2101 Williams Associates, LLC
2228 Livingston Street
Oakland, CA 94606
Telephone (510) 261-5500

October 30, 2015

Mr. Mark Detterman
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION REPORT CERTIFICATION
County Case # RO 2468
Former James River Corporation Site
2101 Williams Street
San Leandro, CA

Dear Mr. Detterman:

You will find enclosed one copy of the following document prepared by P&D Environmental, Inc. for the subject site.

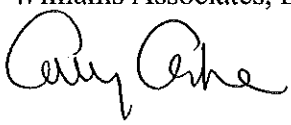
- Subsurface Investigation Report dated October 30, 2015.

I declare under penalty of perjury that the contents and conclusions in the document are true and correct to the best of my knowledge.

Please don't hesitate to call me if you have any questions.

Sincerely,

2101 Williams Associates, LLC



Carey Andre

0660.L7

P&D ENVIRONMENTAL, INC.

55 Santa Clara Avenue, Suite 240
Oakland, CA 94610
(510) 658-6916

October 30, 2015
Report 0660.R3

Ms. Carey Andre
2101 Williams Street, LLC
2228 Livingston Street
Oakland, CA 94606

SUBJECT: SUBSURFACE INVESTIGATION REPORT (M1 THROUGH M6)
County Case # RO 2468
Former James River Corporation Site
2101 Williams Street
San Leandro, California

Dear Ms. Andre:

P&D Environmental, Inc. (P&D) has prepared this report documenting the results of additional investigation at the subject site. The work included drilling at six locations designated as M1 through M6 to a depth of 40 feet below the ground surface (bgs) at each location using a MiHpt probe, which combines a Membrane Interface Probe (MIP), a Hydraulic Profiling Tool (HPT), and an Electrical Conductivity Probe (EC). Additionally, depth-discrete groundwater samples were collected at two different depths at each of locations M1 through M6 using Geoprobe continuous coring for collection of first-encountered groundwater samples and a Geoprobe Hydropunch for collection of deeper depth-discrete groundwater samples. The objective of the investigation was to evaluate the nature and extent of tetrachloroethene (PCE) in soil gas and groundwater along the upgradient property boundary and through the center of the site, as required by the Alameda County Department of Environmental Health (ACDEH).

Drilling was performed and groundwater samples were collected between August 31, 2015 and September 10, 2015. The work was performed in accordance with procedures set forth in P&D's Subsurface Investigation Work Plan (document 0660.W3) dated May 26, 2015. P&D discussed the work scope at a meeting with the ACDEH on May 24, 2015 and the ACDEH approved the work plan by e-mail on July 27, 2015.

A Site Location Map is attached as Figure 1, and a Site Plan Aerial Photograph Detail showing the drilling locations is attached as Figure 2. All work was performed under the direct supervision of a California professional geologist.

BACKGROUND

PCE that originates from sources offsite and upgradient of the subject site has been detected in groundwater on the upgradient and downgradient sides of the subject site building. The presence of the PCE groundwater plume has been well-documented on the adjacent upgradient property at 2075 Williams Street in San Leandro and is recognized by the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) to originate from some unknown upgradient location.

Vapor Pins VP1 through VP6 were installed on November 4, 2014 and were sampled on November 5, 2014. Based on the initial sample results, Vapor Pins VP3 through VP6 were sampled a second time on December 10, 2014. Following discussions with the ACDEH regarding the sample results and related data gaps, Vapor Pins VP7 through VP12 were installed on February 3, 2015 and sampled on February 16 and 17, 2015. The ACDEH had approved the locations for Vapor Pins VP7 through VP12 in an e-mail dated January 29, 2015. The historical Vapor Pin sub-slab soil gas sample results with the highest detected PCE concentrations at each location are shown on Figure 2 of this report.

Based on the sub-slab soil gas sample results and existing groundwater data for the site, the ACDEH required submittal of a work plan for sampling of indoor air in existing site structures, as well as further subsurface sampling designed to identify the extent of contamination at the site. In response, P&D prepared an Indoor Air Investigation Work Plan (document 0660.W2) dated May 13, 2015 and, following a May 24, 2015 meeting with the ACDEH, a Subsurface Investigation Work Plan (document 0660.W3) dated May 26, 2015. The May 13, 2015 Indoor Air Investigation Work Plan was conditionally approved in a letter from the ACDEH dated June 1, 2015.

Notification of the schedule for subsurface investigation was provided to the ACDEH by 2101 Williams Street, LLC on July 27, 2015. In an e-mail dated July 27, 2015 the ACDEH responded to the notification and approved the drilling schedule.

FIELD ACTIVITIES

Drilling was performed and groundwater samples were collected between September 4 and 10, 2015. Prior to performing field activities, drilling permit W2015-0792 was obtained from the Alameda County Public Works Agency (ACPWA), access to the site was scheduled with the tenants, drilling locations were marked with white paint, Underground Service Alert was notified for underground utility location, a private utility locator evaluated the proposed drilling locations for the presence of buried utilities, and a health and safety plan was prepared. Notification of the drilling dates and sampling dates was also provided to the ACDEH. All drilling was performed by Vironex, Inc. of Concord, California. Limitations on the available access time for the different tenant spaces resulted in drilling and sample collection being performed during limited available times of access.

Sub-Slab Baserock Evaluation

The presence and nature of sub-slab fill material was evaluated at each of borehole locations M1 through M6 inside of the building following concrete coring of the concrete floor slab and prior to pushing the MiHpt probe at each location. Each location was either hand augered using a 3.5-inch outside diameter hand auger or was continuously cored using a Geoprobe 2.5-inch outside diameter 5-foot long Macrocore barrel sampler lined with transparent PVC sleeves until native material was encountered to ensure that the MiHpt probe was not damaged on obstructions such as cobbles, concrete structures, or buried utilities. The sub-slab materials consisted of highly compacted gravelly silty sand at all locations, which was underlain by black silty clay. The fill material extended to a depth of 4 feet at M4; 5 feet at M1, M2 and M3; and 6 feet at M5 and M6, as measured from the top of the concrete floor slab. The thickness of the concrete floor slab ranged from 4.5 to 7.0 inches in thickness at all locations with the exception of M4, where the concrete floor slab thickness was measured to be 12.0 inches. The fill material was placed back into each borehole prior to pushing the MiHpt probe in the borehole at each location.

MiHpt Profiling

A MiHpt probe was pushed beginning directly beneath the floor slab to a depth of 40 feet bgs at each of locations M1 through M6 (see Figure 2). The MiHpt probe was advanced at a rate of approximately one foot per minute and provided the following information:

- The Membrane Interface Probe (MIP) provided information regarding organic vapor concentrations with a sensitivity of approximately 0.2 ppmv (approximately 1,350 micrograms per cubic meter of PCE) using the following detectors:
  - Electron Capture Detector (ECD)
  - Halogen Specific Detector (XSD)
  - Photoionization Detector (PID)
  - Flame Ionization Detector (FID)
- The Hydraulic Profiling Tool (HPT) was used to measure the pressure required to inject water at a rate of approximately 250 milliliters per minute into the borehole wall adjacent to the probe.
- The Electrical Conductivity (EC) was measured using a dipole-dipole array.

A description of the MiHpt equipment and methods of operation in addition to copies of the MiHpt logs are provided in the October 1, 2015 MiHpt Site Investigation report prepared by Vironex Technical Services, LLC (Vironex) of Concord, California that is attached to this report as Appendix A.

The MIP information was used to evaluate the presence of HVOCs both above and below the water table. The HPT and EC information were used for identification of higher permeability zones. The HPT data in conjunction with the EC and MIP data was used for identification of water-bearing zones that show evidence of the presence of VOCs, and for

identification of groundwater sample collection depths. Following completion of logging activities at each location, the MiHpt probe was withdrawn from the borehole and the borehole was filled with neat cement grout.

Continuous Coring

On September 8, 2015 one borehole was continuously cored to a depth of 40 feet bgs with Geoprobe dual tube direct push drilling methods at a location adjacent to MiHpt borehole M5 for the purpose of visually confirming the MiHpt log HPT and EC data. The soil from the boring was logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. All soil from the borehole was evaluated with a Photoionization Detector (PID) equipped with a 10.6 eV bulb and calibrated using a 100 ppm isobutylene standard. The soil from the continuous core was also field screened for evidence of odors, staining, and discoloration. Groundwater was encountered in continuously cored borehole M5 to 40.0 feet at a depth of 17.0 feet, bgs on September 8, 2015.

No odors, staining, or discoloration were observed in the soil from continuously cored borehole M5, and PID values ranging from 0.3 to 2.1 ppm were detected in silty clay between the depths of approximately 9.5 and 18.0 feet bgs, with the highest PID value detected at a depth of approximately 9.5 feet bgs.

The subsurface materials encountered in continuously cored borehole M5 consisted of gravelly silty sand fill to a depth of approximately 6.0 feet bgs, beneath which silty clay and clay were encountered to a depth of 30.0 feet bgs. Between the depths of 30.0 and 34.5 feet bgs a zone of silty fine sand, sandy gravel, and silty gravel with a 0.5-foot thick clay layer was encountered, beneath which silty clay was encountered to the total depth explored of 40.0 feet bgs. Groundwater was encountered in continuously cored borehole M5 at a depth of 17.0 feet bgs during drilling on September 8, 2015.

All drilling equipment was cleaned washing with an Alconox solution followed by a clean water rinse prior to use in the borehole. Following completion of logging activities, the borehole was filled with neat cement grout using the dual tube as a tremie pipe. All soil generated during drilling was stored in 55-gallon drums at the site pending appropriate disposal.

Groundwater Sample Collection

On September 4, 2015, following review of the MiHpt data for water table identification at locations M4 through M6, Hydropunches were pushed at locations approximately 4 feet to either the north or south of MiHpt locations M4 through M6 to a depth of 14.0, 15.0, and 14.0 feet bgs, respectively in an effort to obtain groundwater grab samples at first-encountered groundwater. After pushing the Hydropunches to the desired sample collection depths, the interior of the Hydropunches were evaluated with an electric water level indicator to verify that groundwater had not leaked into the Hydropunches. Following verification of the absence of water inside the Hydropunch rods, the drilling

rods were then retracted to expose a 4-foot long section of Hydropunch screen. At location M4 the rods jammed which prevented the rods retracting and prevented the Hydropunch screen from being exposed. The Hydropunch and drilling rods were then withdrawn from borehole M4 and a temporary 1-inch diameter slotted PVC pipe was placed in the borehole. Water did not enter the temporary slotted PVC pipe or either of the Hydropunches at locations M5 and M6, and the temporary slotted PVC pipe and Hydropunches were left in place until September 8, 2015 at which time the absence of water was again verified and the temporary slotted PVC pipe and Hydropunches were withdrawn from the boreholes.

On September 8, 2015 Geoprobe Macrocore drilling rods with an expendable tip were pushed to a depth of 20.0 feet bgs at locations approximately 4 feet either north or south of MiHpt locations M1 through M3 and also into the same boreholes that the temporary slotted PVC pipe and Hydropunches had been withdrawn from at locations M4 through M6. The expendable tip was then dislodged and the drilling rods were withdrawn from the boreholes and a temporary slotted 1-inch diameter PVC pipe was placed in each borehole. At locations M4 and M5, fill material was excavated to a depth of approximately 4 and 6 feet bgs, respectively, at these locations and was placed back into the MiHpt borehole before the MiHpt probe was pushed at these locations, causing MiHpt results for these excavated intervals to be non-representative of site conditions.

Groundwater levels were measured at locations M1 through M4 on September 8, 2015 after completion of drilling to 20.0 feet bgs and prior to groundwater sample collection at depths of 16.4, 15.9, 15.4, and 16.8 feet bgs, respectively, and no water was detected in the PVC pipe at M5 and M6 at the end of September 8, 2015. Groundwater levels at locations M5 and M6 were measured on September 9, 2015 prior to groundwater sample collection at depths of 17.6 and 18.4 feet bgs, respectively. Groundwater samples were collected from the temporary slotted 1-inch diameter PVC pipe at locations M1 through M4 on September 8, 2015 and from locations M5 and M6 on September 9, 2015. No odor or sheen were detected or observed for any of the groundwater samples with the exception of M3, where a moderate hydraulic oil odor and sheen were observed. At location M3 the sample tubing was described as being very slippery where it was in contact with groundwater.

Following review of the MiHpt logs, at a location approximately 3 or 4 feet from the MiHpt borehole and different from the first-encountered groundwater sample collection borehole locations, Hydropunches were pushed at locations M1, M2, M3, and M5 to 34.0 feet bgs; at location M4 to 35.0 feet bgs; and at location M6 to 32.0 feet bgs. After pushing the Hydropunches to the desired sample collection depths, the interior of the Hydropunches were evaluated with an electric water level indicator to verify that groundwater had not leaked into the Hydropunches. Following verification of the absence of water inside the Hydropunch rods, the drilling rods were then retracted to expose a 4-foot long section of Hydropunch screen. The drilling rods were retracted to expose a 4-foot length of Hydropunch screen at all locations except M4 where the drilling rods jammed and the Hydropunch screen could not be exposed.

The Hydropunches were pushed at locations M1, M2 and M3 to a depth of 34.0 feet bgs on September 10, 2015 and were sampled on September 10, 2015. The Hydropunches at locations M4, M5 and M6 were pushed to depths of 35.0, 34.0 and 32.0 feet bgs on September 4, 2015 and the Hydropunches at M5 and M6 were sampled on September 4, 2015. At location M4 the drill rods did not retract to expose the Hydropunch screen, and the Hydropunch was left in the ground until September 8, 2015. On September 8, 2015 water was detected in the Hydropunch at location M4, and a groundwater sample was collected from the Hydropunch after the water in the Hydropunch was purged and had partially recharged. Groundwater was measured in the Hydropunch rods that had been pushed to depths of 32.0 to 35.0 feet bgs at locations M1 through M6 prior to sample collection at a depth of 16.3, 16.2, 16.2, 17.1, 14.7, and 16.8 feet bgs, respectively.

Each of the groundwater samples was collected using new polyethylene tubing and silicone tubing with a peristaltic pump. Approximately 0.1 to 0.3 gallons was purged from each borehole prior to sample collection with the exception of locations M5 and M6 at the 20.0 foot depth because of a lack of substantial accumulation of groundwater in these boreholes. Each groundwater sample was transferred directly from the discharge tubing to 40-milliliter Volatile Organic Analysis (VOA) vials that were supplied by the laboratory, contained hydrochloric acid preservative, and were sealed with screw caps containing Teflon-lined septa. The sample bottles were all overturned and tapped to ensure that no air bubbles were present, labeled, and placed in a cooler with ice pending delivery to the laboratory. Chain of custody procedures were observed for all sample handling.

Copies of the continuously cored borehole M5 boring log and the boring logs for the Hydropunches for each of the shallow and deep groundwater samples at locations M1 through M6 are attached with this report as Appendix B.

All drilling and sampling equipment was cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole. Following completion of logging and sample collection activities, the boreholes were filled with neat cement grout using a tremie pipe. All soil and water generated during subsurface investigation was stored in 55-gallon drums at the site and labeled pending characterization and proper disposal.

GEOLOGY AND HYDROGEOLOGY

Based on review of regional geologic maps from U. S. Geological Survey Professional Paper 943, "Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning," by E. J. Helley and K. R. Lajoie, 1979, the subject site is underlain by coarse-grained alluvium (Qhac). The coarse-grained alluvium is described as unconsolidated, moderately sorted permeable sand and silt with coarse sand and gravel; more abundant toward fan heads.

Based on review of the Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California (U.S. Geological Survey Miscellaneous Field Studies MF-2342, Version 1.0) by R.W Graymer, 2000, the

site is predominantly underlain by Holocene natural levee deposits. Natural levee deposits deposits (Qhl) that are described as consisting of loose, moderately-sorted to well-sorted sandy or clayey silt grading to sandy or silty clay. These deposits are porous and permeable and provide conduits for transport of groundwater. This geologic map also shows that the southwest west corner of the property is underlain by Holocene basin deposits (Qhb). The Holocene basin deposits are described as very fine silty clay to clay deposits occupying flat-floored basins at the distal edge of alluvial fans adjacent to the bay mud (Qhbm). Review of this geologic map also shows that the unconsolidated materials are present in the vicinity of the subject site in a northeast to southwest trending distribution.

Groundwater levels were measured at locations M1 through M4 on September 8, 2015 after completion of drilling to 20.0 feet bgs and prior to groundwater sample collection at depths of 16.4, 15.9, 15.4, and 16.8 feet bgs, respectively, and no water was detected in the PVC pipe at M5 and M6 at the end of September 8, 2015. Groundwater levels at locations M5 and M6 were measured on September 9, 2015 prior to groundwater sample collection at depths of 17.6 and 18.4 feet bgs, respectively.

Groundwater was measured in the Hydropunch rods that had been pushed to depths of 32.0 to 35.0 feet bgs at locations M1 through M6 prior to sample collection at a depth of 16.3, 16.2, 16.2, 17.1, 14.7, and 16.8 feet bgs, respectively.

Review of the EC logs shows higher conductivity values between the depths of approximately 20 and 30 feet at all of the logged locations, indicating the consistent presence of an aquitard beneath the building. The materials above the aquitard consist of interlayered higher and lower conductivity materials, and below the aquitard consist of lower conductivity materials, with the low conductivity zone more clearly pronounced at locations M2, M3, M5 and M6.

Comparison of the HPT results with the EC results shows a strong correlation of the decreased pressure required for HPT flow with corresponding zones of decreased EC. Comparison of the visually logged borehole and the EC log at M5 shows excellent correlation of the coarse-grained materials and low conductivity EC values below the aquitard (below a depth of 30 feet bgs).

Review of the geology and groundwater flow direction at nearby sites located immediately to the north at 1958 Williams Street and immediately upgradient and to the east at 2075 Williams Street has identified subsurface materials consisting predominantly of silt, silty clay, and clay with water-bearing zones identified as the A-Zone, B-Zone, and C-Zone and a westerly to southwesterly groundwater flow direction. Groundwater is first encountered in the A-Zone, which is typically encountered when present at a depth of approximately 10 to 15 feet below the ground surface. Review of the most recent groundwater monitoring and sampling report for the subject site has identified the depth to water in groundwater monitoring wells at the subject site as typically ranging from approximately 10 to 12 feet below the ground surface. Groundwater flow direction at and near the site appears to be locally controlled by buried stream channel segments.

San Francisco Bay is located approximately 3,800 feet to the southwest of the subject site.

LABORATORY ANALYSIS

All of the borehole groundwater samples were analyzed at McCampbell Analytical, Inc. of Pittsburg, California for VOCs, including the Halogenated Volatile Organic Compounds (HVOCs) PCE, TCE (trichloroethene), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride.

The borehole groundwater sample results are summarized in Table 1, and copies of the laboratory analytical reports are attached with this report as Appendix D. Although the chain of custody identifies the M4-35.0 W sample as collected on September 9, 2015, the date on the chain of custody document is incorrect and the correct date of sample collection at this location is September 8, 2015. The laboratory work order summary correctly identifies the date for the sample collection based on the sample collection information that was written on the sample label. The correct sample collection time for groundwater sample M4-35.0 was 1600.

DISCUSSION AND RECOMMENDATIONS

PCE concentrations in groundwater collected at a depth of 20 feet bgs (first encountered groundwater) are shown in Figure 2, and PCE concentrations in groundwater collected at a depth of 30 to 35 feet bgs are shown in Figure 3. Results for all detected VOCs in groundwater at depths of 20 feet and 30 to 35 feet bgs are shown in Figures 4 and 5, respectively. Cross sections A-A' and B-B' showing the EC and ECD logs for locations M1 through M6 are shown on Figure 6, which also illustrates the PCE detections in groundwater.

Evaluation of the fill material beneath the floor slab showed that coarse-grained fill material was encountered at all locations investigated to a depth of 4 to 6 feet below the top of the concrete floor slab.

Review of Figures 2 through 6 shows that elevated PCE concentrations were detected in groundwater as follows:

- at locations M2 and M3 at depths of 30 to 35 feet bgs,
- at locations M4 and M5 at depths of 30 to 35 feet bgs,
- at locations M4, M5 and M6 at a depth of 20 feet bgs with the highest concentration detected at location M4.

Additionally, review of Figures 2 through 6 shows that PCE was not detected, or detected only at very low levels, in groundwater as follows:

- at locations M1, M2 and M3 at a depth of 20 feet bgs,
- at location M1 and M6 at a depth of 30 to 35 feet bgs.

The distribution of PCE in groundwater at locations M1 through M6 at a depth of 30 to 35 feet bgs shows that elevated PCE concentrations were detected on the upgradient side of the building at locations M2 and M3, confirming an upgradient, off-site source of PCE.

The distribution of PCE in groundwater at locations M1 through M6 at a depth of 20 feet bgs shows that no PCE was detected on the upgradient side of the building at locations M1, M2 and M3. The highest PCE concentrations detected in groundwater during the investigation of 770 and 460 ug/L were encountered at a depth of 20 feet bgs at locations M4 and M5, respectively, in the central portion of the building (see Figures 2 and 4).

Review of the ECD logs in Figure 6 shows that elevated ECD readings were detected at depths of less than 20 feet bgs only at locations M4 and M5, and that these locations are where the highest PCE groundwater concentrations were encountered at a depth of 20 feet bgs. Review of the ECD logs also shows that elevated ECD values were not detected at depths of less than approximately 7 feet bgs at locations M4 and M5. However, because the vadose zone fill was excavated and replaced in these two probe locations, it cannot be confirmed that VOCs are not present in shallow soil.

In summary, the investigation confirmed an upgradient off-site source of PCE in groundwater, but did not confirm whether a source of PCE in vadose zone soil is present beneath the building where elevated PCE concentrations were detected in sub-slab vapor and shallow groundwater. Therefore, P&D recommends a targeted additional sub-slab soil gas investigation at the site to identify the areas with the highest PCE concentrations in soil gas, such that soil borings can be drilled to better assess the source of the PCE and design the most effective remediation strategy, as appropriate.

LIMITATIONS

This report was prepared solely for the use of 2101 Williams Street, LLC. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

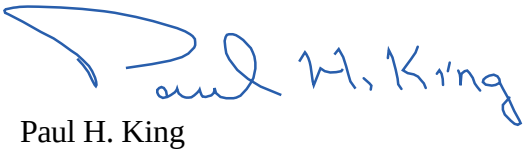
This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental, Inc.



Paul H. King
Professional Geologist #5901
Expires: 12/31/15

Attachments:

Table 1 - Summary of Borehole Groundwater Sample Analytical Results

Figure 1 - Site Location Map
Figure 2 - Site Plan Aerial Photograph Detail Showing PCE Concentrations in Groundwater at 20-Foot Depth
Figure 3 - Site Plan Aerial Photograph Detail Showing PCE Concentrations in Groundwater at 30 to 35-Foot Depth
Figure 4 - Site Plan Aerial Photograph Detail Showing Detected VOC Concentrations in Groundwater at 20-Foot Depth
Figure 5 - Site Plan Aerial Photograph Detail Showing Detected VOC Concentrations in Groundwater at 30 to 35-Foot Depth
Figure 6 - Cross Sections A-A' and B-B' Showing PCE Concentrations in Groundwater

Appendix A - October 1, 2015 MiHpt Site Investigation Report
Appendix B - Boring Logs
Appendix C - Laboratory Analytical Results and Chain of Custody Documentation

PHK/mlbd/sjc
0660.R3

TABLES

Table 1
Summary of Borehole Groundwater Sample Analytical Results

Sample ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	Other VOCs by EPA Method 8260
M1-20.0W	9/8/2015	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	All ND, except
							MTBE = **110**,
M1-34.0W	9/10/2015	ND<0.50	ND<0.50	**15**	ND<0.50	ND<0.50	All ND, except
							MTBE = **36**,
							Toluene = 1.5,
							MBK = 1.0,
							TAME = 0.97,
							Carbon Disulfide = 0.51,
M2-20.0W	9/8/2015	ND<1.2	ND<1.2	ND<1.2	ND<1.2	**30**	All ND, except
							MTBE = **54**,
							TAME = 1.4
M2-34.0W	9/10/2015	**290**	**55**	**37**	ND<12	ND<12	All ND, except
							MTBE = **120**
M3-20.0W	9/8/2015	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND, except
							MTBE = 2.6,
							TBA = **45**,
							DIPE = 1.2
M3-34.0W	9/10/2015	**330**	**30**	ND<12	ND<12	ND<12	All ND, except
							MTBE = **97**
M4-20.0W	9/8/2015	**770**	**60**	**25**	ND<10	ND<10	All ND, except
							MTBE = **150**
M4-35.0W	9/8/2015	**430**	**34**	ND<12	ND<12	ND<12	All ND, except
							MTBE = **160**
M5-20.0W	9/9/2015	**460**	**43**	**21**	ND<12	ND<12	All ND, except
							MTBE = **110**
M5-34.0W	9/4/2015	**110**	**32**	**16**	ND<5.0	ND<5.0	All ND, except
							MTBE = **160**
M6-20.0W	9/9/2015	**150**	**42**	**36**	ND<5.0	ND<5.0	All ND, except
							MTBE = **43**
M6-32.0W	9/4/2015	1.5	**5.4**	4.9	ND<0.50	**4.2**	All ND, except
							MTBE = **11**,
							TBA = **86**,
							TAME = 0.56
ESL[1]		5.0	5.0	6.0	10	0.50	MTBE = 5.0,
							Toluene = 40,
							TBA = 12,
							MBK = No Value,
							TAME = No Value,
							Carbon Disulfide = No Value,
							DIPE = No Value
ESL[2]		640	1,300	26,000	120,000	18	MTBE = 100,000
							Toluene = No Value,
							TBA = No Value,
							MBK = No Value,
							TAME = No Value,
							Carbon Disulfide = No Value,
							DIPE = No Value

Notes:
PCE = Tetrachloroethene.
TCE = Trichloroethene.
cis-1,2-DCE = cis-1,2-Dichloroethene.
trans-1,2-DCE = trans-1,2-Dichloroethene.
MTBE = Methyl-tert-Butyl Ether.
TAME = tert-Amyl methyl ether.
TBA = tert-Butyl Alcohol.
MBK = Methyl Butyl Ketone (2-Hexanone).
DIPE = Diisopropyl Ether.
ND = Not Detected.

