ☒ Electronic transfer - datacoordinator@eheinc.com

☒ Additional report recipient Sletourneau@eheinc.com

Each signatory please return one copy of this form to the above address

Relinquished by: [signature] of Environmental Health & Engineering, Inc. Date: 12/8/10

Received by: Alan Maddigan of (company name) Groundwater a. Date: 12/8/10

Relinquished by: Alan Maddigan of (company name) Groundwater a. Date: 12/8/10 12W

Received by: [signature] of (company name) _____ Date: _____

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 1 of 1

WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans,* US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste,* US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	**EPA 8082**	Instrument ID:	**GC-13 Agilent 6890**	Instrument ID:	**GC-13 Agilent 6890**
QC Batch ID:	**PB-3650-X**	Extracted:	**12-10-10 16:30**	Extracted:	**12-10-10 16:30**
Matrix:	**Wipe**	Cleaned Up:	**12-14-10 16:30**	Cleaned Up:	**12-14-10 16:30**
Units:	**ug/Wipe**	Analyzed:	**12-14-10 22:29**	Analyzed:	**12-14-10 22:53**
		Analyst:	**CRL**	Analyst:	**CRL**

CAS Number	Analyte	LCS					LCS Duplicate							QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD			
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	5.0	4.9	4.6	**98%**	**92%**	5.0	4.7	4.3	**94%**	**87%**	**3 %**	**6 %**	40 - 140%	30 %
11096-82-5	Aroclor 1260	5.0	5.1	4.5	**102%**	**89%**	5.0	5.2	4.4	**104%**	**88%**	**1 %**	**1 %**	40 - 140%	30 %

QC Surrogate Compound	Surrogate Recovery											QC Limits
Tetrachloro-*m* -xylene	0.20	0.17	0.15	**87%**	**77%**	0.20	0.13	0.12	**67%**	**60%**		30 - 150 %
Decachlorobiphenyl	0.20	0.20	0.17	**99%**	**85%**	0.20	0.20	0.16	**101%**	**79%**		30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	**EPA Method 8082**	Instrument ID:	**GC-13 Agilent 6890**
QC Batch ID:	**PB-3650-X**	Extracted:	**12-10-10 16:30**
Matrix:	**Wipe**	Cleaned Up:	**12-14-10 16:30**
		Analyzed:	**12-14-10 22:05**
		Analyst:	**CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Wipe	1.0
11104-28-2	Aroclor 1221	BRL		ug/Wipe	1.0
11141-16-5	Aroclor 1232	BRL		ug/Wipe	1.0
53469-21-9	Aroclor 1242	BRL		ug/Wipe	1.0
12672-29-6	Aroclor 1248	BRL		ug/Wipe	1.0
11097-69-1	Aroclor 1254	BRL		ug/Wipe	1.0
11096-82-5	Aroclor 1260	BRL		ug/Wipe	1.0
37324-23-5	Aroclor 1262 †	BRL		ug/Wipe	1.0
11100-14-4	Aroclor 1268 †	BRL		ug/Wipe	1.0

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro-*m*-xylene	0.20	0.16	**81** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.20	**99** %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.15	**74** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.17	**84** %	30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

GROUNDWATER ANALYTICAL

Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states.
Copies of our current certificates may be obtained from our website:

http://www.groundwateranalytical.com/qualifications.htm

CONNECTICUT

Department of Health Services, PH-0586 — Potable Water, Wastewater, Solid Waste and Soil
http://www.ct.gov/dph/lib/dph/environmental health/environmental laboratories/pdf/Out State.pdf

MASSACHUSETTS

Department of Environmental Protection, M-MA-103 — Potable Water and Non-Potable Water
http://public.dep.state.ma.us/labcert/labcert.aspx

Department of Labor,
Division of Occupational Safety, AA000195 — Asbestos Analytical Services, Class A
http://www.mass.gov/dos/forms/la-rpt list aa.pdf

NEW HAMPSHIRE

Department of Environmental Services, 202708 — Potable Water, Non-Potable Water, Solid and Chemical Materials
http://www4.egov.nh.gov/DES/NHELAP

NEW YORK

Department of Health, 11754 — Potable Water, Non-Potable Water, Solid and Hazardous Waste
http://www.wadsworth.org/labcert/elap/comm.html