ESL[1] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board , updated December 2013 from Table F-1a - Groundwater Screening Levels .

ESL[2] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board , updated December 2013 from Table E-1 - Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion. Fine-Coarse Mix. Commercial/Industrial Land Use.

Values in bold exceed their respective ESL[1] values.

Underlined values exceed their respective ESL[2] values.

Results and ESLs reported in micrograms per Liter (µg/L), unless otherwise indicated.

FIGURES

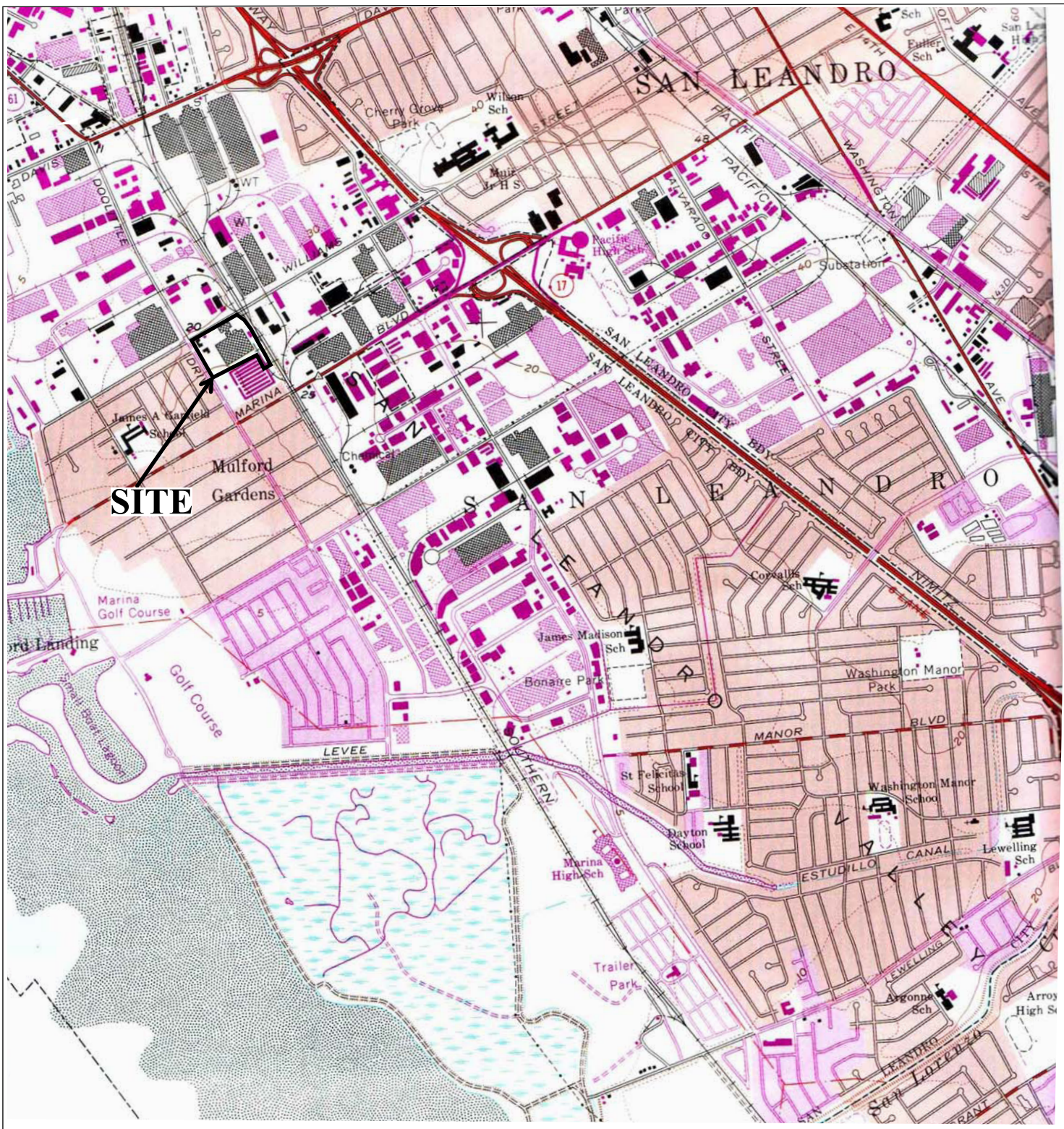


Figure 1
Site Location Map
2101 Williams Street
San Leandro, California

Base Map From:
US Geological Survey San Leandro, California, 7.5-Minute Quadrangles
Map Edited 1980

P&D Environmental, Inc.
55 Santa Clara Avenue
Oakland, CA 94610

0 1000 2000
Approximate Scale in Feet

N

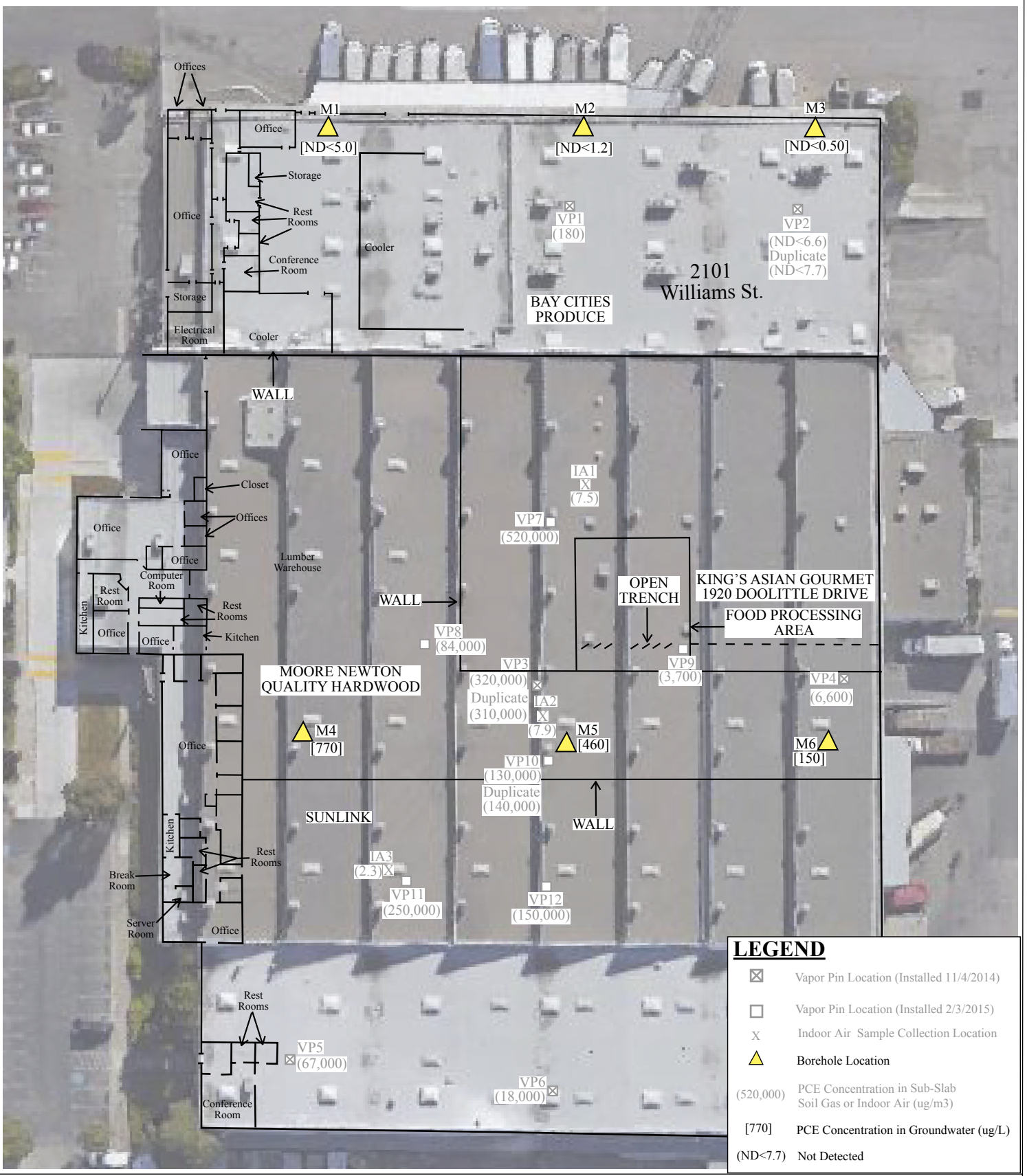


Figure 2
Site Plan Aerial Photograph Detail Showing PCE Concentrations in Groundwater at 20-Foot Depth
2101 Williams Street
San Leandro, California

Base Map from:
Google Earth, image dated August 28, 2012

P&D Environmental, Inc.
55 Santa Clara Avenue
Oakland, CA 94610

0 30 60
Approximate Scale in Feet

N

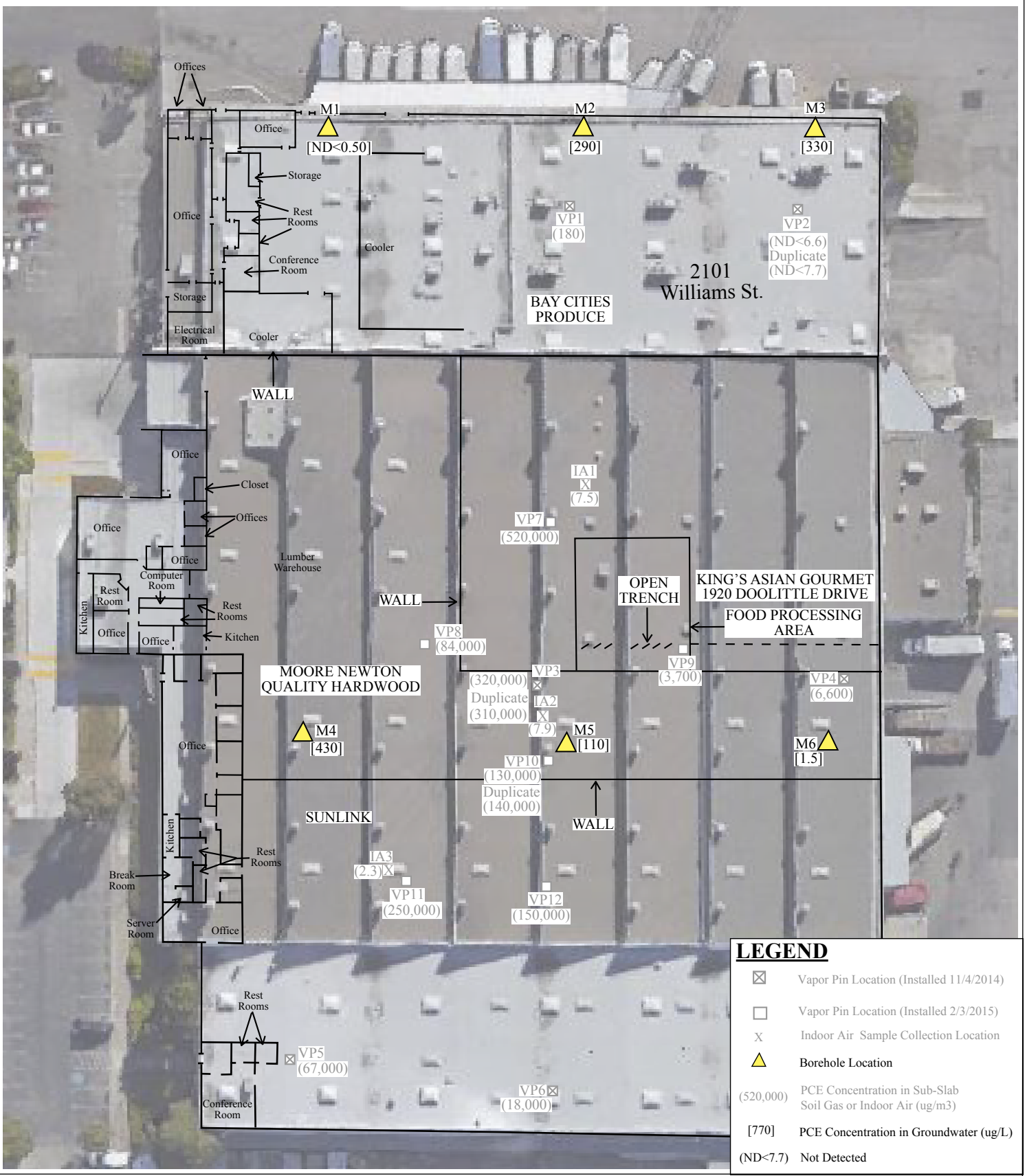


Figure 3
Site Plan Aerial Photograph Detail Showing PCE Concentrations in Groundwater at 30 to 35-Foot Depth
2101 Williams Street
San Leandro, California

Base Map from:
Google Earth, image dated August 28, 2012

P&D Environmental, Inc.
55 Santa Clara Avenue
Oakland, CA 94610

0 30 60
Approximate Scale in Feet

N

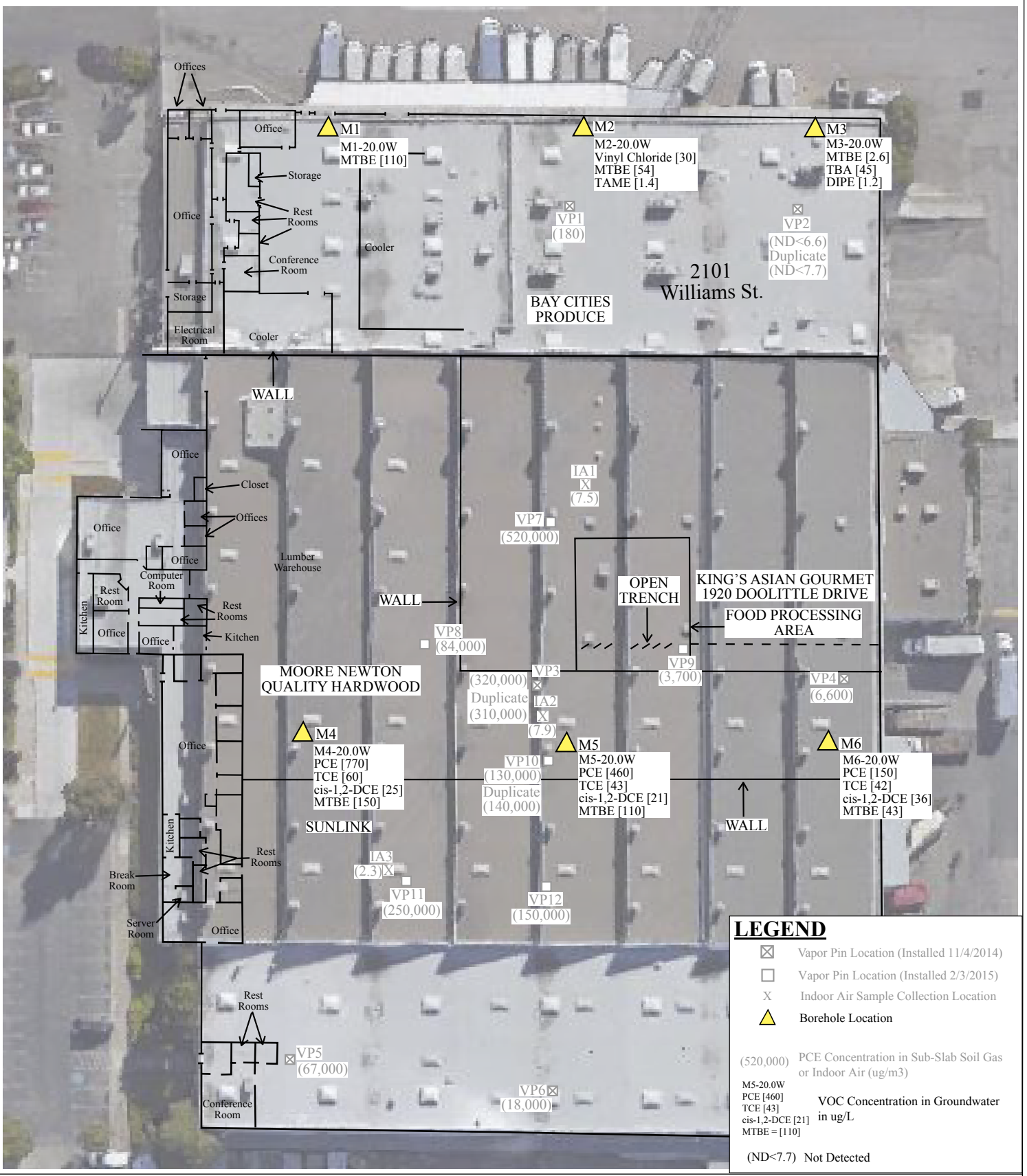


Figure 4
Site Plan Aerial Photograph Detail Showing Detected VOC Concentrations in Groundwater at 20-Foot Depth
2101 Williams Street
San Leandro, California

Base Map from:
Google Earth, image dated August 28, 2012

P&D Environmental, Inc.
55 Santa Clara Avenue
Oakland, CA 94610

0 30 60
Approximate Scale in Feet

N

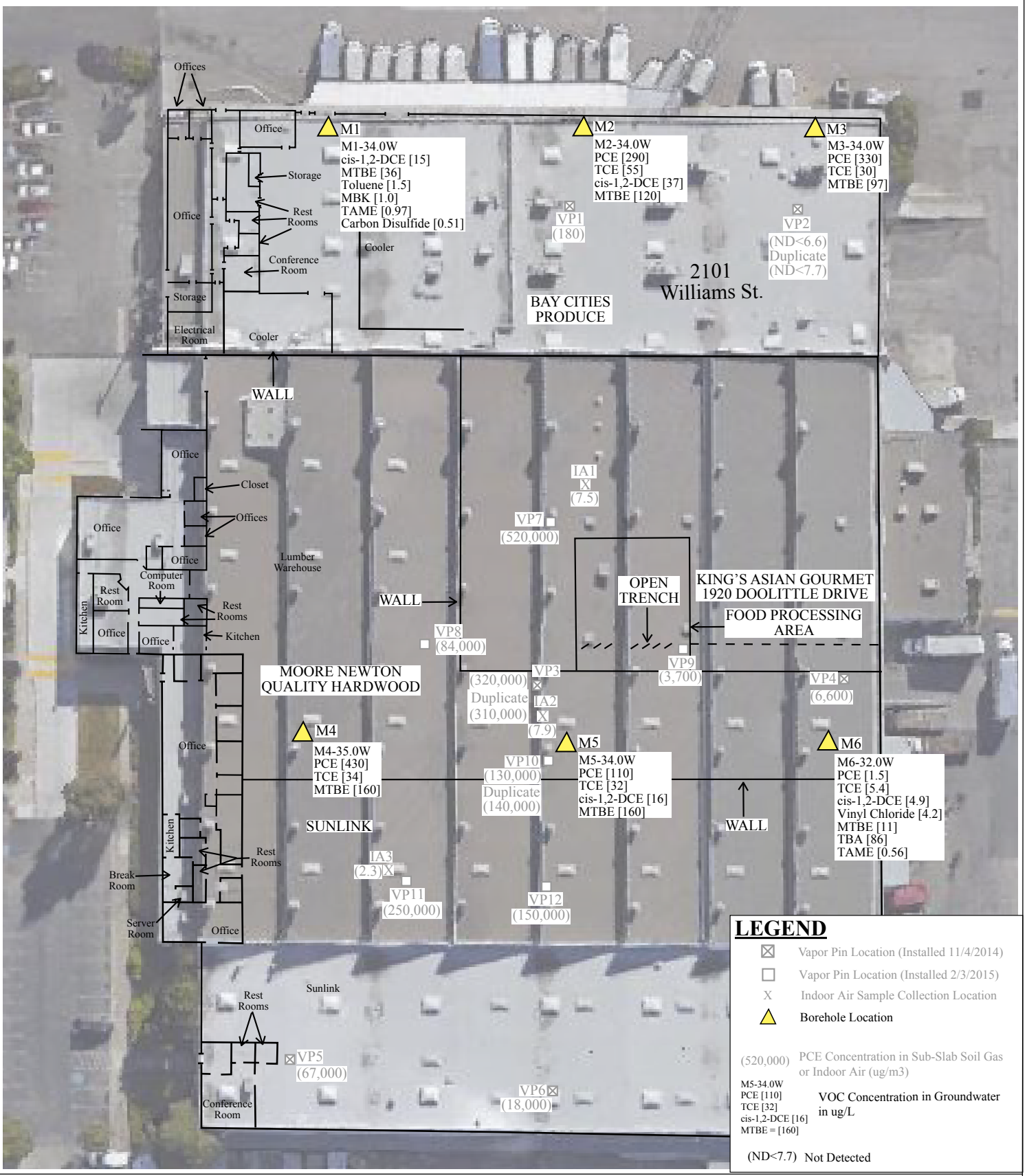


Figure 5
Site Plan Aerial Photograph Detail Showing Detected VOC Concentrations in Groundwater at 30 to 35-Foot Depth
2101 Williams Street
San Leandro, California

Base Map from:
Google Earth, image dated August 28, 2012

P&D Environmental, Inc.
55 Santa Clara Avenue
Oakland, CA 94610

0 30 60
Approximate Scale in Feet

N

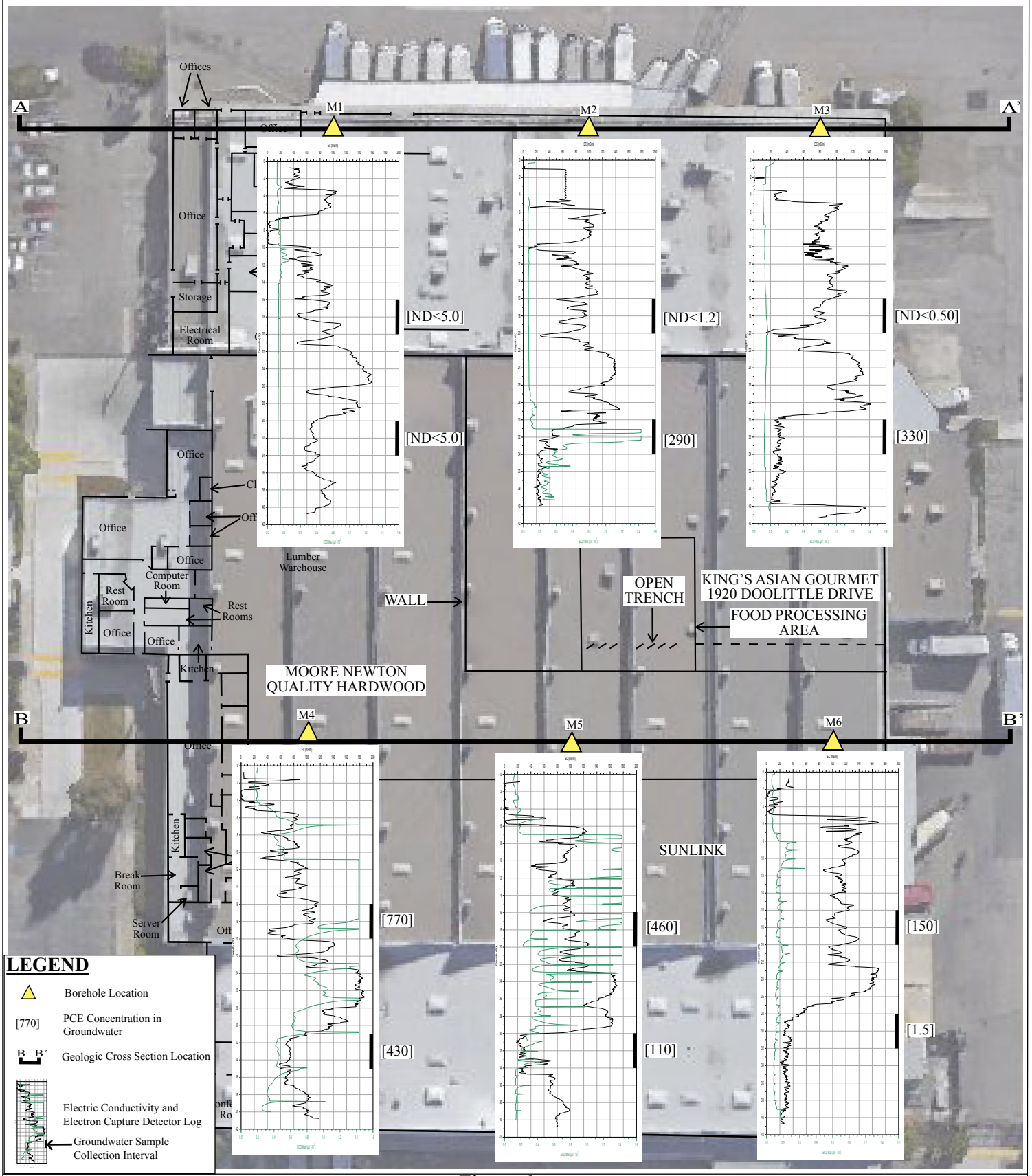


Figure 6
Cross Sections A-A'and B-B' Showing PCE Concentrations in Groundwater
2101 Williams Street
San Leandro, California

Base Map from:
Google Earth, image dated August 28, 2012

P&D Environmental, Inc.
55 Santa Clara Avenue
Oakland, CA 94610

0 30 60
Approximate Scale in Feet

N

APPENDIX A

Vironex October 1, 2015 MiHpt Site Investigation Report

Attention: P&D Environmental

October 15, 2015

RE: MIHPT Site Investigation
2101 Williams ST
San Leandro, CA 94577
15.303158003

Dear Paul:

The following is a summary of site activities performed by Vironex Technical Services, LLC at the P&D Environmental site in San Leandro, CA.