RHODE ISLAND

Department of Health,
Division of Laboratories, LAO00054 — Potable and Non-Potable Water Microbiology, Organic and Inorganic Chemistry
http://www.health.ri.gov/labs/outofstatelabs.pdf

U.S. DEPARTMENT OF AGRICULTURE

USDA, Soil Permit, S-53921 — Foreign soil import permit

VERMONT

Department of Health, VT-87643 — Potable Water
http://healthvermont.gov/enviro/ph_lab/water_test.aspx#cert

GROUNDWATER ANALYTICAL

Certifications and Approvals

MASSACHUSETTS	Department of Environmental Protection, M-MA-103

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

Potable Water (Drinking Water)

Analyte	Method
1,2-Dibromo-3-Chloropropane	EPA 504.1
1,2-Dibromoethane	EPA 504.1
Alkalinity, Total	SM 2320-B
Antimony	EPA 200.8
Arsenic	EPA 200.8
Barium	EPA 200.7
Barium	EPA 200.8
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chlorine, Residual Free	SM 4500-CL-G
Chromium	EPA 200.7
Copper	EPA 200.7
Copper	EPA 200.8
Cyanide, Total	Lachat 10-204-00-1-A
E. Coli (Treatment and Distribution)	Enz. Sub. SM 9223
E. Coli (Treatment and Distribution)	NA-MUG SM 9222-G
Fecal Coliform (Source Water)	MF SM 9222-D
Fluoride	EPA 300.0
Fluoride	SM 4500-F-C
Haloacetic Acids	EPA 552.2
Heterotrophic Plate Count	SM 9215-B
Lead	EPA 200.8
Mercury	EPA 245.1
Nickel	EPA 200.7
Nickel	EPA 200.8
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Nitrite-N	EPA 300.0
Nitrite-N	Lachat 10-107-04-1-C
pH	SM 4500-H-B
Selenium	EPA 200.8
Silver	EPA 200.7
Silver	EPA 200.8
Sodium	EPA 200.7
Sulfate	EPA 300.0
Thallium	EPA 200.8
Total Coliform (Treatment and Distribution)	Enz. Sub. SM 9223
Total Coliform (Treatment and Distribution)	MF SM 9222-B
Total Dissolved Solids	SM 2540-C
Trihalomethanes	EPA 524.2
Turbidity	SM 2130-B
Volatile Organic Compounds	EPA 524.2

Non-Potable Water (Wastewater)

Analyte	Method
Aldrin	EPA 608
Alkalinity, Total	SM 2320-B
Alpha-BHC	EPA 608
Aluminum	EPA 200.7

Non-Potable Water (Wastewater)

Analyte	Method
Aluminum	EPA 200.8
Ammonia-N	Lachat 10-107-06-1-B
Antimony	EPA 200.7
Antimony	EPA 200.8
Arsenic	EPA 200.7
Arsenic	EPA 200.8
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Beta-BHC	EPA 608
Biochemical Oxygen Demand	SM 5210-B
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chemical Oxygen Demand	SM 5220-D
Chlordane	EPA 608
Chloride	EPA 300.0
Chlorine, Total Residual	SM 4500-CL-G
Chromium	EPA 200.7
Chromium	EPA 200.8
Cobalt	EPA 200.7
Cobalt	EPA 200.8
Copper	EPA 200.7
Copper	EPA 200.8
Cyanide, Total	Lachat 10-204-00-1-A
DDD	EPA 608
DDE	EPA 608
DDT	EPA 608
Delta-BHC	EPA 608
Dieldrin	EPA 608
Endosulfan I	EPA 608
Endosulfan II	EPA 608
Endosulfan Sulfate	EPA 608
Endrin	EPA 608
Endrin Aldehyde	EPA 608
Gamma-BHC	EPA 608
Hardness (CaCO3), Total	EPA 200.7
Hardness (CaCO3), Total	SM 2340-B
Heptachlor	EPA 608
Heptachlor Epoxide	EPA 608
Iron	EPA 200.7
Kjeldahl-N	Lachat 10-107-06-02-D
Lead	EPA 200.7
Magnesium	EPA 200.7
Manganese	EPA 200.7
Manganese	EPA 200.8
Mercury	EPA 245.1
Molybdenum	EPA 200.7
Molybdenum	EPA 200.8
Nickel	EPA 200.7
Nickel	EPA 200.8
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Non-Filterable Residue	SM 2540-D
Oil and Grease	EPA 1664