In addition to the field logs within this report, we have provided guides to assist you in understanding the high resolution data and how the systems work. We recommend that you collect groundwater and / or soil samples to correlate the high resolution data with traditional data. This will provide you with additional evidence to support your development or refinement of your conceptual site model.

We offer 3D modeling of high resolution data and traditional sampling services as well. These would be beneficial for viewing the data within the same area.

If you have any questions about this report or you would like to discuss applying this data to a remedial design at the site, please email me or contact Andrew Punsoni at 925-768-8377.

Jeff Paul

Vironex Technical Services, LLC

1641 Challenge Drive
Concord, CA 94520
925-849-6970 Office
925-849-6973 Fax
925-575-1884 Mobile
www.vironex.com

Table of Contents

Personnel:

Mr. Brett Baatrup, Vironex (HRSC Operator)

Mr. Shed Borge, Vironex (DPT Operator)

Mr. Jeff Paul, Vironex (HRSC Operator)

Mr. Herb Rounds, Vironex (DPT Operator)

Mr. Jeff Hogan, Vironex (DPT Helper)

Equipment:

- Geoprobe Direct Push Drill Rig
- MIP Controller (Nitrogen Flow and Heater)
- Geoprobe FI 6000 Computer
- HP 5890 Gas Chromatograph or SRI
- K6300 HPT Controller
- Electrical Conductivity
- ECD (Electron Capture Detector)
- XSD (Halogen Specific Detector)
- PID (Photo Ionization Detector) 10.2 eV Lamp
- FID (Flame Ionization Detector)
- 150' MIP/HPT Trunkline
- 1.75" O.D. MIHPT Probe
- 1.75" O.D. Drive Rods
- UHPN (Ultra High Purity Nitrogen)
- UHPH (Ultra High Purity Hydrogen)

MIP System Overview:

The MIP is a direct push tool that produces continuous chemical and physical logs of the vadose and saturated zones. The system detects VOCs in-situ and shows where the contaminants occur relative to the geologic and hydrologic units. Vertical profiles, transects, 3D images and maps can all be produced from the electronic data generated by the MIP logs. The unique capability of providing reliable, real-time information allows for informed and timely decision making in the field.

The MIP is a downhole tool that heats the soils and groundwater adjacent to the probe to 120 degrees C. This increases volatility and the vapor phase diffuses across a membrane into a closed, inert gas loop that carries these vapors to a series of detectors housed at the surface. Continuous chemical logs or profiles are generated from each hole. Soil conductivity is also measured and these logs can be compared to the chemical logs to better understand where the VOCs occur. The MIP technology is only appropriate for volatile organic compounds (VOCs). The gas stream can be analyzed with multiple detectors, for example an electron capture detector is used to detect chlorinated solvents, a photo-ionization detector is used to detect petroleum hydrocarbons, and a flame ionization detector is used to detect methane.

Detector Overview:

- ECD – Electron Capture Detector uses a radioactive Beta emitter (electrons) to ionize some of the carrier gas and produce a current between a biased pair of electrodes. When organic

molecules contain electronegative functional groups, such as halogens, phosphorous, and nitro groups pass by the detector, they capture some of the electrons and reduce the current measured between the electrodes.

- XSD – The Halogen Specific Detector converts compounds containing halogens to their oxidation products and free halogen atoms by oxidative pyrolysis. These halogen atoms are adsorbed onto the activated platinum surface of the detector probe assembly resulting in an increase thermionic emission. This emission current provides a corresponding voltage that is measured via an electrometer circuit in the detector controller.
- PID – Photo Ionization Detector sample stream flows through the detector's reaction chamber where it is continuously irradiated with high energy ultraviolet light. When compounds are present that have a lower ionization potential than that of the irradiation energy (10.2 electron volts with standard lamp) they are ionized. The ions formed are collected in an electrical field, producing an ion current that is proportional to compound concentration. The ion current is amplified and output by the gas chromatograph's electrometer.
- FID – Flame Ionization Detector consists of a hydrogen / air flame and a collector plate. The effluent from the GC (trunkline) passes through the flame, which breaks down organic molecules and produces ions. The ions are collected on a biased electrode and produce an electric signal.

MIP Data Collection

- Depth - Data is collected from twenty data points per foot. 0.05', 0.10', 0.15', etc…
- Electrical Conductivity - Electrical Conductivity data is measured/collected in milli-siemens per Meter (ms/M). The conductivity of soils is different for each type of media. Finer grained sediments, such as silts or clays, will have a higher EC signal. While coarser grained sediments, sands and gravel, will have a lower EC signal. The coarser grained sediments will allow the migration of contaminants and the finer grained sediments will trap the contaminant.
- Speed / Advancement Rate - Speed data is measured/collected in feet per minute (ft/min). Speed is an indication of the physical advancement rate of the MIP probe. Speed of the MIP probe can vary due to operator advancement and dense soil types. Speed log can provide soil type information which can be correlated with electrical conductivity. Lower advancement speed, correlated with lower conductivity or larger grained soils would more than likely be associated with dense or compacted sands.
- Temperature - Temperature data is measured/collected in Degrees Celsius. Temperature is an indication of the physical temperature of the MIP block. Minimum and Maximum temperature is collected at each vertical interval. Vironex's temperature protocol indicates that the MIP probe temperature shall maintain a minimum temperature of 75 Degrees Celsius.
- Pressure - Pressure data is measured/collected in PSI. Pressure is an indication of the internal pressure of the nitrogen lines located within the trunkline and the pressure behind the membrane. Geoprobe's protocol indicates that the MIP probe pressure shall not exceed 1.5 PSI difference from baseline.
- Detector (XSD, ECD, PID, FID) - Detector responses are measured/collected in micro Volts (uV). Detector responses are an indication of relative contaminant responses. Minimum and Maximum detector responses are collected at each vertical interval.

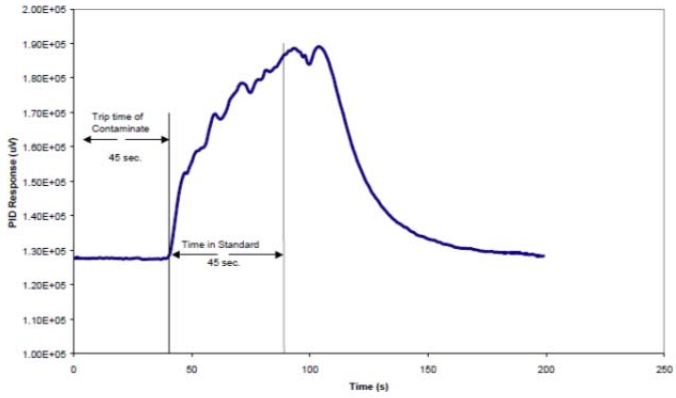
Response Testing

Response testing is an integral part of ensuring the quality of data from the MIP system. Response testing must be conducted before and after each log. This will ensure the validity of the data and the integrity of the system. Response testing also provides for comparison of data for later MIP logs at a particular site. However, results of the response test may change due to membrane wear from soil contact and abrasion.

Prior to conducting a response test, a response test standard solution is prepared by adding an appropriate volume of stock standard solution to 0.5 liters of clean water in a suitable measuring container (beaker or graduated cylinder) to produce a working standard, for example, 10 µL of 50 mg/mL concentration stock standard is added to 0.5 liters of water to yield a 1mg/L working standard. Generally, response test standard solutions are prepared using trichloroethene and toluene. However, response test standard solutions may be prepared based on the specific contaminants of concern at a site of necessary. Also prior to conducting the response test, the MIP is placed in clean water until detector response stabilization has occurred.

The working standard is poured into a 50 mL VOA. Once a stabilized Detector baseline is achieved, the working standard is placed over the Membrane for duration of 30 seconds (Note: in the response test shown below, the MIP was inserted into the working standard for duration of 45 seconds). At the end of 30 seconds the MIP is removed. The working standard cannot be reused after a response test.

The results of the response test are shown on the MIP data acquisition unit (shown below). The trip time is measured by recording the time between the moment when the VOA is placed over the membrane and the response of the detectors, as viewed on the MIP data acquisition unit. The baseline and peak response value are also recorded for comparison with other MIP response tests. The trip time is entered manually into the data acquisition system account for the time it takes for compounds in the subsurface to travel the length of the trunkline during the MIP boring. Per Geoprobe, a passing response test is a response that is double the noise of the detectors.



PID Response Test – 10 ppm Benzene

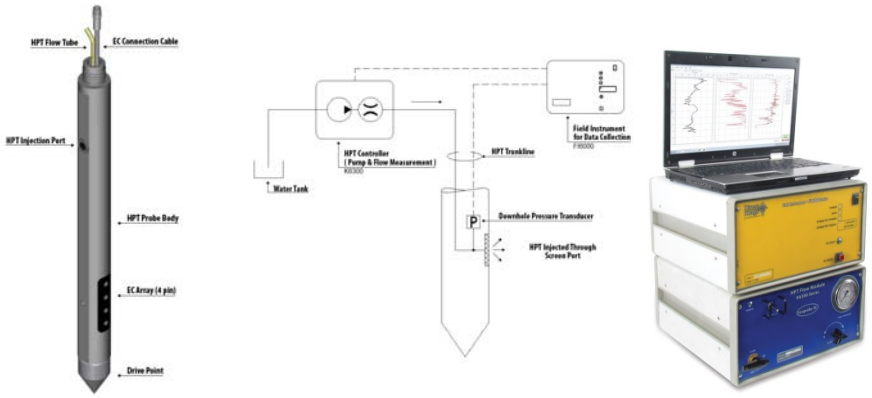
HPT System Overview

The HPT system is designed to evaluate the hydraulic behavior of unconsolidated materials. As the probe is pushed or hammered at 2cm/s, clean water is injected through a screen on the side of the HPT

probe at a flow rate usually less than 300 mL/min. The injection pressure, which is monitored and plotted with depth, is an indication of the hydraulic properties of the soil. A relatively low pressure response indicates a relatively large grain size, and the ability to easily transmit water. However, a relatively high pressure response indicates a relatively small grain size, which correlates with the inability to transmit water.

Additionally, an EC dipole is integrated into the HPT probe. This allows for the collection soil electrical conductivity (EC) data to interpret the lithology of the subsurface. In general, the higher the electrical conductivity value, the smaller the grain size, the lower the electrical conductivity value, the larger the grain size. However, other factors can affect EC, such as mineralogy and pore water chemistry (brines, extreme pH, contaminants). Conversely, the HPT pressure response is independent of these chemical and mineralogical factors.

There are five primary components of the HPT system (see schematic below): the probe assembly, controller, pump, trunkline, and field instrument. The probe assembly consists of the section that houses the 100 psi pressure transducer, water and electrical connections, and the probe body with the injection screen and electrical conductivity.



Injecting water at a constant rate is integral to system operation. A controller box houses components that monitor and regulate the water injection rate and pressure, as well as pressure transducer signal conditioning electronics. The flow rate, up to 1000 mL/min, is set manually on the front of the controller, and a valve is used to turn on or shut off flow.

A vane pump provides system pressure ensuring adequate flow to the screen. The pump is secured to a frame with an integrated visual flow meter. Water and power are transmitted from the controller to the probe assembly via the trunkline. The probe rods are pre-strung with the trunkline before advancing of the HPT probe begins.

HPT Data Collection

The HPT system collects depth, electrical conductivity, advancement rate, hydraulic pressure, and flow information. Additional detail regarding each of these parameters is provided below.

- Depth - Data is collected from twenty data points per foot. 0.05', 0.10', 0.15', etc…

- Electrical Conductivity - Electrical Conductivity (EC) data is collected in milli-siemens per meter (ms/M). The conductivity of soils is different for each type of media. Finer grained sediments, such as silts or clays, will have a higher EC signal. While coarser grained sediments, sands and gravel, will have a lower EC signal. The coarser grained sediments will allow the migration of contaminants and the finer grained sediments will trap the contaminant.

- Advancement Rate – Advancement rate is collected in units of feet per minute (ft/min). Advancement rate of the HPT probe can vary due to operator advancement and soil types encountered.

- Pressure - Pressure data is collected in pounds per square inch (PSI). Pressure is an indication of hydraulic pressure applied to the subsurface by the HPT system. The system collects both the minimum and maximum pressures over each vertical interval.

- Flow - Flow data is collected in milliliters per minute (mL/min). Flow is an indication of the rate water that is pumped out of the membrane at the HPT probe. The system collects both the minimum and maximum flow over each vertical interval.
- Estimated Hydraulic Conductivity (est. K) – Hydraulic conductivity, symbolically represented as K, is an in-situ property that describes the ease with which water can move through pore spaces or fractures. It is dependent on the intrinsic permeability of the material and on the degree of saturation. With respect to the HPT system, the estimated K values are only applicable to the saturated portion of the formation. The estimated K value is calculated using the HPT pressure and flow data. It is also necessary to collect HPT response test data before and after each boring. Additionally, it is necessary to conduct at least one pressure dissipation test during the logging operation, below the static water table level.

Site Activities:

Project Dates: August 31st, September 3rd, 4th and 9th, 2015

SCOPE: Vironex Technical Services, LLC advanced 6 direct push MIHPT borings from the ground surface to 40.00 feet and 41.35 feet below ground surface (BGS).

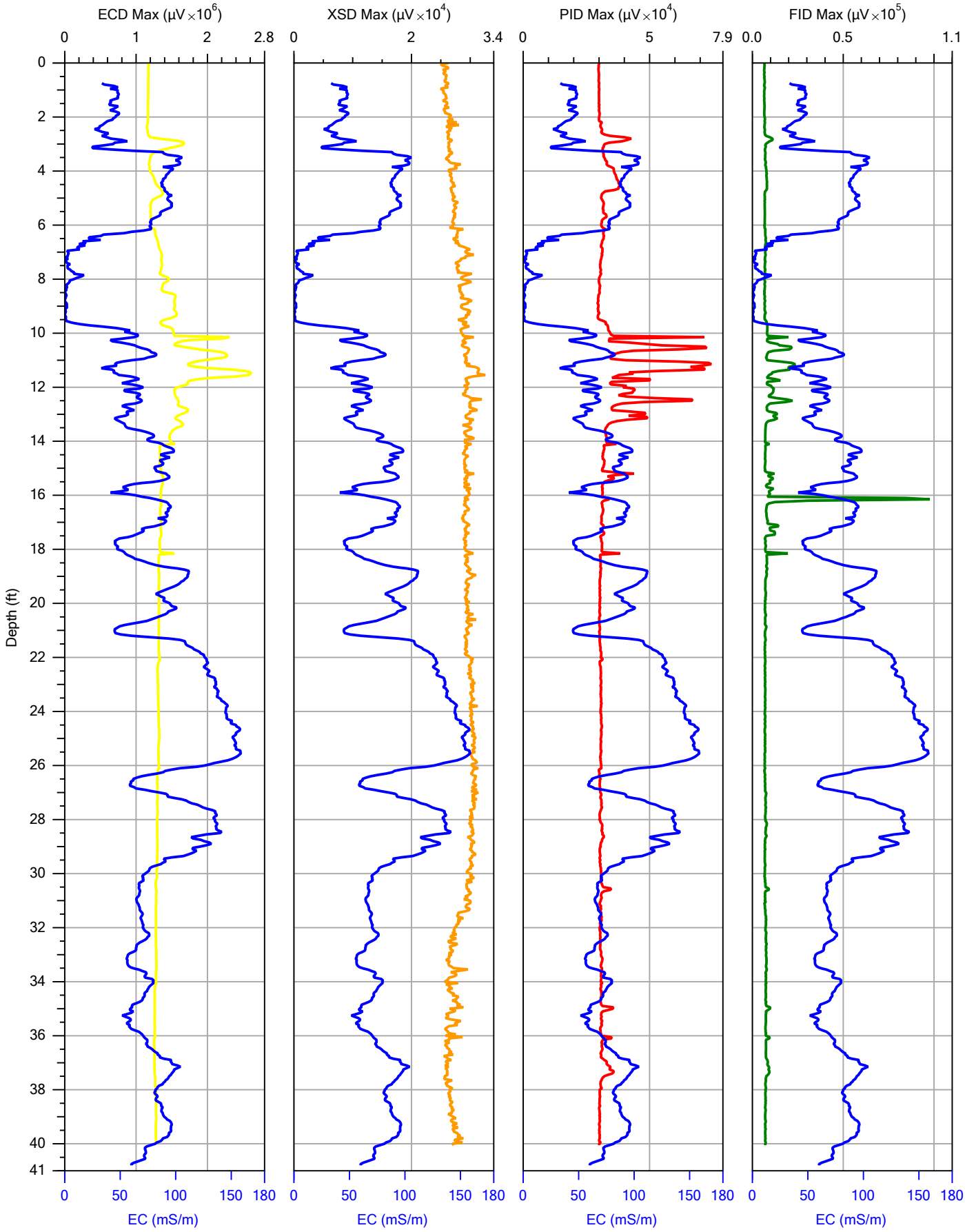
MIHPT Boring	Date	Time	Total Depth	Dissipation Test	MIHPT Notes
M-1	09.09.15	15:24	40.80	35.78	Hand cleared to 5 feet bgs. Dissipation test was unsuccessful due to lithological conditions and did not fully equilibrate.
M-2	09.04.15	15:21	40.00	29.23	Macro cored to 7 feet bgs. Dissipation test was unsuccessful due to lithological conditions and did not fully equilibrate.

MIHPT Boring	Date	Time	Total Depth	Dissipation Test	MIHPT Notes
M-3	08.31.15	15:26	41.35	19.88	Hand cleared to 5 feet bgs. Dissipation test was unsuccessful due to lithological conditions and did not fully equilibrate.
M-4	08.31.15	10:30	40.75	38.53	Hand cleared to 4 feet bgs. Dissipation test was unsuccessful due to lithological conditions and did not fully equilibrate.
M-5	09.03.15	09:21	40.80	32.73	Hand cleared to 4 feet bgs.
M-6	09.03.15	13:23	40.80	29.83	Macro cored to 5 feet bgs.

Site Map:

Boring locations are marked using Google Earth.

Appendix A – MIP Boring Logs (Auto-Scale)



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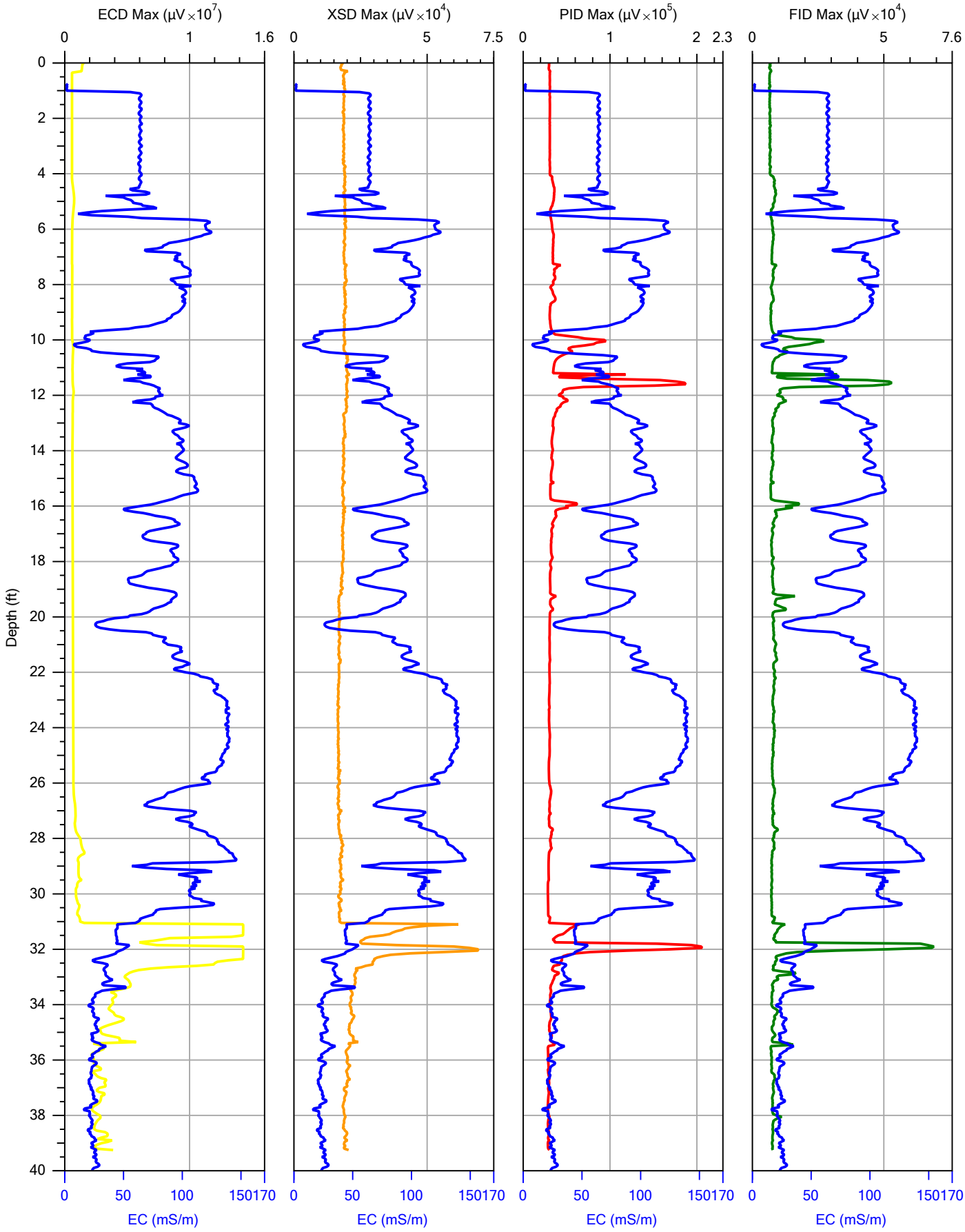
Project ID: James River Corporation		Client: P&D Environmental Inc.	Location:



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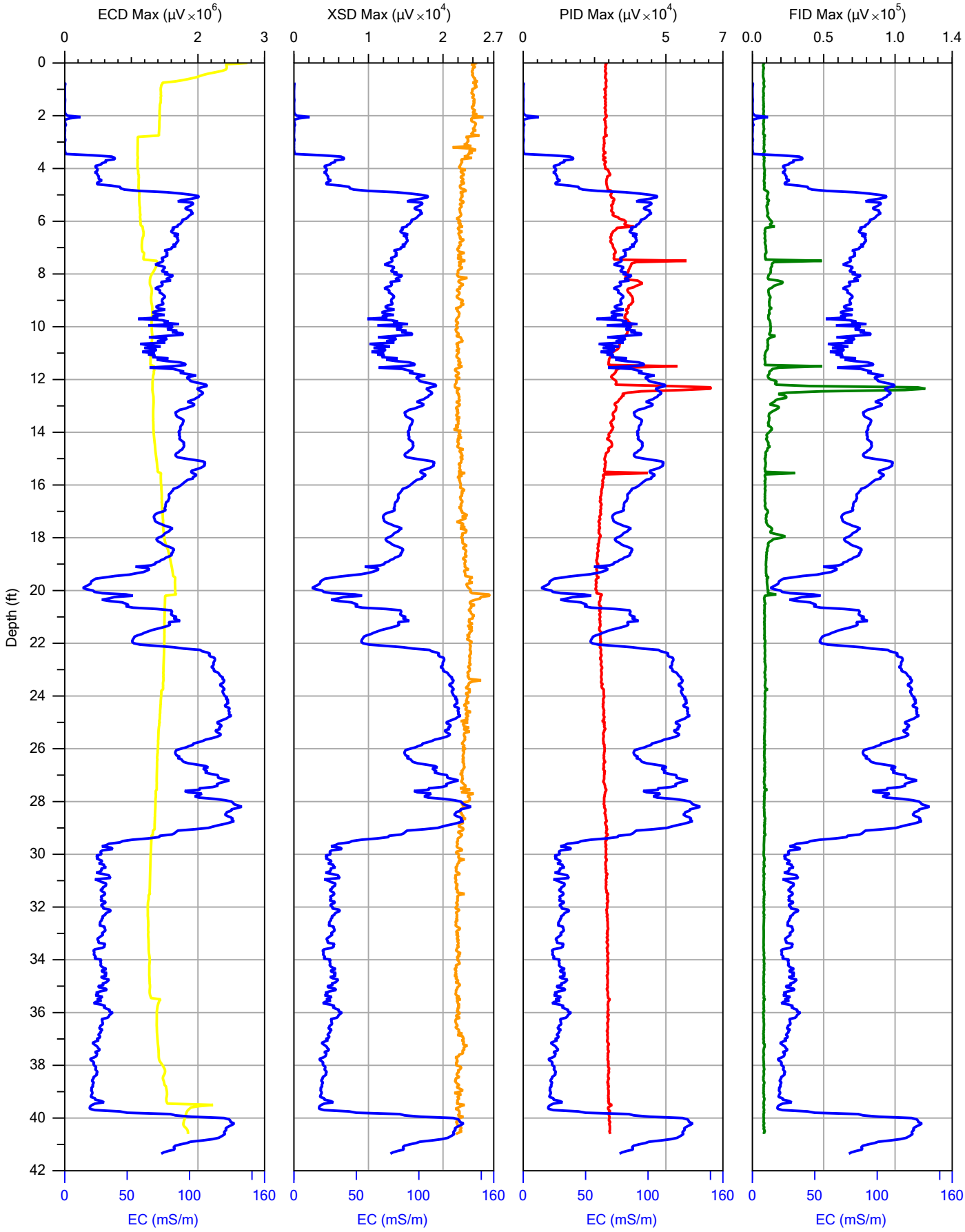