GROUNDWATER ANALYTICAL

Certifications and Approvals

MASSACHUSETTS	Department of Environmental Protection, M-MA-103

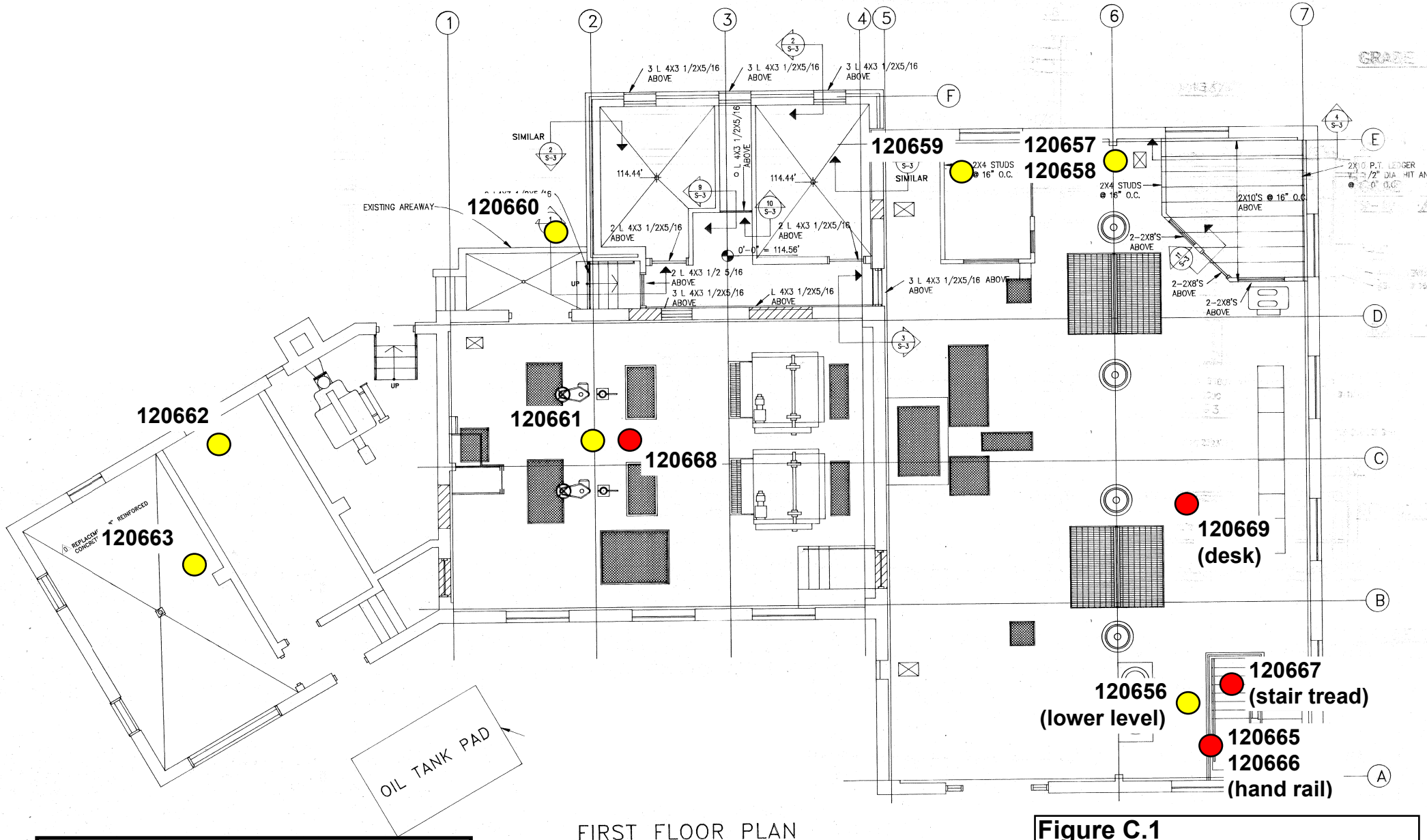
Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

Non-Potable Water (Wastewater)

Analyte	Method
Orthophosphate	Lachat 10-115-01-1-A
pH	SM 4500-H-B
Phenolics, Total	EPA 420.4
Phenolics, Total	Lachat 10-210-00-1-B
Phosphorus, Total	Lachat 10-115-01-1-C
Phosphorus, Total	SM 4500-P-B,E
Polychlorinated Biphenyls (Oil)	EPA 600/4-81-045
Polychlorinated Biphenyls (Water)	EPA 608
Potassium	EPA 200.7
Selenium	EPA 200.7
Selenium	EPA 200.8
Silver	EPA 200.7
Sodium	EPA 200.7
Specific Conductivity	SM 2510-B
Strontium	EPA 200.7
Sulfate	EPA 300.0
SVOC-Acid Extractables	EPA 625
SVOC-Base/Neutral Extractables	EPA 625
Thallium	EPA 200.7
Thallium	EPA 200.8
Titanium	EPA 200.7
Total Dissolved Solids	SM 2540-C
Total Organic Carbon	SM 5310-B
Toxaphene	EPA 608
Vanadium	EPA 200.7
Vanadium	EPA 200.8
Volatile Aromatics	EPA 602
Volatile Aromatics	EPA 624
Volatile Halocarbons	EPA 624
Zinc	EPA 200.7
Zinc	EPA 200.8

APPENDIX C

FIGURE



LEGEND

- Air Sample Location w/Sample ID
- Wipe Sample Location w/ Sample ID

Figure C.1
Air & Wipe Sample Locations

MWRA Alewife Brook Pumping Station
392 Alewife Brook Parkway
West Somerville, MA 02144

APPENDIX D

RISK CHARACTERIZATION SUMMARY

Risk Calculations
Alewife Pumping Station

Exposure Assumptions - Indoor Air

Exposure Assumptions:

Exposure Time - ET (hours/day):	4	Professional Judgement
Exposure Frequency - EF (days/year):	250	Assumes exposure 5 days/week, 50 weeks/year
Exposure Duration - ED_{cancer} (years):	5	Professional Judgement
Averaging Time, Noncancer - AT (hours)	43800	Exposure Duration * 365 days/year * 24 hours/day
Averaging Time, Cancer - AT (hours)	613200	70 years * 365 days/year * 24 hours/day

Exposure (mg/m^3): AVE

Concentration (mg/m^3)*ET*EF/(AT)

Exposure Assumptions - Surfaces

Exposure Assumptions:		
Exposure Time, soft surfaces - ET_{soft} (hours/day)	0	Professional Judgement
Exposure Time, hard surfaces - ET_{hard} (hours/day)	0.5	Professional Judgement re: amount of time contacting contaminated surfaces
Fraction Transferred from Surface to Hand, soft surfaces - $FTSS_{soft\text{-}ing}$ (unitless)	0.1	Used for WTC benchmarks, based on Rodes et al., 2001 study re: surface-to-hand transfer of fluorescein-tagged Arizona Test Dust (particle size < 80 µm) from medium pile carpeting (n = 1)
Fraction Transferred from Surface to Hand, hard surfaces - $FTSS_{hard\text{-}ing}$ (unitless)	0.5	Used for WTC benchmarks, based on Rodes et al., 2001 study re: surface-to-hand transfer of fluorescein-tagged Arizona Test Dust (particle size < 80 µm) from a vinyl surface (n = 1)
Surface Area (for hand-mouth contact) - SA_{ing} (cm^2/event)	45	Used for WTC benchmarks, assumes 3 fingers = 5% of the area of both hands (900 cm^2)
Frequency of hand to mouth events - FQ (events/hr)	1	Value assumed for WTC benchmarks
Saliva Extraction Factor - SE (unitless)	0.78	Mean value used in U.S. EPA SHEDS-Wood probabilistic model for CCA-treated playsets and decks (EPA, 2005) is 0.78 (using a triangular distribution) based on study by Cammann et al. (1995), Lewis (2003 – personal communication)
Bioavailability - B	1	
Fraction Transferred from Surface to Skin, soft surfaces - $FTSS_{soft\text{-}derm}$ (unitless)	0.1	Used for WTC benchmarks, based on Rodes et al., 2001 study re: surface-to-hand transfer of fluorescein-tagged Arizona Test Dust (particle size < 80 µm) from medium pile carpeting (n = 1)
Fraction Transferred from Surface to Skin, hard surfaces - $FTSS_{hard\text{-}derm}$ (unitless)	0.5	Used for WTC benchmarks, based on Rodes et al., 2001 study re: surface-to-hand transfer of fluorescein-tagged Arizona Test Dust (particle size < 80 µm) from a vinyl surface (n = 1)
Surface - Skin Contact Rate - TC (cm^2/hour)	752	Assumes exposure to palmar surface of hands Based on particle adherence factor for tae kwon do activity
Body Weight - BW (kg)	70	
Exposure Frequency - EF (days/year)	250	Assumes exposure 5 days/week, 50 weeks/year
Exposure Duration - ED (years)	5	Professional Judgement
Averaging Time, Noncancer - AT (days)	1825	Exposure Duration * 365 days/year
Averaging Time, Cancer - AT (days)	25550	70 years * 365 days/year