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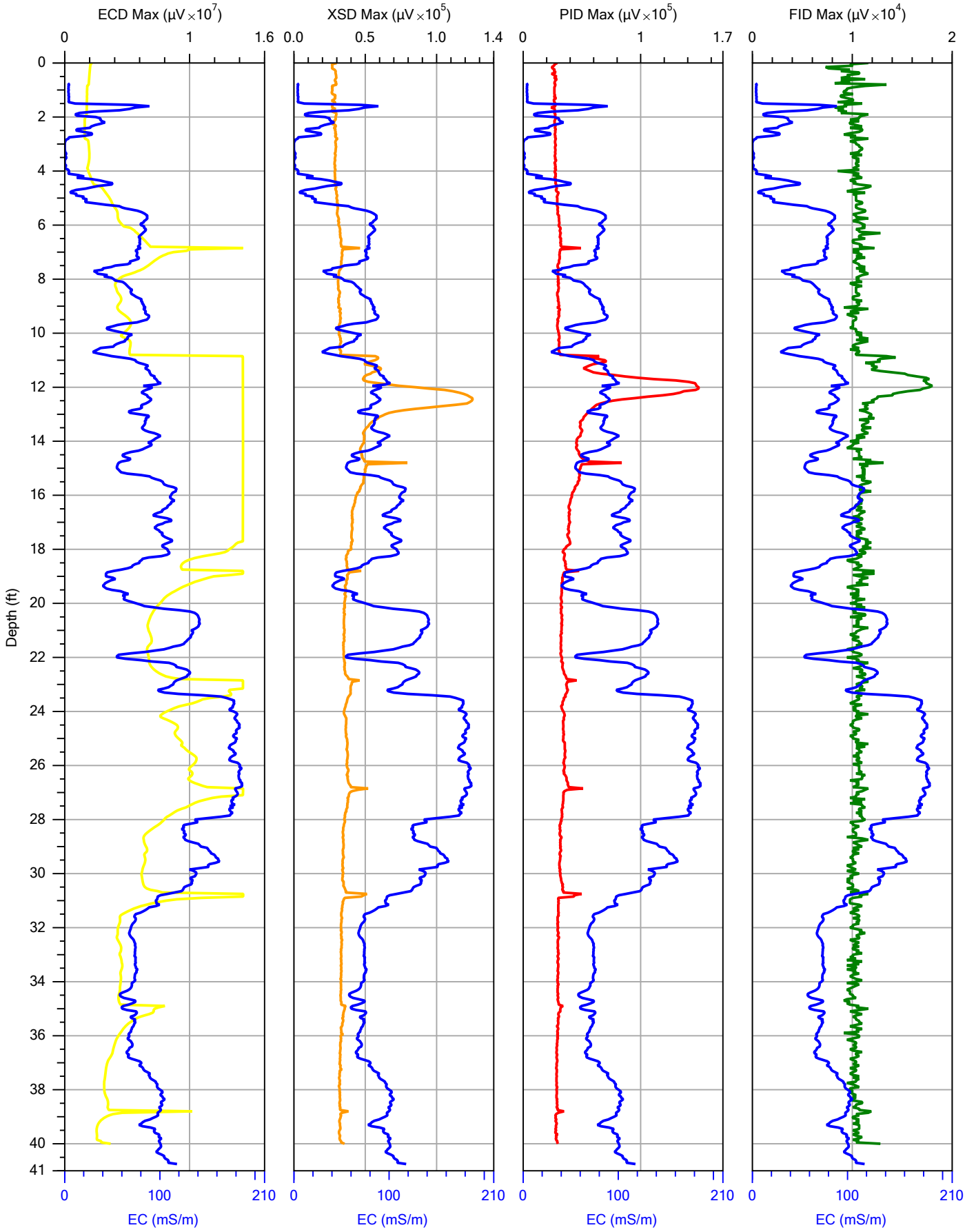
Project ID: James River Corporation		Client: P&D Environmental Inc.	Location:



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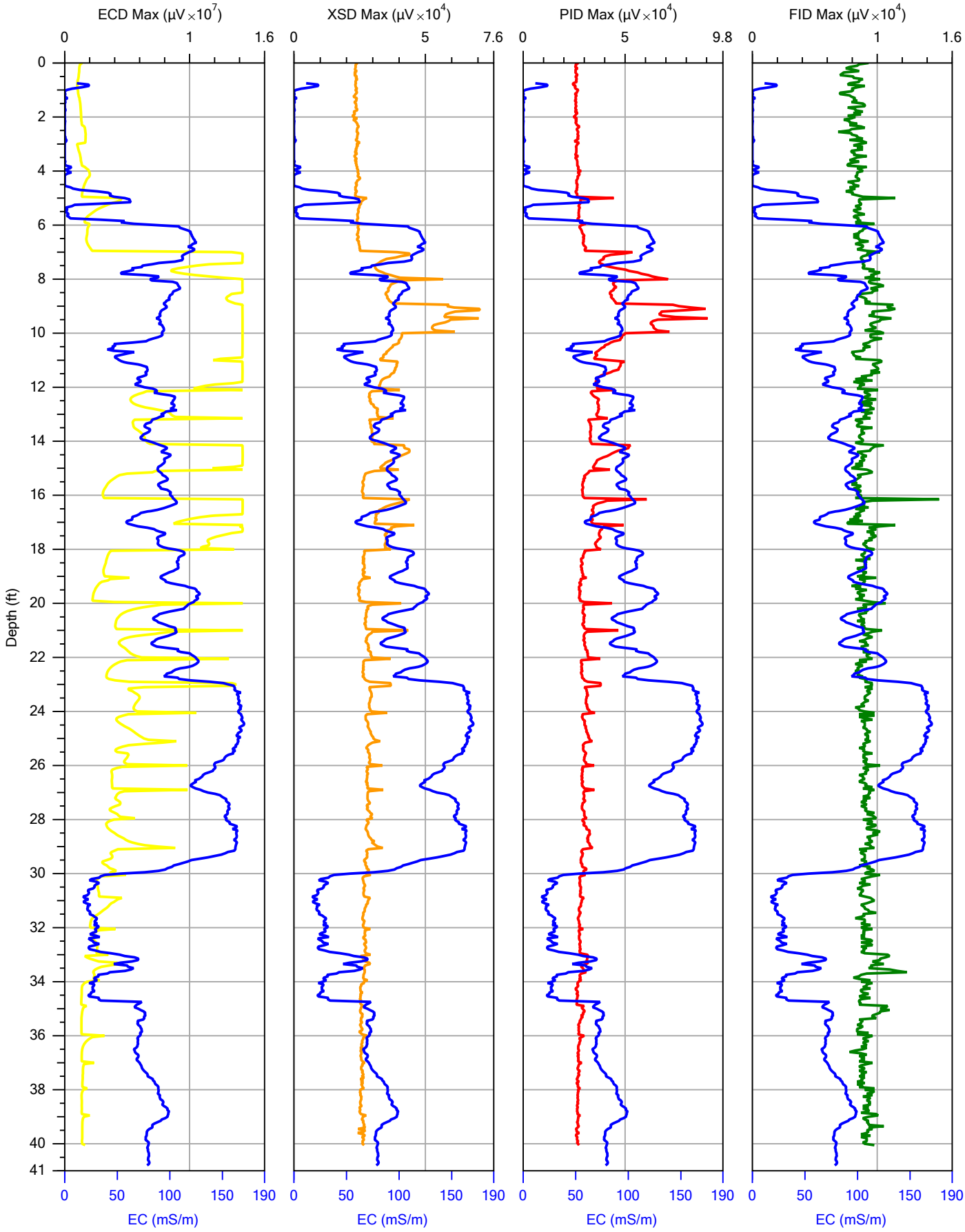
Project ID: James River Corporation		Client: P&D Environmental Inc.	Location:



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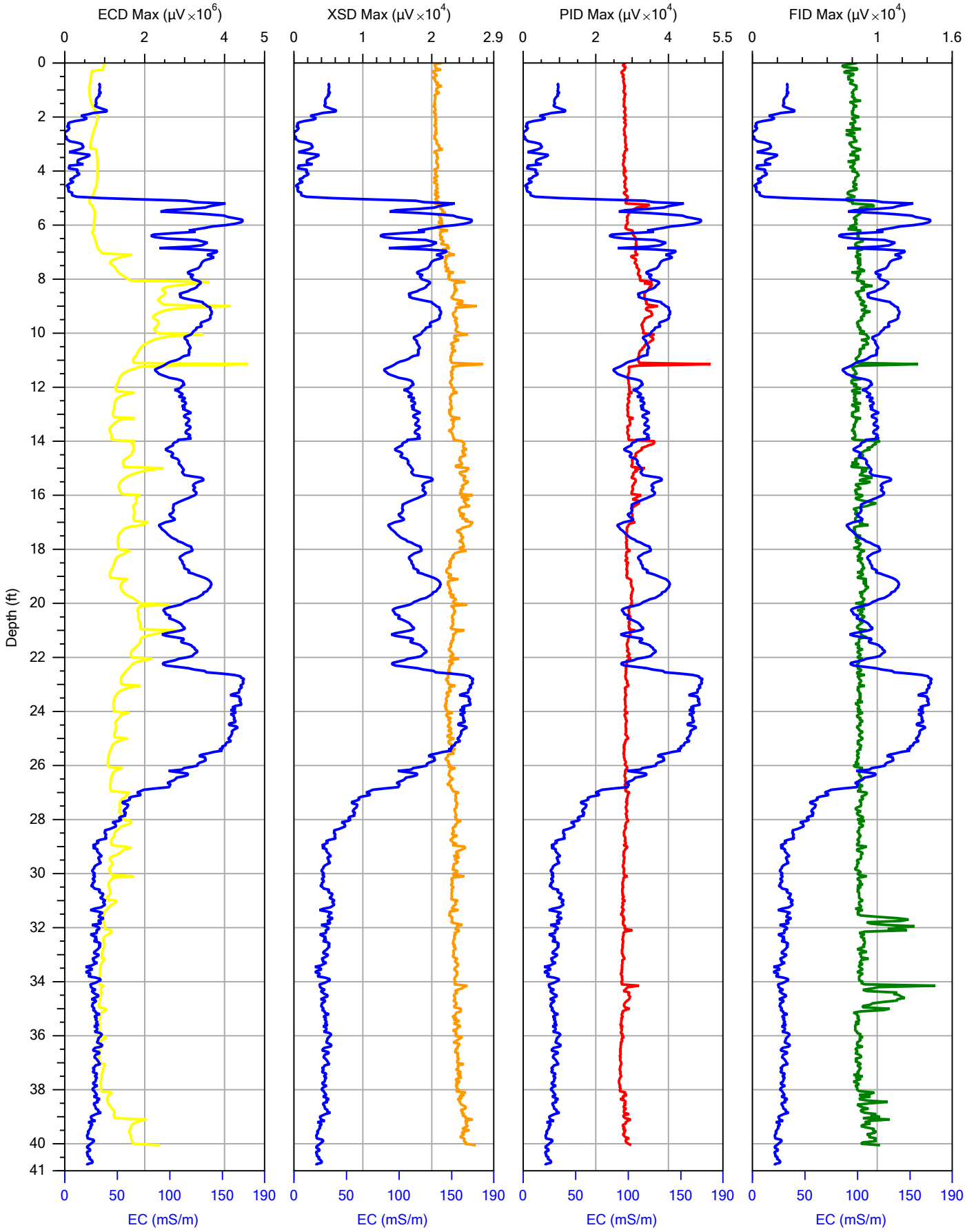

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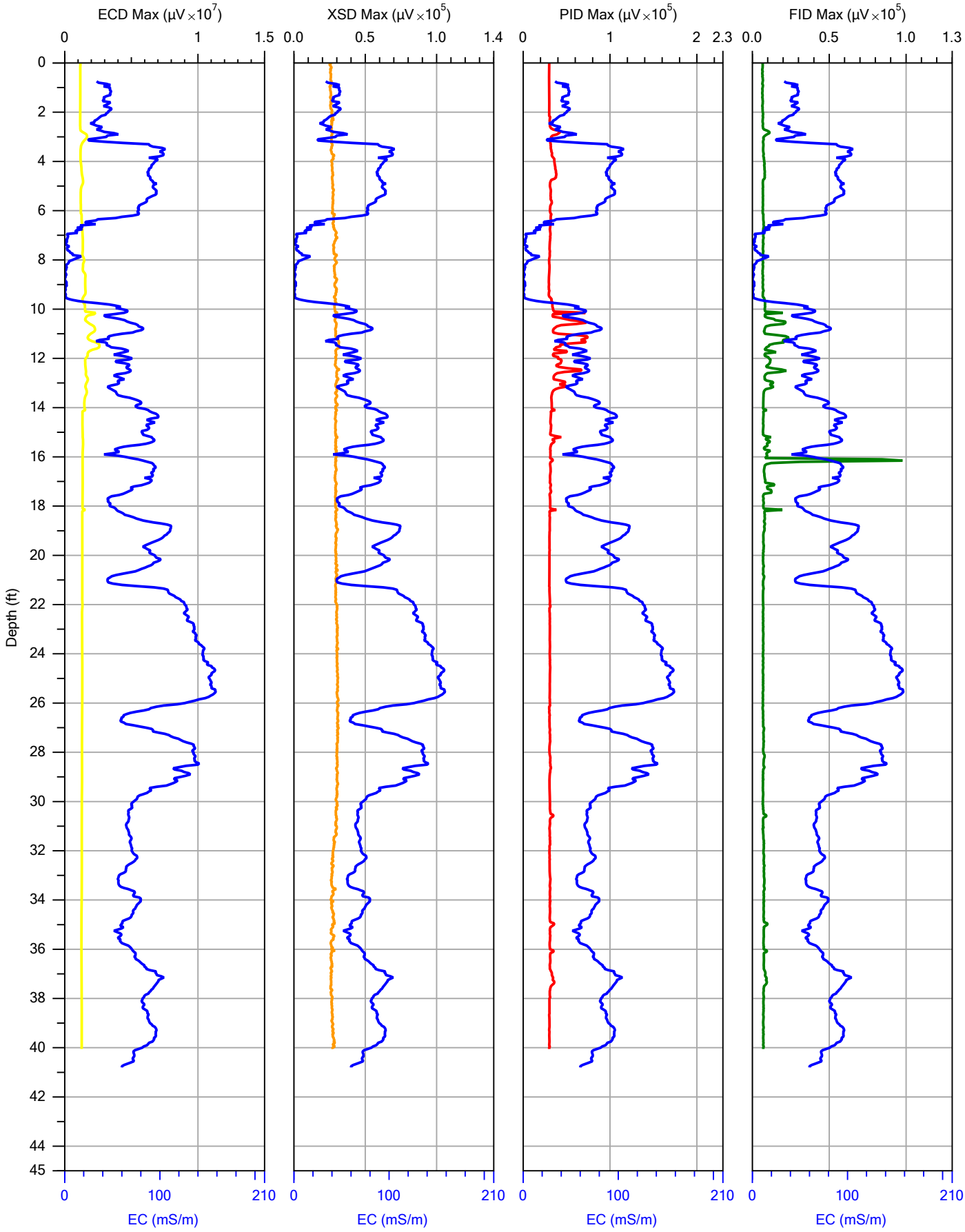
Project ID: James River Corporation		Client: P&D Environmental Inc.	Location:

Appendix B – MIP Boring Logs (Common-Scale)



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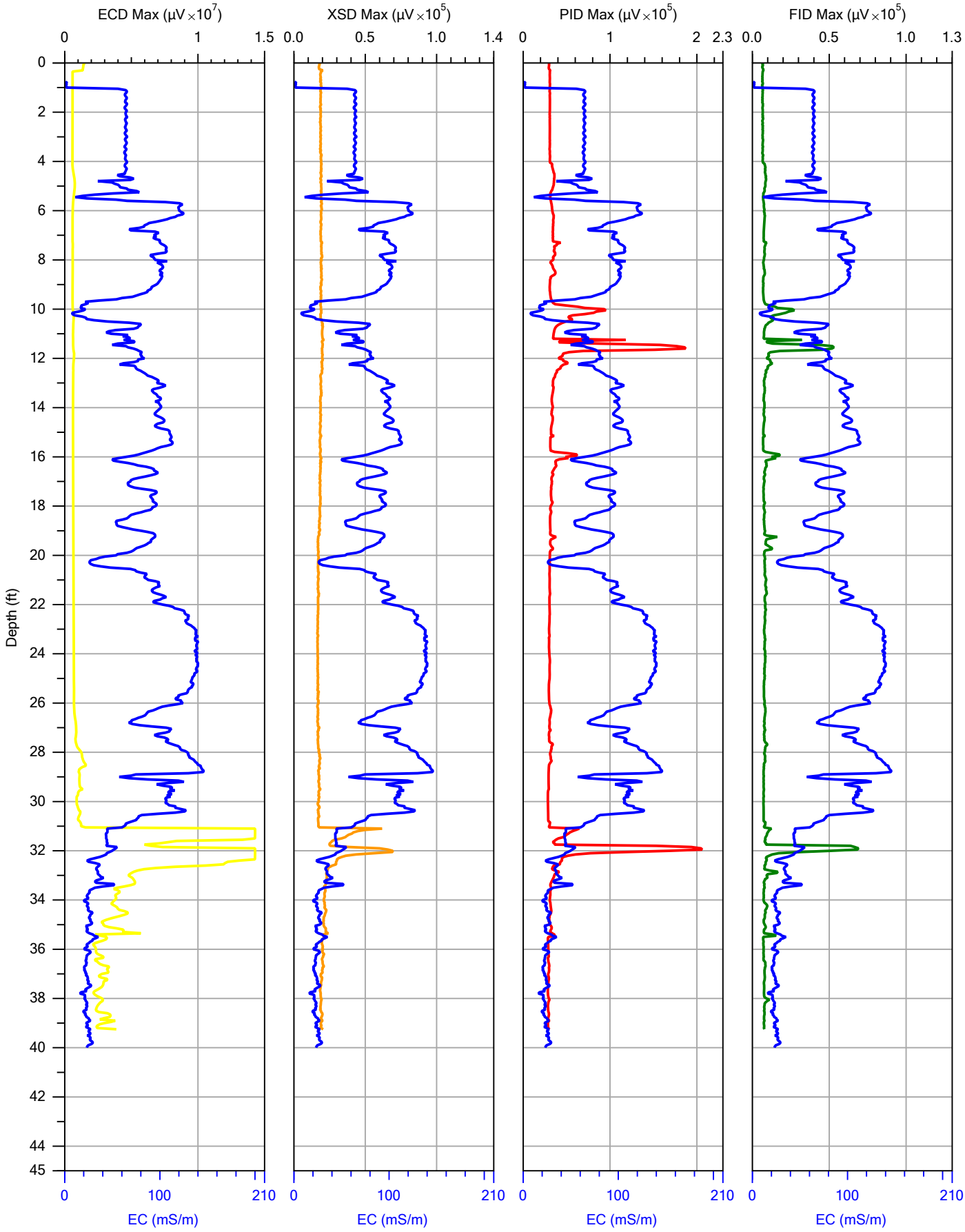
Project ID: James River Corporation		Client: P&D Environmental Inc.	Location:



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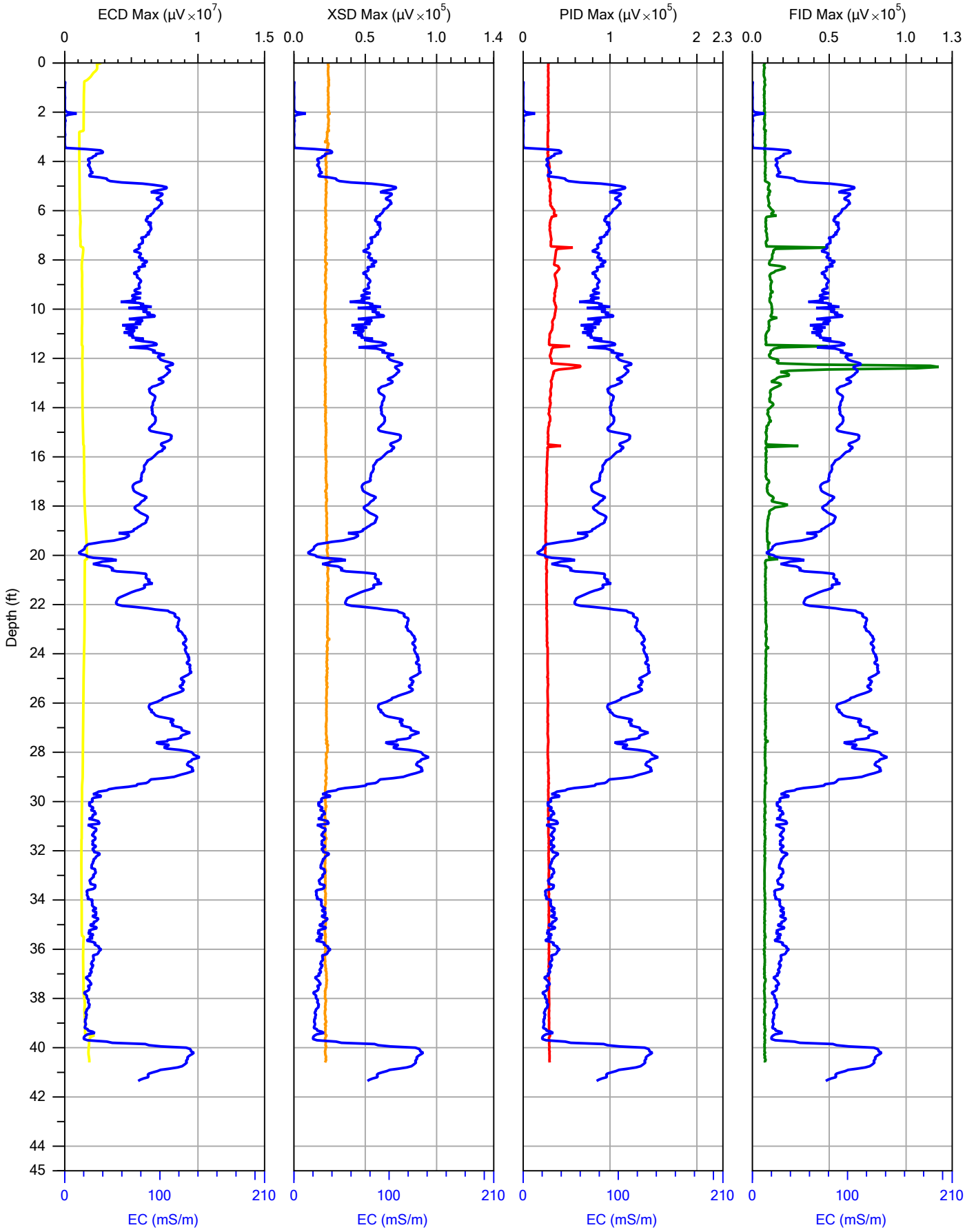
Project ID: James River Corporation		Client: P&D Environmental Inc.	Location:



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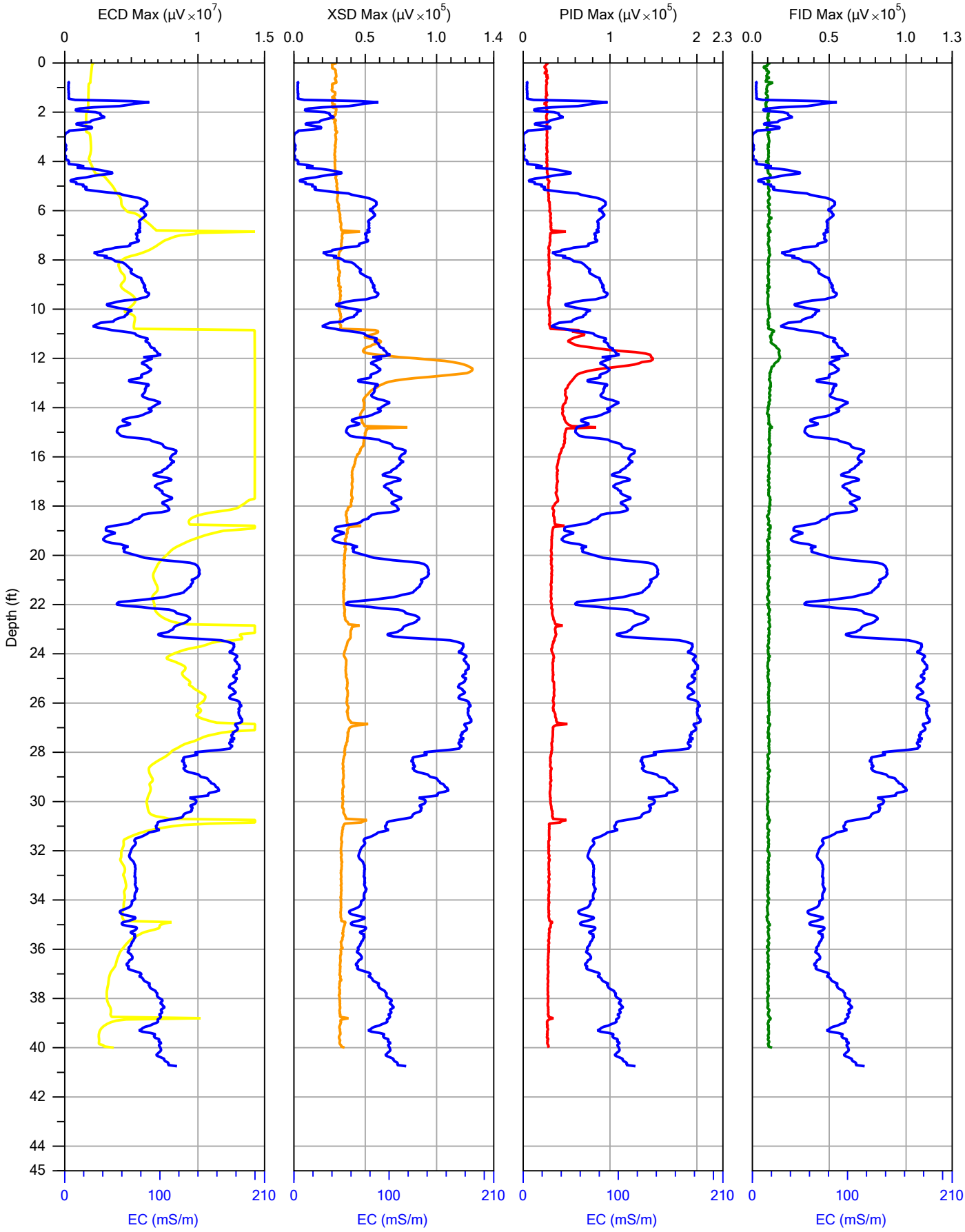

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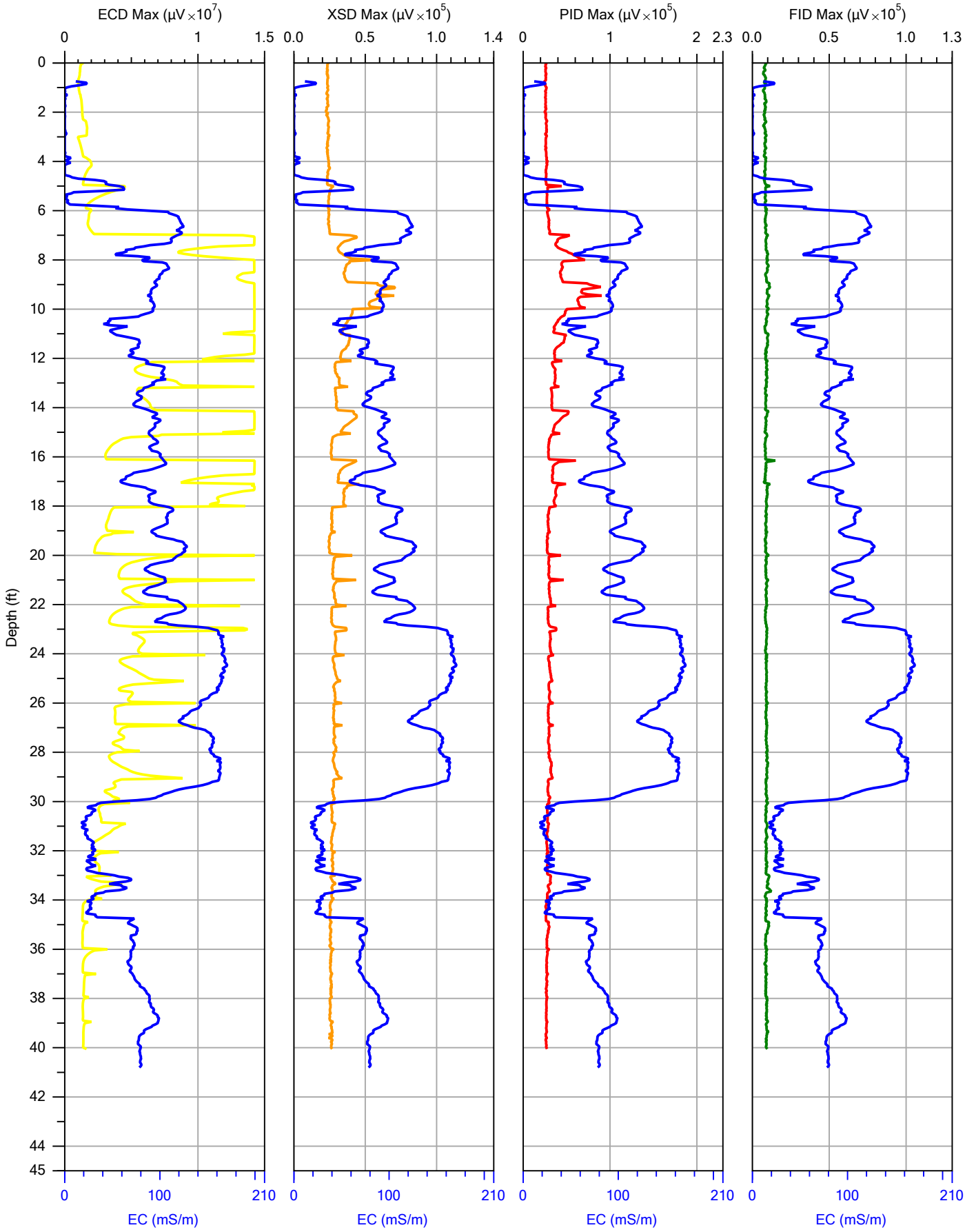

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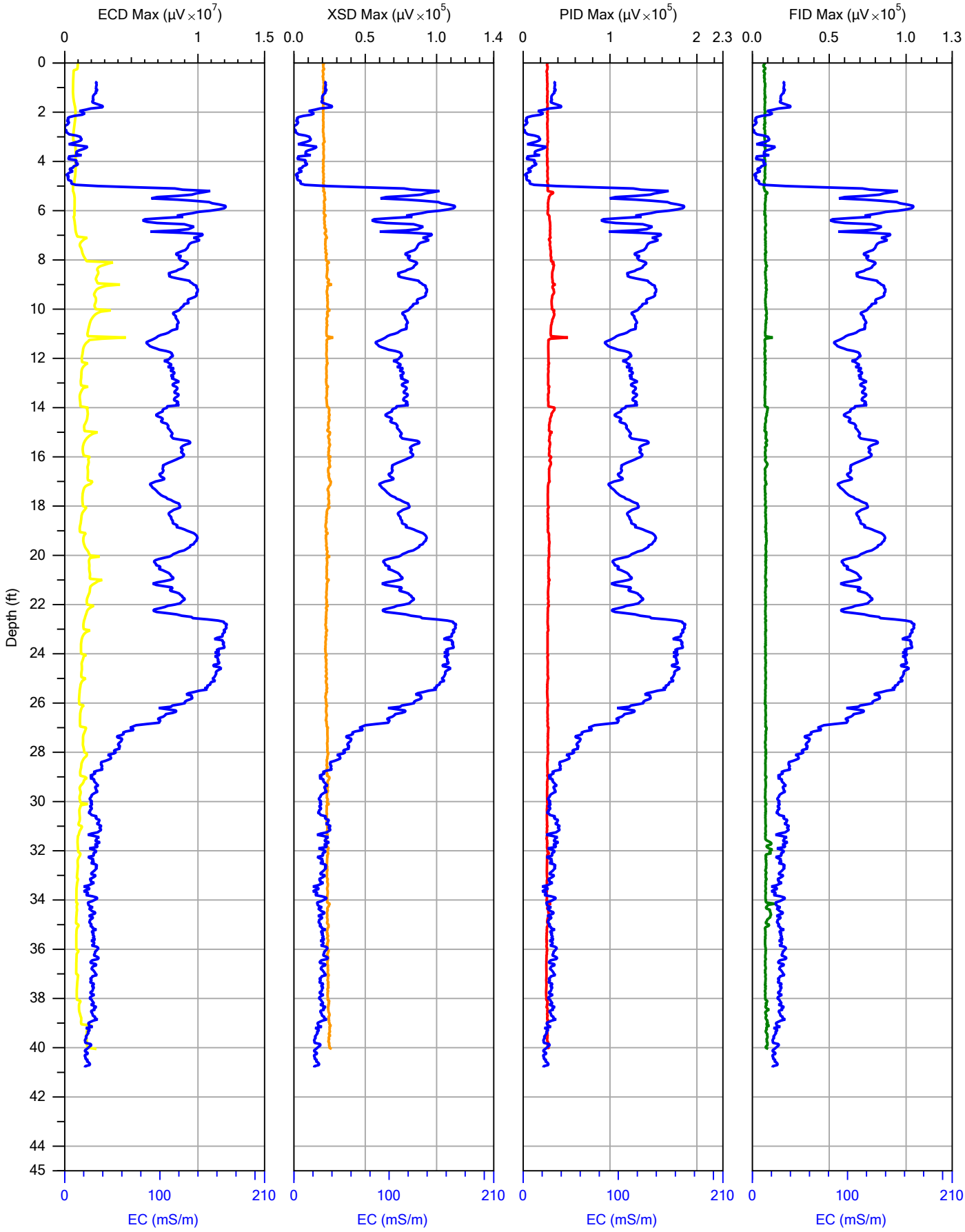

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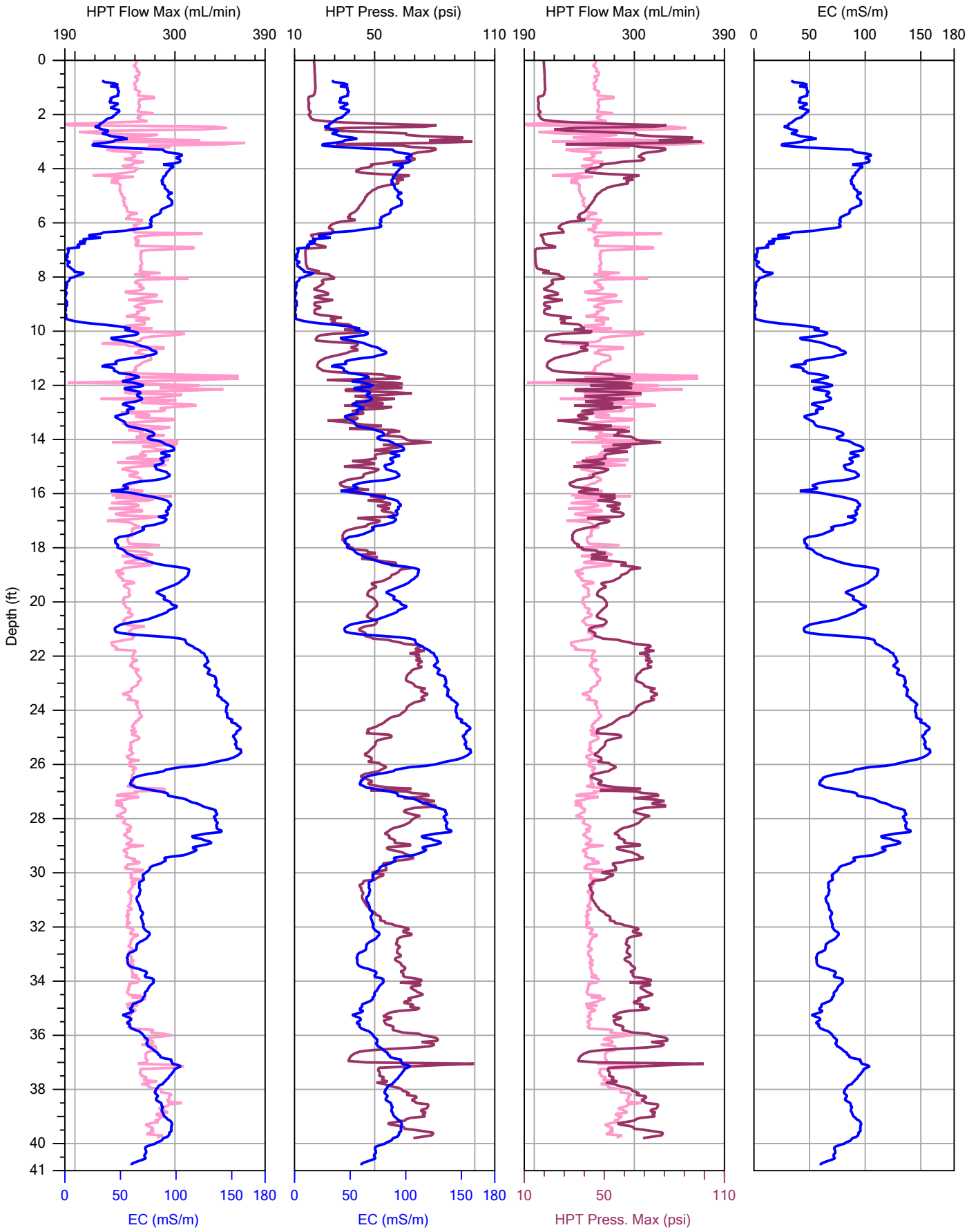
Appendix C – HPT Boring Logs



VIRONEX

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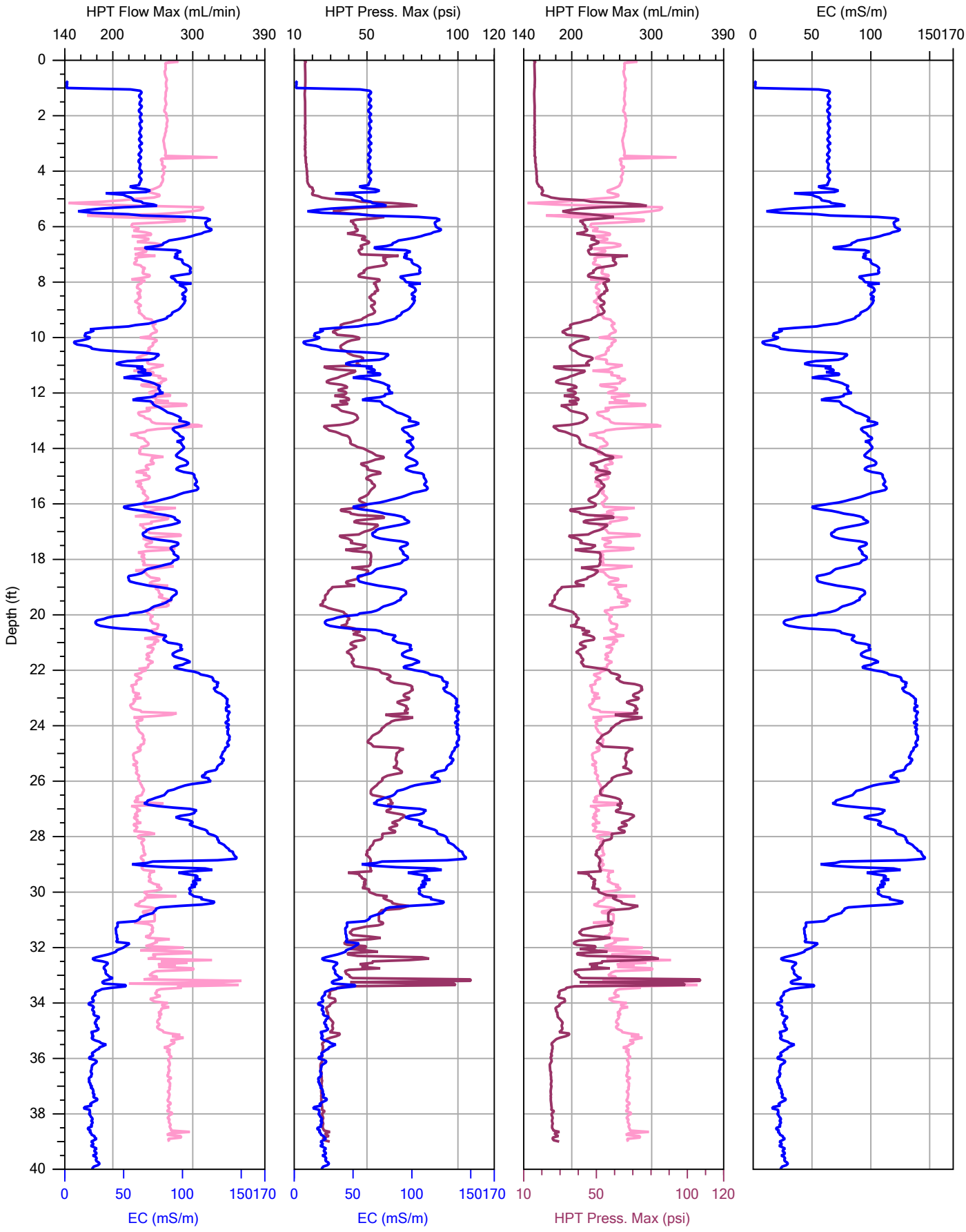
Project ID: James River Corporation	Client: P&D Environmental Inc.	Location:



VIRONEX

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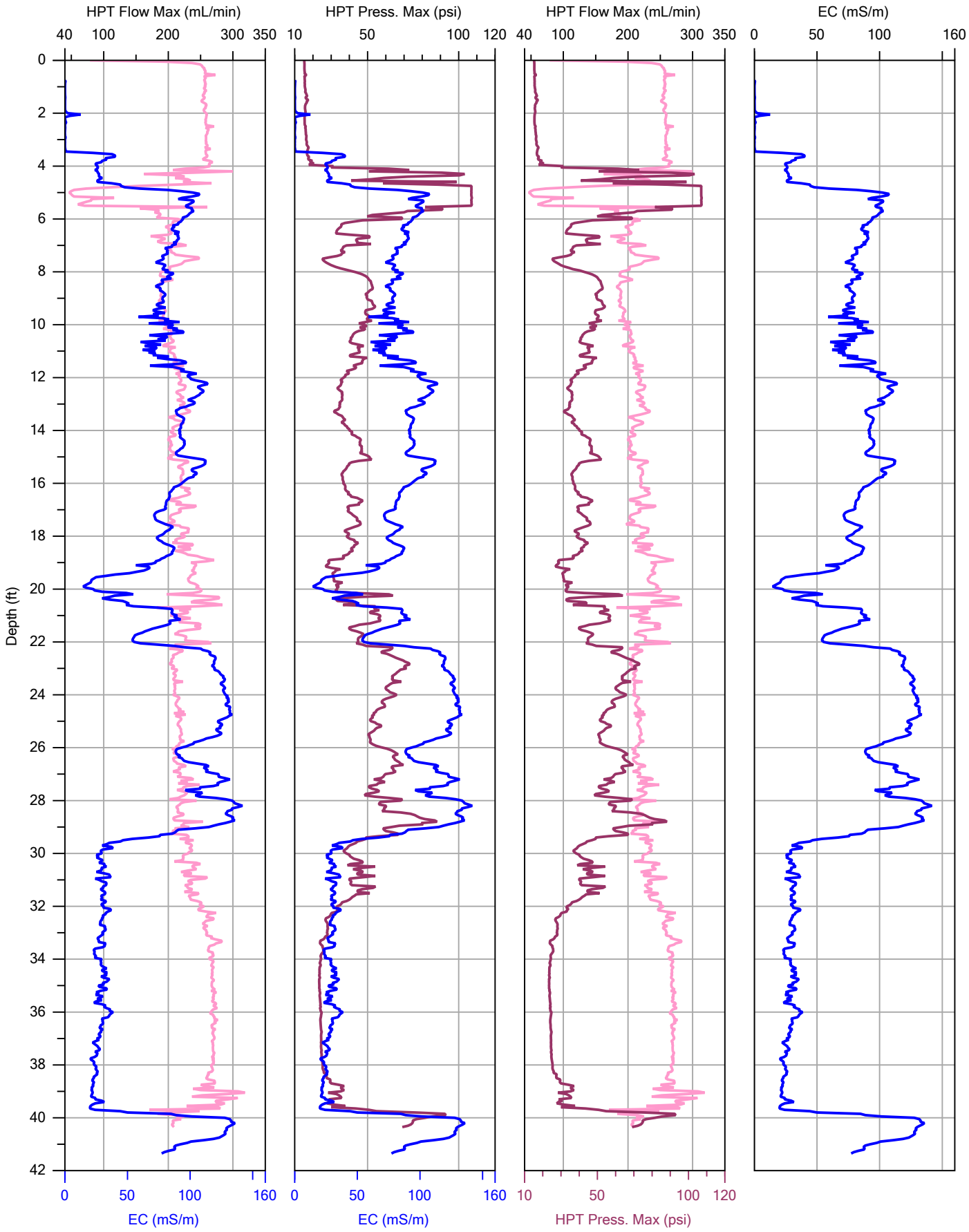
Project ID: James River Corporation	Client: P&D Environmental Inc.	Location:



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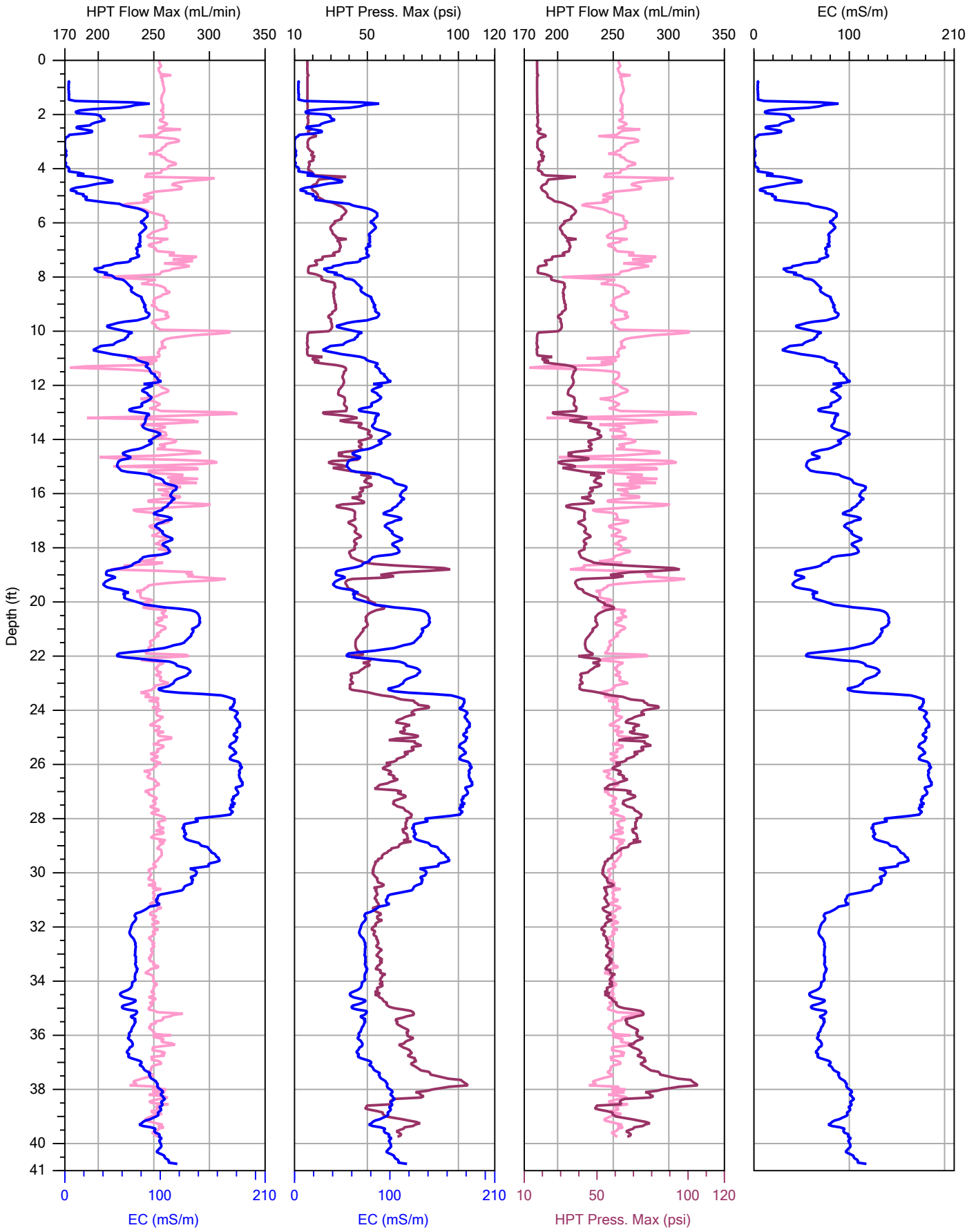
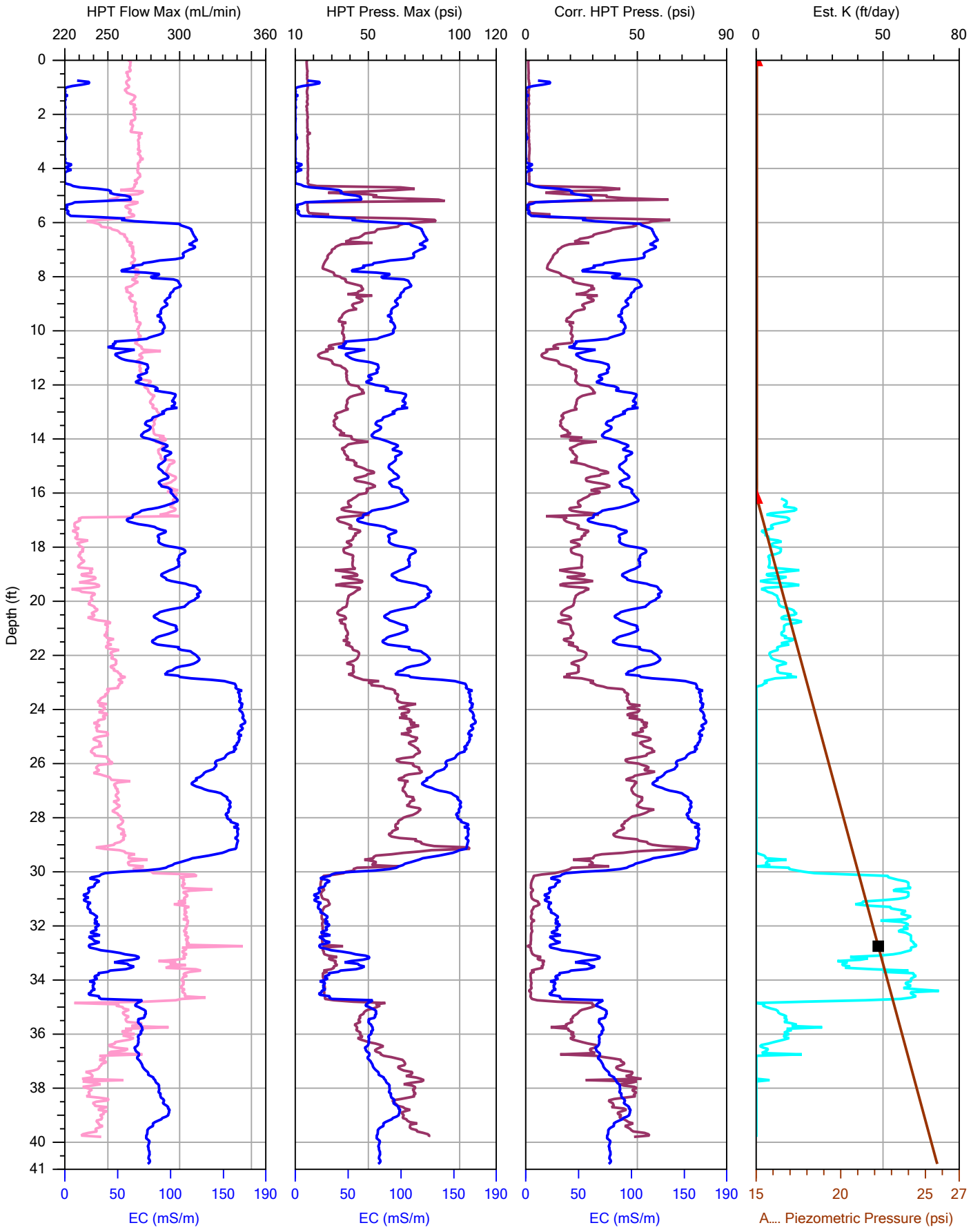
Company: Vironex Technical Services, LLC		Operator: Brett Baatrup	Date: 8/31/2015
Project ID: James River Corporation		Client: P&D Environmental Inc.	Location:



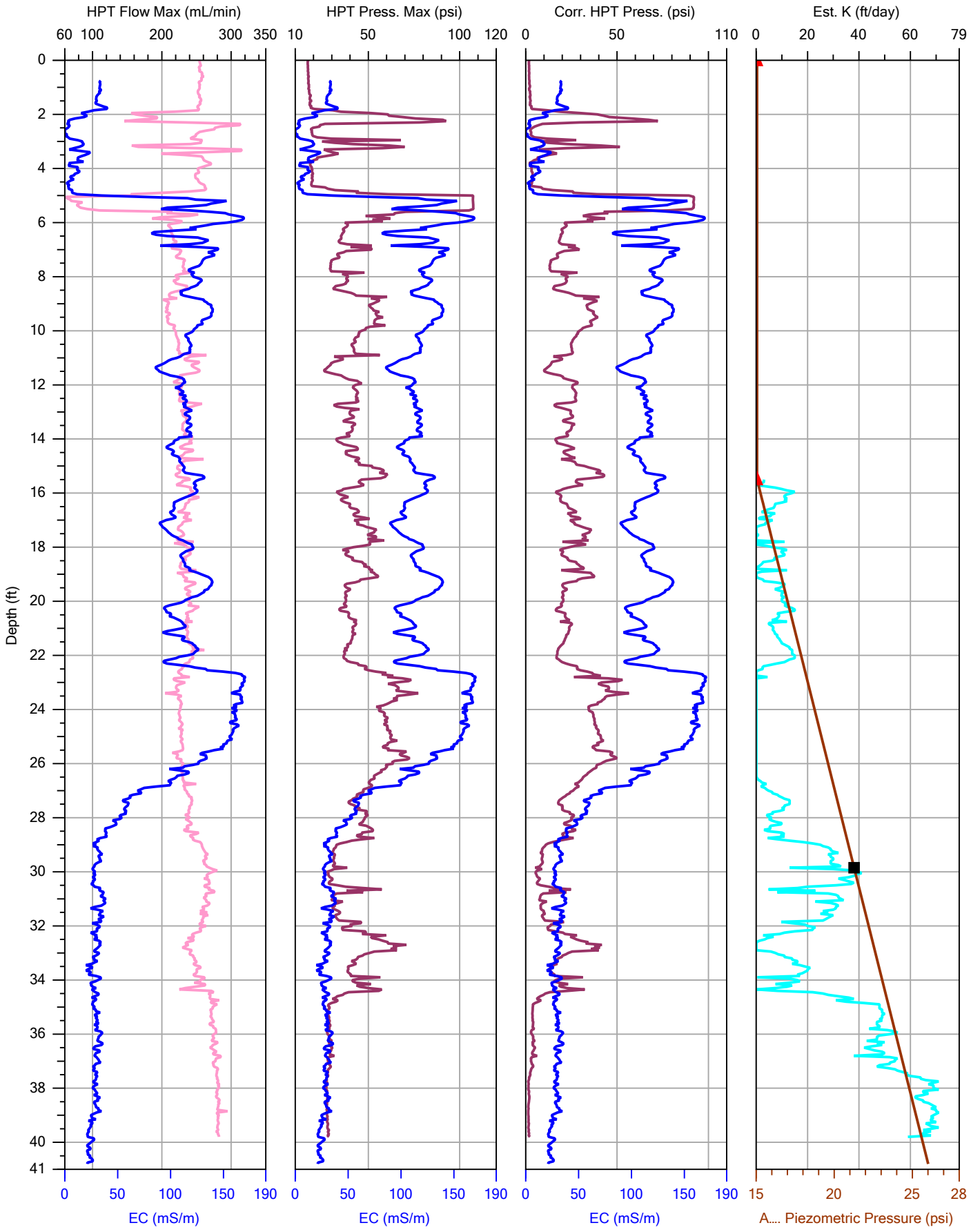
VIRONEX

		File: M4.MHP
Company: Vironex Technical Services, LLC	Operator: Brett Baatrup	Date: 8/31/2015
Project ID: James River Corporation	Client: P&D Environmental Inc.	Location:



VIRONEX

		File: M5.MHP
Company: Vironex Technical Services, LLC	Operator: Jeff Paul	Date: 9/3/2015
Project ID: James River Corporation	Client: P&D Environmental Inc.	Location:



VIRONEX

		File: M6.MHP
Company: Vironex Technical Services, LLC	Operator: Jeff Paul	Date: 9/3/2015
Project ID: James River Corporation	Client: P&D Environmental Inc.	Location:

APPENDIX B

Boring Logs

- **Continuously Cored Borehole M5 Boring Log**
- **M1 Through M6 Hydropunch Boring Logs**

Continuously Cored Borehole M5 Boring Log

P&D ENVIRONMENTAL, INC.

BORING NO.: M5	PROJECT NO.: 0660	PROJECT NAME: 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 142 ft. north and 31 ft. west of southeast corner of Moore Newton		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: JP	DATE & TIME STARTED: 09/8/15 0815	DATE & TIME FINISHED: 09/8/15 1200
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 40.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY:
FIRST WATER DEPTH: 17.0 Feet	NO. OF SAMPLES: None		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 0.5 ft. Concrete (6-inches)	Concrete		No Well Constructed		At a location approximately 4 ft. east of MIHPT borehole M5, borehole was continuously cored from 0.0 to 40.0 ft. using 5.0-foot long 4.0-inch O.D. Geoprobe dual walled drill rods containing a Geoprobe Macrocore barrel sampler. The sampler was lined with 4.8-foot long 2.5- inch O.D. transparent PVC tubes. Water encountered during drilling at 17.0 ft.
	0.5 to 6.0 ft. Brown gravelly silty sand (FILL).	FILL				
5						
	6.0 to 7.0 ft. Black clay (CL); medium stiff, moist. No odor. (0,0,100)					
	7.0 to 24.0 ft. Dark brown silty clay (CL), medium stiff, moist. No odor. (0,0,100)					
10					2.1	
15					0.80	
					1.2	
	Soft and wet between 17.0 and 20.0 ft.				0.3	
		CL				
20					0	
					0	
	24.0 to 25.0 ft. Black clay (CL); stiff, moist. No odor. (0,0,100)					
25						
	25.0 to 28.0 ft. Dark grayish-brown silty clay (CL); stiff, moist. No odor. (0,0,100)				0	
	28.0 to 30.0 ft. Olive-brown clay (CL); stiff, moist to wet, with orange mottling and shell fragments.				0	
30						

P&D ENVIRONMENTAL, INC.

BORING NO.: M5	PROJECT NO.: 0660	PROJECT NAME: 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 142 ft. north and 31 ft. west of southeast corner of Moore Newton		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: JP	DATE & TIME STARTED: 09/8/15 0815	DATE & TIME FINISHED: 09/8/15 1200
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 40.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY:
FIRST WATER DEPTH: 17.0 Feet	NO. OF SAMPLES: None		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	30.0 to 31.5 ft. Grayish-brown silty fine sand (SM); loose, saturated. No odor. (0,85,15)	SM		No Well Constructed	0	Borehole terminated at 40.0 ft. on 9/8/15.
	31.5.0 to 33.0 ft. Grayish-brown sandy gravel (GW); saturated, with some coarse sand. No odor. (60,35,5)	GW				
	33.0 to 33.5 ft. Brown silty clay (CL); soft, wet. No odor. (0,0,100)	CL				Borehole grouted on 9/8/15 using neat cement grout and the Hydropunch rods as a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency gave verbal authorization to grout the borehole.
	33.5 to 34.5 ft. Brown silty gravel (GM); saturated, with some coarse sand. No odor. (70,10,20)	GM				
35					0	
	34.5 to 40.0 ft. Brown silty clay (CL); medium stiff, wet to moist. No odor. (0,0,100)	CL				
40					0	
45						Drilling Notes: 1) Field estimates of percent gravel, sand, and fines are shown in parentheses. 2) Density determinations are qualitative and are not based on
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M1 Through M6 Hydropunch Boring Logs

P&D ENVIRONMENTAL, INC.

BORING NO.: M1	**PROJECT NO.:** 0660	**PROJECT NAME:** 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 259 ft. north and 8 ft. west of southeast corner of Bay Cities Produce		**ELEVATION AND DATUM:** None	
DRILLING AGENCY: Vironex, Inc.	**DRILLER:** Herb	**DATE & TIME STARTED:** 09/8/15 1445	**DATE & TIME FINISHED:** 09/11/15 1400
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 20.0 ft.	**BEDROCK DEPTH:** Not Encountered	**LOGGED BY:** MLBD	**CHECKED BY:**
FIRST WATER DEPTH: 16.6 ft.	**NO. OF SAMPLES:** 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
0	Concrete Slab (6.5-inches)			No Well Constructed		On 9/9/15 MiHpt borehole M1 was hand augered from 0.5 to 5.0 ft. to determine fill thickness, using a 3.5-inch O.D. hand auger. Fill material consisted of highly compacted dark brown gravelly silty sand from 0.5 to 5.0 ft. Native black silty clay encountered at 5.0 ft. On 9/8/15, at a location approximately 4 ft. north of MiHpt borehole M1, Geoprobe Macrocore drill rods with an expendable tip were pushed to 20.0 ft. The expendable tip was disloged and the drill rods were withdrawn from the borehole. Temporary 1-inch diameter slotted PVC casing was placed in borehole. Water level was measured at 16.6 ft. at 1638, and at 16.4 ft. at 1748 on 9/8/15. Approximately 0.2-gallon purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample M1-20.0W was collected at 1810 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 16.6 ft. at 1814 on 9/8/15. Borehole was grouted on 9/11/15 using neat cement grout and a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency gave verbal authorization to grout the borehole.
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P&D ENVIRONMENTAL, INC.

BORING NO.: M1	**PROJECT NO.:** 0660	**PROJECT NAME:** 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 251 ft. north and 8 ft. west of southeast corner of Bay Cities Produce		**ELEVATION AND DATUM:** None	
DRILLING AGENCY: Vironex, Inc.	**DRILLER:** Herb	**DATE & TIME STARTED:** 09/10/15 1500	**DATE & TIME FINISHED:** 09/11/15 1500
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: Hydropunch to 34.0 ft.	**BEDROCK DEPTH:** Not Encountered	**LOGGED BY:** MLBD	**CHECKED BY:**
FIRST WATER DEPTH: 16.3 ft.	**NO. OF SAMPLES:** 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	Concrete Slab (6.5-inches)			No Well Constructed		On 9/10/15, at a location approximately 4 ft. south of MiHpt borehole M1, a Hydropunch was pushed to 34.0 ft. Hydropunch seal integrity was confirmed using an electric depth to water indicator. The Hydropunch rods were then retracted to 30.0 ft. The Hydropunch rods were dry at 1530 and 1540. The water level in the Hydropunch rods was measured at 16.3 ft. at 1732 on 9/10/15. Approximately 0.3-gallon purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample M1-34.0W was collected at 1745 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 16.1 ft. at 1810 on 9/10/15. The Hydropunch borehole was grouted on 9/11/15 using neat cement grout and the Hydropunch rods as a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
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P&D ENVIRONMENTAL, INC.

BORING NO.: M2	**PROJECT NO.:** 0660	**PROJECT NAME:** 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 139 ft. north and 8 ft. west of southeast corner of Bay Cities Produce		**ELEVATION AND DATUM:** None	
DRILLING AGENCY: Vironex, Inc.	**DRILLER:** Herb	**DATE & TIME STARTED:** 09/8/15 1400	**DATE & TIME FINISHED:** 09/11/15 1415
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 20.0 ft.	**BEDROCK DEPTH:** Not Encountered	**LOGGED BY:** MLBD	**CHECKED BY:**
FIRST WATER DEPTH: 15.8 ft.	**NO. OF SAMPLES:** 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
0	Concrete Slab (7.0-inches)			No Well Constructed		On 9/4/15 MiHpt borehole M2 was continuously cored from 0.5 to 7.0 ft. to determine fill material thickness, using 5.0-foot long 2.0-inch O.D. Geoprobe Macrocore barrel sampler. The sampler was lined with 4.8-foot long 1.5-inch O.D. transparent PVC tubes. Fill material consisted of highly compacted dark brown gravelly silty sand from 0.5 to 5.0 ft. Native black silty clay encountered at 5.0 ft. On 9/8/15, at a location approximately 4 ft. north of MiHpt borehole M2, Geoprobe Macrocore drill rods with an expendable tip were pushed to 20.0 ft. The expendable tip was disloged and the drill rods were withdrawn from the borehole. Temporary 1-inch diameter slotted PVC casing was placed in borehole. Water level was measured at 15.8 ft. at 1635, and at 15.9 ft. at 1815 on 9/8/15. Approximately 0.3-gallon purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample M2-20.0W was collected at 1820 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 16.3 ft. at 1825 on 9/8/15. Borehole was grouted on 9/11/15 using neat cement grout and a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency gave verbal authorization to grout the borehole.
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P&D ENVIRONMENTAL, INC.

BORING NO.: M2	**PROJECT NO.:** 0660	**PROJECT NAME:** 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 131 ft. north and 8 ft. west of southeast corner of Bay Cities Produce		**ELEVATION AND DATUM:** None	
DRILLING AGENCY: Vironex, Inc.	**DRILLER:** Herb	**DATE & TIME STARTED:** 09/10/15 1600	**DATE & TIME FINISHED:** 09/11/15 1530
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: Hydropunch to 34.0 ft.	**BEDROCK DEPTH:** Not Encountered	**LOGGED BY:** MLBD	**CHECKED BY:**
FIRST WATER DEPTH: 16.6 ft.	**NO. OF SAMPLES:** 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
0	Concrete Slab (7.0-inches)			No Well Constructed		On 9/10/15, at a location approximately 4 ft. south of MiHpt borehole M2, a Hydropunch was pushed to 34.0 ft. Hydropunch seal integrity was confirmed using an electric depth to water indicator. The Hydropunch rods were then retracted to 30.0 ft. The water level in the Hydropunch rods was measured at 16.6 ft. at 1650, and and 16.2 at 1700 on 9/10/15. Approximately 0.3-gallon purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample M2-34.0W was collected at 1715 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 15.9 ft. at 1727 on 9/10/15. The Hydropunch borehole was grouted on 9/11/15 using neat cement grout and the Hydropunch rods as a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
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P&D ENVIRONMENTAL, INC.

BORING NO.: M3	PROJECT NO.: 0660	PROJECT NAME: 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 26 ft. north and 8 ft. west of southeast corner of Bay Cities Produce		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Herb	DATE & TIME STARTED: 09/8/15 1315	DATE & TIME FINISHED: 09/11/15 1430
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 20.0 ft.	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY:
FIRST WATER DEPTH: 15.6 ft.	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
0	Concrete Slab (4.5-inches)			No Well Constructed		On 8/31/15 MiHpt borehole M3 was hand augered from 0.5 to 5.0 ft. to determine fill material thickness, using a 3.5-inch O.D. hand auger. Fill material consisted of highly compacted dark brown gravelly silty sand from 0.5 to 5.0 ft. Native black silty clay encountered at 5.0 ft. On 9/8/15, at a location approximately 4 ft. south of MiHpt borehole M3, Geoprobe Macrocore drill rods with an expendable tip were pushed to 20.0 ft. The expendable tip was disloged and the drill rods were withdrawn from the borehole. Temporary 1-inch diameter slotted PVC casing was placed in borehole. Water level was measured at 15.6 ft. at 1630, and at 15.4 ft. at 1830 on 9/8/15. Approximately 0.2-gallon purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample M3-20.0W was collected at 1835 directly from the discharge tubing. Moderate hydraulic oil odor and sheen on sample. Sample tubing was very slippery from oil where tubing contacted groundwater. Water level was subsequently measured at 15.6 ft. at 1845 on 9/8/15. Borehole was grouted on 9/11/15 using neat cement grout and a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency gave verbal authorization to grout the borehole.
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P&D ENVIRONMENTAL, INC.

BORING NO.: M3	PROJECT NO.: 0660	PROJECT NAME: 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 34 ft. north and 8 ft. west of southeast corner of Bay Cities Produce		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Herb	DATE & TIME STARTED: 09/10/15 1710	DATE & TIME FINISHED: 09/11/15 1600
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: Hydropunch to 34.0 ft.	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY:
FIRST WATER DEPTH: 16.5 ft.	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	Concrete Slab (4.5-inches)			No Well Constructed		On 9/10/15, at a location approximately 4 ft. north of MiHpt borehole M3, a Hydropunch was pushed to 34.0 ft. Hydropunch seal integrity was confirmed using an electric depth to water indicator. The Hydropunch rods were then retracted to 30.0 ft. The water level in the Hydropunch rods was measured at 16.5 ft. at 1748, and and at 16.2 at 1758 on 9/10/15. Approximately 0.3-gallon purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample M3-34.0W was collected at 1815 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 16.1 ft. at 1832 on 9/10/15. The Hydropunch borehole was grouted on 9/11/15 using neat cement grout and the Hydropunch rods as a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
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P&D ENVIRONMENTAL, INC.

BORING NO.: M4	PROJECT NO.: 0660	PROJECT NAME: 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 267 ft. north and 22 ft. east of southwest corner of Moore Newton		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Herb	DATE & TIME STARTED: 09/4/15 0830	DATE & TIME FINISHED: 09/10/15 1630
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 20.0 ft.	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY:
FIRST WATER DEPTH: 16.8 ft.	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	Concrete Slab (12.0-inches)			No Well Constructed		On 8/31/15 MiHpt borehole M4 was hand augered from 1.0 to 4.0 ft. to determine fill material thickness, using 3.5-inch O.D. hand auger. Fill material consisted of highly compacted gray gravelly silty sand from 1.0 to 3.5 ft., and brown gravelly silty sand from 3.5 to 4.0 ft. Native black silty clay encountered at 4.0 ft. On 9/4/15, at a location approximately 4 ft. north of MiHpt borehole M4, a Hydropunch was pushed to 14.0 ft. Hydropunch seal integrity was confirmed using an electric depth to water indicator. The Hydropunch rods were then retracted to 10.0 ft. Hydropunch screen jammed. The Hydropunch and drilling rods were removed from the borehole and Temporary 1-inch diameter slotted PVC casing was placed in borehole on 9/4/15. Borehole was dry at 0903 and at 1730 on 9/4/15. On 9/8/15 following confirmation of no water in the PVC casing, temporary 1-inch diameter PVC casing was removed from the borehole and Geoprobe Macrocore drill rods with an expendable tip pushed to 20.0 ft. on 9/8/15 and slotted PVC casing placed in borehole. Water level was measured at 16.8 ft. at 1502, and at 16.8 ft. at 1916 on 9/8/15. Approximately 0.1-gallon purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample M4-20.0W was collected at 1925 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 17.1 ft. at 1936 on 9/8/15. Borehole was grouted on 9/10/15 using neat cement grout and a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency gave verbal authorization to grout the borehole.
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P&D ENVIRONMENTAL, INC.

BORING NO.: M4	**PROJECT NO.:** 0660	**PROJECT NAME:** 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 260 ft. north and 22 ft. east of southwest corner of Moore Newton		**ELEVATION AND DATUM:** None	
DRILLING AGENCY: Vironex, Inc.	**DRILLER:** Herb	**DATE & TIME STARTED:** 09/4/15 1130	**DATE & TIME FINISHED:** 09/8/15 1700
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: Hydropunch to 35.0 ft.	**BEDROCK DEPTH:** Not Encountered	**LOGGED BY:** MLBD	**CHECKED BY:**
FIRST WATER DEPTH: 17.1 ft.	**NO. OF SAMPLES:** 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
0	Concrete Slab (12.0-inches)			No Well Constructed		On 9/4/15, at a location approximately 3 ft. south of MiHpt borehole M4, a Hydropunch was pushed to 35.0 ft. Hydropunch seal integrity was confirmed using an electric depth to water indicator. The Hydropunch rods were jammed and Hydropunch screen was not exposed. Hydropunch rods were dry at 1205 and at 1215 on 9/4/15. On 9/8/15, the water level in the Hydropunch rods was measured at 17.1 ft. at 1040 on 9/8/15. Approximately 0.3-gallon purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample M4-35.0W was collected at 1600 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 26.1 ft. at 1608 on 9/8/15. The Hydropunch borehole was grouted on 9/8/15 using neat cement grout using a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency gave verbal authorization to grout the borehole.
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P&D ENVIRONMENTAL, INC.

BORING NO.: M5	PROJECT NO.: 0660	PROJECT NAME: 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 137 ft. north and 34 ft. west of southeast corner of Moore Newton		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Herb	DATE & TIME STARTED: 09/4/15 0915	DATE & TIME FINISHED: 09/10/15 1645
DRILLING EQUIPMENT: Geprobe 6610 DT Track Rig			
COMPLETION DEPTH: 20.0 ft.	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY:
FIRST WATER DEPTH: 17.6 ft.	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
0	Concrete Slab (6.0-inches)			No Well Constructed		On 9/3/15 MiHpt borehole M5 was hand augered from 0.5 to 4.0 ft. using a 3.5-inch O.D. hand auger. Borehole was continuously cored from 4.0 to 6.0 ft. using a 2.5-inch O.D. 5-foot long Geoprobe Macrocore barrel sampler. The sampler was lined with 4.8-foot long transparent PVC sleeves. The Macrocore barrel sampler was used due to difficulties hand augering in gravel. Fill material consisted of highly compacted brown gravelly silty sand from 0.5 to 6.0 ft. Native black silty clay encountered at 6.0 ft. On 9/4/15, at a location approximately 4 ft. south of MiHpt borehole M5, a Hydropunch was pushed to 15.0 ft. Hydropunch seal integrity was confirmed using an electric depth to water indicator. The Hydropunch rods were then retracted to 11.0 ft. to expose 4 feet of Hydropunch screen. Borehole was dry at 0920 and 1730 on 9/4/15. On 9/8/15 the absence of water in the Hydropunch was confirmed and Hydropunch was removed from the borehole. Geoprobe Macrocore drill rods with an expendable tip pushed in the same borehole to 20.0 ft. and then were removed from the borehole on 9/8/15 and 1-inch diameter slotted PVC casing placed in borehole. Borehole was dry at 1505 and at 1938 on 9/4/15. Water level was measured at 17.6 ft. at 1253, on 9/9/15. Water sample M5-20.0W was collected at 1415 directly from the discharge tubing using new unused disposable polyethylene tubing attached to a peristaltic pump. No odor or sheen on sample. Borehole dewatered at 1425 on 9/9/15. Borehole was grouted on 9/10/15 using neat cement grout and a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency gave verbal authorization to grout the borehole.
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P&D ENVIRONMENTAL, INC.

BORING NO.: M5	**PROJECT NO.:** 0660	**PROJECT NAME:** 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 146 ft. north and 34 ft. west of southeast corner of Moore Newton		**ELEVATION AND DATUM:** None	
DRILLING AGENCY: Vironex, Inc.	**DRILLER:** Herb	**DATE & TIME STARTED:** 09/4/15 1015	**DATE & TIME FINISHED:** 09/4/15 1730
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: Hydropunch to 34.0 ft.	**BEDROCK DEPTH:** Not Encountered	**LOGGED BY:** MLBD	**CHECKED BY:**
FIRST WATER DEPTH: 26.2 ft.	**NO. OF SAMPLES:** 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
5	Concrete Slab (6.0-inches)			No Well Constructed		On 9/4/15, at a location approximately 4 ft. north of MiHpt borehole M5, a Hydropunch was pushed to 34.0 ft. Hydropunch seal integrity was confirmed using an electric depth to water indicator. The Hydropunch rods were then retracted to 30.0 ft. The water level in the Hydropunch rods was measured at 26.2 ft. at 1042, and at 14.7 ft. at 1052 on 9/4/15. Approximately 0.3-gallon purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample M5-34.0W was collected at 1120 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 15.6 ft. at 1137 on 9/4/15. The Hydropunch borehole was grouted on 9/8/15 using neat cement grout and the Hydropunch rods as a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency gave verbal authorization to grout the borehole.
10						
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P&D ENVIRONMENTAL, INC.

BORING NO.: M6	PROJECT NO.: 0660	PROJECT NAME: 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 30 ft. north and 34 ft. west of southeast corner of Moore Newton		ELEVATION AND DATUM: None	
DRILLING AGENCY: Vironex, Inc.	DRILLER: Herb	DATE & TIME STARTED: 09/4/15 0950	DATE & TIME FINISHED: 09/10/15 1700
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: 20.0 ft.	BEDROCK DEPTH: Not Encountered	LOGGED BY: MLBD	CHECKED BY:
FIRST WATER DEPTH: 18.4 ft.	NO. OF SAMPLES: 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
5 10 15 20 25 30	Concrete Slab (6.5-inches)			No Well Constructed		On 9/3/15 MiHpt borehole M6 was continuously cored from 0.5 to 6.0 ft. to determine fill material thickness, using 5.0-foot long 2.0-inch O.D. Geoprobe Macrocore barrel sampler. The sampler was lined with 4.8-foot long 1.5-inch O.D. transparent PVC tubes. Fill material consisted of highly compacted dark brown gravelly silty sand from 0.5 to 6.0 ft. Native black silty clay encountered at 6.0 ft. On 9/4/15, at a location approximately 4 ft. north of MiHpt borehole M6, a Hydropunch was pushed to 14.0 ft. Hydropunch seal integrity was confirmed using an electric depth to water indicator. The Hydropunch rods were then retracted to 10.0 ft. Borehole was dry at 0959 and 1730 on 9/4/15. On 9/8/15 the absence of water in the Hydropunch was confirmed and Hydropunch removed from the borehole. Geoprobe Macrocore drill rods with an expendable tip pushed in the same borehole to 20.0 ft. and then removed from the borehole on 9/8/15 and 1-inch diameter slotted PVC casing placed in borehole. Water level was measured at 18.4 ft. at 1250 on 9/9/15. Borehole dewatered upon sample collection. Water sample M6-20.0W was collected at 1500 directly from the discharge tubing using new unused disposable polyethylene tubing attached to a peristaltic pump. No odor or sheen on sample. Borehole was grouted on 9/10/15 using neat cement grout and a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency gave verbal authorization to grout the borehole.

P&D ENVIRONMENTAL, INC.

BORING NO.: M6	**PROJECT NO.:** 0660	**PROJECT NAME:** 2101 Williams Street, San Leandro	
BORING LOCATION: Approximately 23 ft. north and 34 ft. west of southeast corner of Moore Newton		**ELEVATION AND DATUM:** None	
DRILLING AGENCY: Vironex, Inc.	**DRILLER:** Herb	**DATE & TIME STARTED:** 09/4/15 1330	**DATE & TIME FINISHED:** 09/8/15 1800
DRILLING EQUIPMENT: Geoprobe 6610 DT Track Rig			
COMPLETION DEPTH: Hydropunch to 32.0 ft.	**BEDROCK DEPTH:** Not Encountered	**LOGGED BY:** MLBD	**CHECKED BY:**
FIRST WATER DEPTH: 21.4 ft.	**NO. OF SAMPLES:** 1 Water		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
0	Concrete Slab (6.5-inches)			No Well Constructed		On 9/4/15, at a location approximately 3 ft. south of MiHpt borehole M6, a Hydropunch was pushed to 32.0 ft. Hydropunch seal integrity was confirmed using an electric depth to water indicator. The Hydropunch rods were then retracted to 28.0 ft. The water level in the Hydropunch rods was measured at 21.4 ft. at 1358, and at 16.8 ft. at 1408 on 9/4/15. Approximately 0.3-gallon purged from borehole prior to sample collection using new unused disposable polyethylene tubing attached to a peristaltic pump. Water sample M6-32.0W was collected at 1415 directly from the discharge tubing. No odor or sheen on sample. Water level was subsequently measured at 18.2 ft. at 1432 on 9/4/15. The Hydropunch borehole was grouted on 9/8/15 using neat cement grout and the Hydropunch rods as a tremie pipe. Mr. Steve Miller with the Alameda County Public Works Agency gave verbal authorization to grout the borehole.
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APPENDIX C

Laboratory Analytical Reports and Chain of Custody Documentation

- **McCampbell W/O # 1509352 - M1-20.0W Through M6-20.0W Groundwater Results**
- **McCampbell W/O # 1509408 - M1-34.0W, M2-34.0W, and M3-34.0W Groundwater Results**
- **McCampbell W/O # 1509352 A- M4-35.0W Groundwater Results**
- **McCampbell W/O # 1509195 - M5-34.0W and M6-32.0W Groundwater Results**

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1509352

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Paul King
Project P.O.:
Project Name: 0660; James River Corporation

Project Received: 09/10/2015

Analytical Report reviewed & approved for release on 09/17/2015 by:

Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0660; James River Corporation
WorkOrder: 1509352

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

b1	aqueous sample that contains greater than ~1 vol. % sediment

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M1-20.0 W	1509352-001A	Water	09/08/2015 16:10	GC16	110165

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	100	10	09/14/2015 15:36
tert-Amyl methyl ether (TAME)	ND	5.0	10	09/14/2015 15:36
Benzene	ND	5.0	10	09/14/2015 15:36
Bromobenzene	ND	5.0	10	09/14/2015 15:36
Bromochloromethane	ND	5.0	10	09/14/2015 15:36
Bromodichloromethane	ND	5.0	10	09/14/2015 15:36
Bromoform	ND	5.0	10	09/14/2015 15:36
Bromomethane	ND	5.0	10	09/14/2015 15:36
2-Butanone (MEK)	ND	20	10	09/14/2015 15:36
t-Butyl alcohol (TBA)	ND	20	10	09/14/2015 15:36
n-Butyl benzene	ND	5.0	10	09/14/2015 15:36
sec-Butyl benzene	ND	5.0	10	09/14/2015 15:36
tert-Butyl benzene	ND	5.0	10	09/14/2015 15:36
Carbon Disulfide	ND	5.0	10	09/14/2015 15:36
Carbon Tetrachloride	ND	5.0	10	09/14/2015 15:36
Chlorobenzene	ND	5.0	10	09/14/2015 15:36
Chloroethane	ND	5.0	10	09/14/2015 15:36
Chloroform	ND	5.0	10	09/14/2015 15:36
Chloromethane	ND	5.0	10	09/14/2015 15:36
2-Chlorotoluene	ND	5.0	10	09/14/2015 15:36
4-Chlorotoluene	ND	5.0	10	09/14/2015 15:36
Dibromochloromethane	ND	5.0	10	09/14/2015 15:36
1,2-Dibromo-3-chloropropane	ND	2.0	10	09/14/2015 15:36
1,2-Dibromoethane (EDB)	ND	5.0	10	09/14/2015 15:36
Dibromomethane	ND	5.0	10	09/14/2015 15:36
1,2-Dichlorobenzene	ND	5.0	10	09/14/2015 15:36
1,3-Dichlorobenzene	ND	5.0	10	09/14/2015 15:36
1,4-Dichlorobenzene	ND	5.0	10	09/14/2015 15:36
Dichlorodifluoromethane	ND	5.0	10	09/14/2015 15:36
1,1-Dichloroethane	ND	5.0	10	09/14/2015 15:36
1,2-Dichloroethane (1,2-DCA)	ND	5.0	10	09/14/2015 15:36
1,1-Dichloroethene	ND	5.0	10	09/14/2015 15:36
cis-1,2-Dichloroethene	ND	5.0	10	09/14/2015 15:36
trans-1,2-Dichloroethene	ND	5.0	10	09/14/2015 15:36
1,2-Dichloropropane	ND	5.0	10	09/14/2015 15:36
1,3-Dichloropropane	ND	5.0	10	09/14/2015 15:36
2,2-Dichloropropane	ND	5.0	10	09/14/2015 15:36

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M1-20.0 W	**1509352-001A**	**Water**	**09/08/2015 16:10**	**GC16**	**110165**

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	5.0	10	09/14/2015 15:36
cis-1,3-Dichloropropene	ND	5.0	10	09/14/2015 15:36
trans-1,3-Dichloropropene	ND	5.0	10	09/14/2015 15:36
Diisopropyl ether (DIPE)	ND	5.0	10	09/14/2015 15:36
Ethylbenzene	ND	5.0	10	09/14/2015 15:36
Ethyl tert-butyl ether (ETBE)	ND	5.0	10	09/14/2015 15:36
Freon 113	ND	5.0	10	09/14/2015 15:36
Hexachlorobutadiene	ND	5.0	10	09/14/2015 15:36
Hexachloroethane	ND	5.0	10	09/14/2015 15:36
2-Hexanone	ND	5.0	10	09/14/2015 15:36
Isopropylbenzene	ND	5.0	10	09/14/2015 15:36
4-Isopropyl toluene	ND	5.0	10	09/14/2015 15:36
Methyl-t-butyl ether (MTBE)	**110**	5.0	10	09/14/2015 15:36
Methylene chloride	ND	5.0	10	09/14/2015 15:36
4-Methyl-2-pentanone (MIBK)	ND	5.0	10	09/14/2015 15:36
Naphthalene	ND	5.0	10	09/14/2015 15:36
n-Propyl benzene	ND	5.0	10	09/14/2015 15:36
Styrene	ND	5.0	10	09/14/2015 15:36
1,1,1,2-Tetrachloroethane	ND	5.0	10	09/14/2015 15:36
1,1,2,2-Tetrachloroethane	ND	5.0	10	09/14/2015 15:36
Tetrachloroethene	ND	5.0	10	09/14/2015 15:36
Toluene	ND	5.0	10	09/14/2015 15:36
1,2,3-Trichlorobenzene	ND	5.0	10	09/14/2015 15:36
1,2,4-Trichlorobenzene	ND	5.0	10	09/14/2015 15:36
1,1,1-Trichloroethane	ND	5.0	10	09/14/2015 15:36
1,1,2-Trichloroethane	ND	5.0	10	09/14/2015 15:36
Trichloroethene	ND	5.0	10	09/14/2015 15:36
Trichlorofluoromethane	ND	5.0	10	09/14/2015 15:36
1,2,3-Trichloropropane	ND	5.0	10	09/14/2015 15:36
1,2,4-Trimethylbenzene	ND	5.0	10	09/14/2015 15:36
1,3,5-Trimethylbenzene	ND	5.0	10	09/14/2015 15:36
Vinyl Chloride	ND	5.0	10	09/14/2015 15:36
Xylenes, Total	ND	5.0	10	09/14/2015 15:36

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M1-20.0 W	1509352-001A	Water	09/08/2015 16:10	GC16	110165

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	105	70-130		09/14/2015 15:36
Toluene-d8	98	70-130		09/14/2015 15:36
4-BFB	80	70-130		09/14/2015 15:36

Analyst(s): KF Analytical Comments: b1

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M2-20.0 W	1509352-002A	Water	09/08/2015 18:20	GC16	110165

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	25	2.5	09/14/2015 16:19
tert-Amyl methyl ether (TAME)	**1.4**	1.2	2.5	09/14/2015 16:19
Benzene	ND	1.2	2.5	09/14/2015 16:19
Bromobenzene	ND	1.2	2.5	09/14/2015 16:19
Bromochloromethane	ND	1.2	2.5	09/14/2015 16:19
Bromodichloromethane	ND	1.2	2.5	09/14/2015 16:19
Bromoform	ND	1.2	2.5	09/14/2015 16:19
Bromomethane	ND	1.2	2.5	09/14/2015 16:19
2-Butanone (MEK)	ND	5.0	2.5	09/14/2015 16:19
t-Butyl alcohol (TBA)	ND	5.0	2.5	09/14/2015 16:19
n-Butyl benzene	ND	1.2	2.5	09/14/2015 16:19
sec-Butyl benzene	ND	1.2	2.5	09/14/2015 16:19
tert-Butyl benzene	ND	1.2	2.5	09/14/2015 16:19
Carbon Disulfide	ND	1.2	2.5	09/14/2015 16:19
Carbon Tetrachloride	ND	1.2	2.5	09/14/2015 16:19
Chlorobenzene	ND	1.2	2.5	09/14/2015 16:19
Chloroethane	ND	1.2	2.5	09/14/2015 16:19
Chloroform	ND	1.2	2.5	09/14/2015 16:19
Chloromethane	ND	1.2	2.5	09/14/2015 16:19
2-Chlorotoluene	ND	1.2	2.5	09/14/2015 16:19
4-Chlorotoluene	ND	1.2	2.5	09/14/2015 16:19
Dibromochloromethane	ND	1.2	2.5	09/14/2015 16:19
1,2-Dibromo-3-chloropropane	ND	0.50	2.5	09/14/2015 16:19
1,2-Dibromoethane (EDB)	ND	1.2	2.5	09/14/2015 16:19
Dibromomethane	ND	1.2	2.5	09/14/2015 16:19
1,2-Dichlorobenzene	ND	1.2	2.5	09/14/2015 16:19
1,3-Dichlorobenzene	ND	1.2	2.5	09/14/2015 16:19
1,4-Dichlorobenzene	ND	1.2	2.5	09/14/2015 16:19
Dichlorodifluoromethane	ND	1.2	2.5	09/14/2015 16:19
1,1-Dichloroethane	ND	1.2	2.5	09/14/2015 16:19
1,2-Dichloroethane (1,2-DCA)	ND	1.2	2.5	09/14/2015 16:19
1,1-Dichloroethene	ND	1.2	2.5	09/14/2015 16:19
cis-1,2-Dichloroethene	ND	1.2	2.5	09/14/2015 16:19
trans-1,2-Dichloroethene	ND	1.2	2.5	09/14/2015 16:19
1,2-Dichloropropane	ND	1.2	2.5	09/14/2015 16:19
1,3-Dichloropropane	ND	1.2	2.5	09/14/2015 16:19
2,2-Dichloropropane	ND	1.2	2.5	09/14/2015 16:19

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M2-20.0 W	1509352-002A	Water	09/08/2015 18:20	GC16	110165

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	1.2	2.5	09/14/2015 16:19
cis-1,3-Dichloropropene	ND	1.2	2.5	09/14/2015 16:19
trans-1,3-Dichloropropene	ND	1.2	2.5	09/14/2015 16:19
Diisopropyl ether (DIPE)	ND	1.2	2.5	09/14/2015 16:19
Ethylbenzene	ND	1.2	2.5	09/14/2015 16:19
Ethyl tert-butyl ether (ETBE)	ND	1.2	2.5	09/14/2015 16:19
Freon 113	ND	1.2	2.5	09/14/2015 16:19
Hexachlorobutadiene	ND	1.2	2.5	09/14/2015 16:19
Hexachloroethane	ND	1.2	2.5	09/14/2015 16:19
2-Hexanone	ND	1.2	2.5	09/14/2015 16:19
Isopropylbenzene	ND	1.2	2.5	09/14/2015 16:19
4-Isopropyl toluene	ND	1.2	2.5	09/14/2015 16:19
Methyl-t-butyl ether (MTBE)	**54**	1.2	2.5	09/14/2015 16:19
Methylene chloride	ND	1.2	2.5	09/14/2015 16:19
4-Methyl-2-pentanone (MIBK)	ND	1.2	2.5	09/14/2015 16:19
Naphthalene	ND	1.2	2.5	09/14/2015 16:19
n-Propyl benzene	ND	1.2	2.5	09/14/2015 16:19
Styrene	ND	1.2	2.5	09/14/2015 16:19
1,1,1,2-Tetrachloroethane	ND	1.2	2.5	09/14/2015 16:19
1,1,2,2-Tetrachloroethane	ND	1.2	2.5	09/14/2015 16:19
Tetrachloroethene	ND	1.2	2.5	09/14/2015 16:19
Toluene	ND	1.2	2.5	09/14/2015 16:19
1,2,3-Trichlorobenzene	ND	1.2	2.5	09/14/2015 16:19
1,2,4-Trichlorobenzene	ND	1.2	2.5	09/14/2015 16:19
1,1,1-Trichloroethane	ND	1.2	2.5	09/14/2015 16:19
1,1,2-Trichloroethane	ND	1.2	2.5	09/14/2015 16:19
Trichloroethene	ND	1.2	2.5	09/14/2015 16:19
Trichlorofluoromethane	ND	1.2	2.5	09/14/2015 16:19
1,2,3-Trichloropropane	ND	1.2	2.5	09/14/2015 16:19
1,2,4-Trimethylbenzene	ND	1.2	2.5	09/14/2015 16:19
1,3,5-Trimethylbenzene	ND	1.2	2.5	09/14/2015 16:19
Vinyl Chloride	**30**	1.2	2.5	09/14/2015 16:19
Xylenes, Total	ND	1.2	2.5	09/14/2015 16:19

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M2-20.0 W	1509352-002A	Water	09/08/2015 18:20	GC16	110165

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	105	70-130		09/14/2015 16:19
Toluene-d8	98	70-130		09/14/2015 16:19
4-BFB	79	70-130		09/14/2015 16:19

Analyst(s): KF Analytical Comments: b1

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M3-20.0 W	1509352-003A	Water	09/08/2015 18:35	GC28	110165

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	09/12/2015 02:41
tert-Amyl methyl ether (TAME)	ND	0.50	1	09/12/2015 02:41
Benzene	ND	0.50	1	09/12/2015 02:41
Bromobenzene	ND	0.50	1	09/12/2015 02:41
Bromochloromethane	ND	0.50	1	09/12/2015 02:41
Bromodichloromethane	ND	0.50	1	09/12/2015 02:41
Bromoform	ND	0.50	1	09/12/2015 02:41
Bromomethane	ND	0.50	1	09/12/2015 02:41
2-Butanone (MEK)	ND	2.0	1	09/12/2015 02:41
t-Butyl alcohol (TBA)	**45**	2.0	1	09/12/2015 02:41
n-Butyl benzene	ND	0.50	1	09/12/2015 02:41
sec-Butyl benzene	ND	0.50	1	09/12/2015 02:41
tert-Butyl benzene	ND	0.50	1	09/12/2015 02:41
Carbon Disulfide	ND	0.50	1	09/12/2015 02:41
Carbon Tetrachloride	ND	0.50	1	09/12/2015 02:41
Chlorobenzene	ND	0.50	1	09/12/2015 02:41
Chloroethane	ND	0.50	1	09/12/2015 02:41
Chloroform	ND	0.50	1	09/12/2015 02:41
Chloromethane	ND	0.50	1	09/12/2015 02:41
2-Chlorotoluene	ND	0.50	1	09/12/2015 02:41
4-Chlorotoluene	ND	0.50	1	09/12/2015 02:41
Dibromochloromethane	ND	0.50	1	09/12/2015 02:41
1,2-Dibromo-3-chloropropane	ND	0.20	1	09/12/2015 02:41
1,2-Dibromoethane (EDB)	ND	0.50	1	09/12/2015 02:41
Dibromomethane	ND	0.50	1	09/12/2015 02:41
1,2-Dichlorobenzene	ND	0.50	1	09/12/2015 02:41
1,3-Dichlorobenzene	ND	0.50	1	09/12/2015 02:41
1,4-Dichlorobenzene	ND	0.50	1	09/12/2015 02:41
Dichlorodifluoromethane	ND	0.50	1	09/12/2015 02:41
1,1-Dichloroethane	ND	0.50	1	09/12/2015 02:41
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	09/12/2015 02:41
1,1-Dichloroethene	ND	0.50	1	09/12/2015 02:41
cis-1,2-Dichloroethene	ND	0.50	1	09/12/2015 02:41
trans-1,2-Dichloroethene	ND	0.50	1	09/12/2015 02:41
1,2-Dichloropropane	ND	0.50	1	09/12/2015 02:41
1,3-Dichloropropane	ND	0.50	1	09/12/2015 02:41
2,2-Dichloropropane	ND	0.50	1	09/12/2015 02:41

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M3-20.0 W	**1509352-003A**	**Water**	**09/08/2015 18:35**	**GC28**	**110165**

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	09/12/2015 02:41
cis-1,3-Dichloropropene	ND	0.50	1	09/12/2015 02:41
trans-1,3-Dichloropropene	ND	0.50	1	09/12/2015 02:41
Diisopropyl ether (DIPE)	**1.2**	0.50	1	09/12/2015 02:41
Ethylbenzene	ND	0.50	1	09/12/2015 02:41
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	09/12/2015 02:41
Freon 113	ND	0.50	1	09/12/2015 02:41
Hexachlorobutadiene	ND	0.50	1	09/12/2015 02:41
Hexachloroethane	ND	0.50	1	09/12/2015 02:41
2-Hexanone	ND	0.50	1	09/12/2015 02:41
Isopropylbenzene	ND	0.50	1	09/12/2015 02:41
4-Isopropyl toluene	ND	0.50	1	09/12/2015 02:41
Methyl-t-butyl ether (MTBE)	**2.6**	0.50	1	09/12/2015 02:41
Methylene chloride	ND	0.50	1	09/12/2015 02:41
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	09/12/2015 02:41
Naphthalene	ND	0.50	1	09/12/2015 02:41
n-Propyl benzene	ND	0.50	1	09/12/2015 02:41
Styrene	ND	0.50	1	09/12/2015 02:41
1,1,1,2-Tetrachloroethane	ND	0.50	1	09/12/2015 02:41
1,1,2,2-Tetrachloroethane	ND	0.50	1	09/12/2015 02:41
Tetrachloroethene	ND	0.50	1	09/12/2015 02:41
Toluene	ND	0.50	1	09/12/2015 02:41
1,2,3-Trichlorobenzene	ND	0.50	1	09/12/2015 02:41
1,2,4-Trichlorobenzene	ND	0.50	1	09/12/2015 02:41
1,1,1-Trichloroethane	ND	0.50	1	09/12/2015 02:41
1,1,2-Trichloroethane	ND	0.50	1	09/12/2015 02:41
Trichloroethene	ND	0.50	1	09/12/2015 02:41
Trichlorofluoromethane	ND	0.50	1	09/12/2015 02:41
1,2,3-Trichloropropane	ND	0.50	1	09/12/2015 02:41
1,2,4-Trimethylbenzene	ND	0.50	1	09/12/2015 02:41
1,3,5-Trimethylbenzene	ND	0.50	1	09/12/2015 02:41
Vinyl Chloride	ND	0.50	1	09/12/2015 02:41
Xylenes, Total	ND	0.50	1	09/12/2015 02:41