Exposure - Ingestion:

Loading (mg/cm^2)*{[[(ET_{hard}*$FTSS_{hard}$)+(ET_{soft}*$FTSS_{soft}$)]*[SA*FQ*SE]]*[EF*ED/BW*AT]}

Exposure - Dermal:

Loading (mg/cm^2)*{[[(ET_{hard}*$FTSS_{hard}$)+(ET_{soft}*$FTSS_{soft}$)]*[TC_i]*[EF*ED/BW*AT]}

Risk Summary
Average Value EPCs
Alewife Pumping Station

EPC = AVE				TOTAL RISK
Non-Cancer - Hazard Quotient				
	PCBs			
	Ingestion	**Dermal**	**Inhalation**	
Baseline	0.13	0.44	0.05	0.62
Cancer - Cancer Risk				
	PCBs			
	Ingestion	**Dermal**	**Inhalation**	
Baseline	3.7E-07	1.3E-06	1.4E-07	1.8E-06

HQ (Ingestion/GI) = Ingestion/GI exposure (mg/kg-day)/RfD_{oral}
HQ (Dermal) = Dermal exposure (mg/kg-day)*Dermal Absorption/RfD_{oral}
HQ (Inhalation) = Inhalation exposure (mg/m^3)/RfD_{inh}

CSF (Ingestion/GI) = Ingestion/GI exposure (mg/kg-day)*CSF_{oral}
CSF (Dermal) = Dermal exposure (mg/kg-day)*Dermal Absorption*CSF_{oral}
CSF (Inhalation) = Inhalation exposure (mg/m^3)*IUR

Risk Summary
Maximum Value EPCs
Alewife Pumping Station

EPC = MAX				TOTAL RISK
Non-Cancer - Hazard Quotient				
	PCBs			
	Ingestion	**Dermal**	**Inhalation**	
Baseline	0.52	1.77	0.15	2.4
Cancer - Cancer Risk				
	PCBs			
	Ingestion	**Dermal**	**Inhalation**	
Baseline	1.5E-06	5.0E-06	4.4E-07	7.0E-06

HQ (Ingestion/GI) = Ingestion/GI exposure (mg/kg-day)/RfD_{oral}
HQ (Dermal) = Dermal exposure (mg/kg-day)*Dermal Absorption/RfD_{oral}
HQ (Inhalation) = Inhalation exposure (mg/m^3)/RfD_{inh}

CSF (Ingestion/GI) = Ingestion/GI exposure (mg/kg-day)*CSF_{oral}
CSF (Dermal) = Dermal exposure (mg/kg-day)*Dermal Absorption*CSF_{oral}
CSF (Inhalation) = Inhalation exposure (mg/m^3)*IUR

Risk Calculations
Alewife Pumping Station

Toxicity Criteria

	PCBs
Chronic RfD_{oral}	0.00002
Subchronic RfD_{oral}	0.00005
CSF_{oral}	2
Chronic RfC[1]	0.00007
Subchronic	0.0002
IUR[2]	0.57
Dermal Absorption	0.16

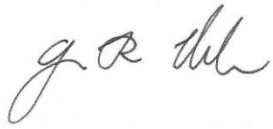
[1] IRIS does not list a RfC for PCBs. RfC converted from RfD (0.00002 mg/kg-day) using same assumptions that USEPA used for converting CSF to IUR (IR = 20 m^3/day; BW = 70 kg)

ATTACHMENT 7

CERTIFICATION

MWRA is proposing a risk-based disposal approach in accordance with 40 CFR 761(c) for this project. As required by 40 CFR 761.61(a)(3)(i)(E) the following certification is also required.

The undersigned named in the abatement plan as being responsible for this project, certifies "*that all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are on file*" at the MWRA offices in Charleston Navy Yard, Boston, Massachusetts and "*are available for EPA inspection*".



John R. Nelson, P.G.
Program Manager - Environmental
Real Property & Environmental Management Department
Massachusetts Water Resources Authority