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M3-20.0 W	1509352-003A	Water	09/08/2015 18:35	GC28	110165

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	109	70-130		09/12/2015 02:41
Toluene-d8	109	70-130		09/12/2015 02:41
4-BFB	104	70-130		09/12/2015 02:41

Analyst(s): KF Analytical Comments: b1

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M4-20.0 W	1509352-004A	Water	09/08/2015 19:25	GC16	110165

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	200	20	09/14/2015 17:02
tert-Amyl methyl ether (TAME)	ND	10	20	09/14/2015 17:02
Benzene	ND	10	20	09/14/2015 17:02
Bromobenzene	ND	10	20	09/14/2015 17:02
Bromochloromethane	ND	10	20	09/14/2015 17:02
Bromodichloromethane	ND	10	20	09/14/2015 17:02
Bromoform	ND	10	20	09/14/2015 17:02
Bromomethane	ND	10	20	09/14/2015 17:02
2-Butanone (MEK)	ND	40	20	09/14/2015 17:02
t-Butyl alcohol (TBA)	ND	40	20	09/14/2015 17:02
n-Butyl benzene	ND	10	20	09/14/2015 17:02
sec-Butyl benzene	ND	10	20	09/14/2015 17:02
tert-Butyl benzene	ND	10	20	09/14/2015 17:02
Carbon Disulfide	ND	10	20	09/14/2015 17:02
Carbon Tetrachloride	ND	10	20	09/14/2015 17:02
Chlorobenzene	ND	10	20	09/14/2015 17:02
Chloroethane	ND	10	20	09/14/2015 17:02
Chloroform	ND	10	20	09/14/2015 17:02
Chloromethane	ND	10	20	09/14/2015 17:02
2-Chlorotoluene	ND	10	20	09/14/2015 17:02
4-Chlorotoluene	ND	10	20	09/14/2015 17:02
Dibromochloromethane	ND	10	20	09/14/2015 17:02
1,2-Dibromo-3-chloropropane	ND	4.0	20	09/14/2015 17:02
1,2-Dibromoethane (EDB)	ND	10	20	09/14/2015 17:02
Dibromomethane	ND	10	20	09/14/2015 17:02
1,2-Dichlorobenzene	ND	10	20	09/14/2015 17:02
1,3-Dichlorobenzene	ND	10	20	09/14/2015 17:02
1,4-Dichlorobenzene	ND	10	20	09/14/2015 17:02
Dichlorodifluoromethane	ND	10	20	09/14/2015 17:02
1,1-Dichloroethane	ND	10	20	09/14/2015 17:02
1,2-Dichloroethane (1,2-DCA)	ND	10	20	09/14/2015 17:02
1,1-Dichloroethene	ND	10	20	09/14/2015 17:02
cis-1,2-Dichloroethene	**25**	10	20	09/14/2015 17:02
trans-1,2-Dichloroethene	ND	10	20	09/14/2015 17:02
1,2-Dichloropropane	ND	10	20	09/14/2015 17:02
1,3-Dichloropropane	ND	10	20	09/14/2015 17:02
2,2-Dichloropropane	ND	10	20	09/14/2015 17:02

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Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M4-20.0 W	1509352-004A	Water	09/08/2015 19:25	GC16	110165

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	10	20	09/14/2015 17:02
cis-1,3-Dichloropropene	ND	10	20	09/14/2015 17:02
trans-1,3-Dichloropropene	ND	10	20	09/14/2015 17:02
Diisopropyl ether (DIPE)	ND	10	20	09/14/2015 17:02
Ethylbenzene	ND	10	20	09/14/2015 17:02
Ethyl tert-butyl ether (ETBE)	ND	10	20	09/14/2015 17:02
Freon 113	ND	10	20	09/14/2015 17:02
Hexachlorobutadiene	ND	10	20	09/14/2015 17:02
Hexachloroethane	ND	10	20	09/14/2015 17:02
2-Hexanone	ND	10	20	09/14/2015 17:02
Isopropylbenzene	ND	10	20	09/14/2015 17:02
4-Isopropyl toluene	ND	10	20	09/14/2015 17:02
Methyl-t-butyl ether (MTBE)	**150**	10	20	09/14/2015 17:02
Methylene chloride	ND	10	20	09/14/2015 17:02
4-Methyl-2-pentanone (MIBK)	ND	10	20	09/14/2015 17:02
Naphthalene	ND	10	20	09/14/2015 17:02
n-Propyl benzene	ND	10	20	09/14/2015 17:02
Styrene	ND	10	20	09/14/2015 17:02
1,1,1,2-Tetrachloroethane	ND	10	20	09/14/2015 17:02
1,1,2,2-Tetrachloroethane	ND	10	20	09/14/2015 17:02
Tetrachloroethene	**770**	10	20	09/14/2015 17:02
Toluene	ND	10	20	09/14/2015 17:02
1,2,3-Trichlorobenzene	ND	10	20	09/14/2015 17:02
1,2,4-Trichlorobenzene	ND	10	20	09/14/2015 17:02
1,1,1-Trichloroethane	ND	10	20	09/14/2015 17:02
1,1,2-Trichloroethane	ND	10	20	09/14/2015 17:02
Trichloroethene	**60**	10	20	09/14/2015 17:02
Trichlorofluoromethane	ND	10	20	09/14/2015 17:02
1,2,3-Trichloropropane	ND	10	20	09/14/2015 17:02
1,2,4-Trimethylbenzene	ND	10	20	09/14/2015 17:02
1,3,5-Trimethylbenzene	ND	10	20	09/14/2015 17:02
Vinyl Chloride	ND	10	20	09/14/2015 17:02
Xylenes, Total	ND	10	20	09/14/2015 17:02

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M4-20.0 W	1509352-004A	Water	09/08/2015 19:25	GC16	110165

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	105	70-130		09/14/2015 17:02
Toluene-d8	98	70-130		09/14/2015 17:02
4-BFB	79	70-130		09/14/2015 17:02

Analyst(s): KF Analytical Comments: b1

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M5-20.0 W	1509352-005A	Water	09/09/2015 14:15	GC16	110165

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	250	25	09/16/2015 01:04
tert-Amyl methyl ether (TAME)	ND	12	25	09/16/2015 01:04
Benzene	ND	12	25	09/16/2015 01:04
Bromobenzene	ND	12	25	09/16/2015 01:04
Bromochloromethane	ND	12	25	09/16/2015 01:04
Bromodichloromethane	ND	12	25	09/16/2015 01:04
Bromoform	ND	12	25	09/16/2015 01:04
Bromomethane	ND	12	25	09/16/2015 01:04
2-Butanone (MEK)	ND	50	25	09/16/2015 01:04
t-Butyl alcohol (TBA)	ND	50	25	09/16/2015 01:04
n-Butyl benzene	ND	12	25	09/16/2015 01:04
sec-Butyl benzene	ND	12	25	09/16/2015 01:04
tert-Butyl benzene	ND	12	25	09/16/2015 01:04
Carbon Disulfide	ND	12	25	09/16/2015 01:04
Carbon Tetrachloride	ND	12	25	09/16/2015 01:04
Chlorobenzene	ND	12	25	09/16/2015 01:04
Chloroethane	ND	12	25	09/16/2015 01:04
Chloroform	ND	12	25	09/16/2015 01:04
Chloromethane	ND	12	25	09/16/2015 01:04
2-Chlorotoluene	ND	12	25	09/16/2015 01:04
4-Chlorotoluene	ND	12	25	09/16/2015 01:04
Dibromochloromethane	ND	12	25	09/16/2015 01:04
1,2-Dibromo-3-chloropropane	ND	5.0	25	09/16/2015 01:04
1,2-Dibromoethane (EDB)	ND	12	25	09/16/2015 01:04
Dibromomethane	ND	12	25	09/16/2015 01:04
1,2-Dichlorobenzene	ND	12	25	09/16/2015 01:04
1,3-Dichlorobenzene	ND	12	25	09/16/2015 01:04
1,4-Dichlorobenzene	ND	12	25	09/16/2015 01:04
Dichlorodifluoromethane	ND	12	25	09/16/2015 01:04
1,1-Dichloroethane	ND	12	25	09/16/2015 01:04
1,2-Dichloroethane (1,2-DCA)	ND	12	25	09/16/2015 01:04
1,1-Dichloroethene	ND	12	25	09/16/2015 01:04
cis-1,2-Dichloroethene	**21**	12	25	09/16/2015 01:04
trans-1,2-Dichloroethene	ND	12	25	09/16/2015 01:04
1,2-Dichloropropane	ND	12	25	09/16/2015 01:04
1,3-Dichloropropane	ND	12	25	09/16/2015 01:04
2,2-Dichloropropane	ND	12	25	09/16/2015 01:04

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M5-20.0 W	1509352-005A	Water	09/09/2015 14:15	GC16	110165

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	12	25	09/16/2015 01:04
cis-1,3-Dichloropropene	ND	12	25	09/16/2015 01:04
trans-1,3-Dichloropropene	ND	12	25	09/16/2015 01:04
Diisopropyl ether (DIPE)	ND	12	25	09/16/2015 01:04
Ethylbenzene	ND	12	25	09/16/2015 01:04
Ethyl tert-butyl ether (ETBE)	ND	12	25	09/16/2015 01:04
Freon 113	ND	12	25	09/16/2015 01:04
Hexachlorobutadiene	ND	12	25	09/16/2015 01:04
Hexachloroethane	ND	12	25	09/16/2015 01:04
2-Hexanone	ND	12	25	09/16/2015 01:04
Isopropylbenzene	ND	12	25	09/16/2015 01:04
4-Isopropyl toluene	ND	12	25	09/16/2015 01:04
Methyl-t-butyl ether (MTBE)	**110**	12	25	09/16/2015 01:04
Methylene chloride	ND	12	25	09/16/2015 01:04
4-Methyl-2-pentanone (MIBK)	ND	12	25	09/16/2015 01:04
Naphthalene	ND	12	25	09/16/2015 01:04
n-Propyl benzene	ND	12	25	09/16/2015 01:04
Styrene	ND	12	25	09/16/2015 01:04
1,1,1,2-Tetrachloroethane	ND	12	25	09/16/2015 01:04
1,1,2,2-Tetrachloroethane	ND	12	25	09/16/2015 01:04
Tetrachloroethene	**460**	12	25	09/16/2015 01:04
Toluene	ND	12	25	09/16/2015 01:04
1,2,3-Trichlorobenzene	ND	12	25	09/16/2015 01:04
1,2,4-Trichlorobenzene	ND	12	25	09/16/2015 01:04
1,1,1-Trichloroethane	ND	12	25	09/16/2015 01:04
1,1,2-Trichloroethane	ND	12	25	09/16/2015 01:04
Trichloroethene	**43**	12	25	09/16/2015 01:04
Trichlorofluoromethane	ND	12	25	09/16/2015 01:04
1,2,3-Trichloropropane	ND	12	25	09/16/2015 01:04
1,2,4-Trimethylbenzene	ND	12	25	09/16/2015 01:04
1,3,5-Trimethylbenzene	ND	12	25	09/16/2015 01:04
Vinyl Chloride	ND	12	25	09/16/2015 01:04
Xylenes, Total	ND	12	25	09/16/2015 01:04

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
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Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M5-20.0 W	1509352-005A	Water	09/09/2015 14:15	GC16	110165

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	104	70-130		09/16/2015 01:04
Toluene-d8	98	70-130		09/16/2015 01:04
4-BFB	85	70-130		09/16/2015 01:04

Analyst(s): KF Analytical Comments: b1

(Cont.)

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Analytical Report

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Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M6-20.0 W	1509352-006A	Water	09/09/2015 15:00	GC10	110165

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	100	10	09/16/2015 21:49
tert-Amyl methyl ether (TAME)	ND	5.0	10	09/16/2015 21:49
Benzene	ND	5.0	10	09/16/2015 21:49
Bromobenzene	ND	5.0	10	09/16/2015 21:49
Bromochloromethane	ND	5.0	10	09/16/2015 21:49
Bromodichloromethane	ND	5.0	10	09/16/2015 21:49
Bromoform	ND	5.0	10	09/16/2015 21:49
Bromomethane	ND	5.0	10	09/16/2015 21:49
2-Butanone (MEK)	ND	20	10	09/16/2015 21:49
t-Butyl alcohol (TBA)	ND	20	10	09/16/2015 21:49
n-Butyl benzene	ND	5.0	10	09/16/2015 21:49
sec-Butyl benzene	ND	5.0	10	09/16/2015 21:49
tert-Butyl benzene	ND	5.0	10	09/16/2015 21:49
Carbon Disulfide	ND	5.0	10	09/16/2015 21:49
Carbon Tetrachloride	ND	5.0	10	09/16/2015 21:49
Chlorobenzene	ND	5.0	10	09/16/2015 21:49
Chloroethane	ND	5.0	10	09/16/2015 21:49
Chloroform	ND	5.0	10	09/16/2015 21:49
Chloromethane	ND	5.0	10	09/16/2015 21:49
2-Chlorotoluene	ND	5.0	10	09/16/2015 21:49
4-Chlorotoluene	ND	5.0	10	09/16/2015 21:49
Dibromochloromethane	ND	5.0	10	09/16/2015 21:49
1,2-Dibromo-3-chloropropane	ND	2.0	10	09/16/2015 21:49
1,2-Dibromoethane (EDB)	ND	5.0	10	09/16/2015 21:49
Dibromomethane	ND	5.0	10	09/16/2015 21:49
1,2-Dichlorobenzene	ND	5.0	10	09/16/2015 21:49
1,3-Dichlorobenzene	ND	5.0	10	09/16/2015 21:49
1,4-Dichlorobenzene	ND	5.0	10	09/16/2015 21:49
Dichlorodifluoromethane	ND	5.0	10	09/16/2015 21:49
1,1-Dichloroethane	ND	5.0	10	09/16/2015 21:49
1,2-Dichloroethane (1,2-DCA)	ND	5.0	10	09/16/2015 21:49
1,1-Dichloroethene	ND	5.0	10	09/16/2015 21:49
cis-1,2-Dichloroethene	**36**	5.0	10	09/16/2015 21:49
trans-1,2-Dichloroethene	ND	5.0	10	09/16/2015 21:49
1,2-Dichloropropane	ND	5.0	10	09/16/2015 21:49
1,3-Dichloropropane	ND	5.0	10	09/16/2015 21:49
2,2-Dichloropropane	ND	5.0	10	09/16/2015 21:49

(Cont.)

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M6-20.0 W	1509352-006A	Water	09/09/2015 15:00	GC10	110165

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	5.0	10	09/16/2015 21:49
cis-1,3-Dichloropropene	ND	5.0	10	09/16/2015 21:49
trans-1,3-Dichloropropene	ND	5.0	10	09/16/2015 21:49
Diisopropyl ether (DIPE)	ND	5.0	10	09/16/2015 21:49
Ethylbenzene	ND	5.0	10	09/16/2015 21:49
Ethyl tert-butyl ether (ETBE)	ND	5.0	10	09/16/2015 21:49
Freon 113	ND	5.0	10	09/16/2015 21:49
Hexachlorobutadiene	ND	5.0	10	09/16/2015 21:49
Hexachloroethane	ND	5.0	10	09/16/2015 21:49
2-Hexanone	ND	5.0	10	09/16/2015 21:49
Isopropylbenzene	ND	5.0	10	09/16/2015 21:49
4-Isopropyl toluene	ND	5.0	10	09/16/2015 21:49
Methyl-t-butyl ether (MTBE)	**43**	5.0	10	09/16/2015 21:49
Methylene chloride	ND	5.0	10	09/16/2015 21:49
4-Methyl-2-pentanone (MIBK)	ND	5.0	10	09/16/2015 21:49
Naphthalene	ND	5.0	10	09/16/2015 21:49
n-Propyl benzene	ND	5.0	10	09/16/2015 21:49
Styrene	ND	5.0	10	09/16/2015 21:49
1,1,1,2-Tetrachloroethane	ND	5.0	10	09/16/2015 21:49
1,1,2,2-Tetrachloroethane	ND	5.0	10	09/16/2015 21:49
Tetrachloroethene	**150**	5.0	10	09/16/2015 21:49
Toluene	ND	5.0	10	09/16/2015 21:49
1,2,3-Trichlorobenzene	ND	5.0	10	09/16/2015 21:49
1,2,4-Trichlorobenzene	ND	5.0	10	09/16/2015 21:49
1,1,1-Trichloroethane	ND	5.0	10	09/16/2015 21:49
1,1,2-Trichloroethane	ND	5.0	10	09/16/2015 21:49
Trichloroethene	**42**	5.0	10	09/16/2015 21:49
Trichlorofluoromethane	ND	5.0	10	09/16/2015 21:49
1,2,3-Trichloropropane	ND	5.0	10	09/16/2015 21:49
1,2,4-Trimethylbenzene	ND	5.0	10	09/16/2015 21:49
1,3,5-Trimethylbenzene	ND	5.0	10	09/16/2015 21:49
Vinyl Chloride	ND	5.0	10	09/16/2015 21:49
Xylenes, Total	ND	5.0	10	09/16/2015 21:49

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/12/15-9/16/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M6-20.0 W	1509352-006A	Water	09/09/2015 15:00	GC10	110165

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	97	70-130		09/16/2015 21:49
Toluene-d8	93	70-130		09/16/2015 21:49
4-BFB	117	70-130		09/16/2015 21:49

Analyst(s): AK

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Prepared:	9/11/15	**BatchID:**	110165
Date Analyzed:	9/11/15	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; James River Corporation	**Sample ID:**	MB/LCS-110165 1509333-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	9.71	0.50	10	-	97	54-140
Benzene	ND	9.74	0.50	10	-	97	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	37.2	2.0	40	-	93	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	9.47	0.50	10	-	95	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	9.29	0.50	10	-	93	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	9.61	0.50	10	-	96	66-125
1,1-Dichloroethene	ND	10.1	0.50	10	-	101	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Prepared:	9/11/15	**BatchID:**	110165
Date Analyzed:	9/11/15	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; James River Corporation	**Sample ID:**	MB/LCS-110165 1509333-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	9.73	0.50	10	-	97	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	9.33	0.50	10	-	93	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	9.36	0.50	10	-	94	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	9.86	0.50	10	-	98	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	9.56	0.50	10	-	96	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Prepared:	9/11/15	**BatchID:**	110165
Date Analyzed:	9/11/15	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; James River Corporation	**Sample ID:**	MB/LCS-110165 1509333-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	27.6	27.1		25	110	108	70-130
Toluene-d8	26.8	27.6		25	107	110	70-130
4-BFB	2.56	2.55		2.5	102	102	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	10.6	10.6	10	ND	106	106	69-139	0	20
Benzene	9.92	9.57	10	ND	99	96	69-141	0	20
t-Butyl alcohol (TBA)	46.0	45.8	40	ND	115	115	41-152	0	20
Chlorobenzene	9.54	9.08	10	ND	95	91	77-120	0	20
1,2-Dibromoethane (EDB)	10.2	9.91	10	ND	102	99	76-135	0	20
1,2-Dichloroethane (1,2-DCA)	10.4	10.2	10	ND	104	101	73-139	0	20
1,1-Dichloroethene	10.1	9.73	10	ND	101	97	59-140	0	20
Diisopropyl ether (DIPE)	10.4	10.1	10	ND	104	101	72-140	0	20
Ethyl tert-butyl ether (ETBE)	10.0	10.0	10	ND	100	100	71-140	0	20
Methyl-t-butyl ether (MTBE)	10.6	10.5	10	ND	106	105	73-139	0	20
Toluene	9.83	9.36	10	ND	98	94	71-128	0	20
Trichloroethene	9.53	9.13	10	ND	95	91	64-132	0	20
Surrogate Recovery									
Dibromofluoromethane	27.5	27.5	25		110	110	70-130	0	20
Toluene-d8	26.8	26.8	25		107	107	70-130	0	20
4-BFB	2.36	2.32	2.5		94	93	70-130	0	20

McCampbell Analytical, Inc.
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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1509352 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Paul King
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Email: lab@pdenviro.com; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0660; James River Corporation

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: **5 days;**

Date Received: **09/10/2015**
Date Printed: **09/10/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1509352-001	M1-20.0 W	Water	9/8/2015 16:10	☐	A											
1509352-002	M2-20.0 W	Water	9/8/2015 18:20	☐	A											
1509352-003	M3-20.0 W	Water	9/8/2015 18:35	☐	A											
1509352-004	M4-20.0 W	Water	9/8/2015 19:25	☐	A											
1509352-005	M5-20.0 W	Water	9/9/2015 14:15	☐	A											
1509352-006	M6-20.0 W	Water	9/9/2015 15:00	☐	A											

Test Legend:

1	8260B_W	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Jena Alfaro

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
QC Level: LEVEL 2
Work Order: 1509352
Project: 0660; James River Corporation
Client Contact: Paul King
Date Received: 9/10/2015
Comments:
Contact's Email: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1509352-001A	M1-20.0 W	Water	SW8260B (VOCs)	5	VOA w/ HCl	☐	9/8/2015 16:10	5 days	1%+	☐	
1509352-002A	M2-20.0 W	Water	SW8260B (VOCs)	5	VOA w/ HCl	☐	9/8/2015 18:20	5 days	5%+	☐	
1509352-003A	M3-20.0 W	Water	SW8260B (VOCs)	5	VOA w/ HCl	☐	9/8/2015 18:35	5 days	5%+	☐	
1509352-004A	M4-20.0 W	Water	SW8260B (VOCs)	5	VOA w/ HCl	☐	9/8/2015 19:25	5 days	2%+	☐	
1509352-005A	M5-20.0 W	Water	SW8260B (VOCs)	5	VOA w/ HCl	☐	9/9/2015 14:15	5 days	1%+	☐	
1509352-006A	M6-20.0 W	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	9/9/2015 15:00	5 days	Present	☐	
1509352-007A	M4-35.0 W	Water		5	VOA w/ HCl	☐	9/8/2015 11:15		Present	☑	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

CHAIN OF CUSTODY RECORD

P&D ENVIRONMENTAL, INC.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

1509352

PROJECT NUMBER: 0660

PROJECT NAME: James River Corporation 2101 Williams St. San Leandro, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL BASS-DESCHENES Michael Bass-Deschenes

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): EPA 8260B	PRESERVATIVE	REMARKS
M1-20.0W	9/8/15	1810	H2O		5	X	ICE	NORMAL TAT
M2-20.0W	9/8/15	1820	"		5	X	"	
M3-20.0W	9/8/15	1835	"		5	X	"	
M4-20.0W	9/8/15	1925	"		5	X	"	
M5-20.0W	9/9/15	1415	"		5	X	"	
M6-20.0W	9/9/15	1500	"		3	X	"	
M4-35.0W	9/9/15	11:15	"		5			

RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes	DATE 9-10-15	TIME 1415	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment): 6 Total No. of Containers (This Shipment): 28	LABORATORY: MC CAMPBELL ANALYTICAL, INC.
RELINQUISHED BY: (SIGNATURE)	DATE 9-10-15	TIME 1510	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: ANGELA RYDELIUS	LABORATORY PHONE NUMBER: (925) 252-9262
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

~~X~~ Additional Sample Received. Put on Hold

REMARKS: 5 VOAs with HCL

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Sample Receipt Checklist

Client Name: **P & D Environmental** Date and Time Received: **9/10/2015 8:35:59 PM**

Project Name: **0660; James River Corporation** LogIn Reviewed by: Jena Alfaro

WorkOrder №: **1509352** Matrix: Water Carrier: Bernie Cummins (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Sample/Temp Blank temperature	Temp: 2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET ICE)		

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes ☐	No ☐	NA ☑

** NOTE: If the "No" box is checked, see comments below.*

Comments:

McCampbell Analytical, Inc.
"When Quality Counts"

Analytical Report

WorkOrder: 1509408

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Michael Deschenes
Project P.O.:
Project Name: 0660; 2101 Williams St. San Leandro, CA

Project Received: 09/11/2015

Analytical Report reviewed & approved for release on 09/17/2015 by:

Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0660; 2101 Williams St. San Leandro, CA
WorkOrder: 1509408

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509408
Date Received:	9/11/15 16:59	**Extraction Method:**	SW5030B
Date Prepared:	9/16/15-9/17/15	**Analytical Method:**	SW8260B
Project:	0660; 2101 Williams St. San Leandro, CA	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M1-34.0 W	1509408-001A	Water	09/10/2015 17:45	GC10	110297

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	09/16/2015 23:52
tert-Amyl methyl ether (TAME)	**0.97**	0.50	1	09/16/2015 23:52
Benzene	ND	0.50	1	09/16/2015 23:52
Bromobenzene	ND	0.50	1	09/16/2015 23:52
Bromochloromethane	ND	0.50	1	09/16/2015 23:52
Bromodichloromethane	ND	0.50	1	09/16/2015 23:52
Bromoform	ND	0.50	1	09/16/2015 23:52
Bromomethane	ND	0.50	1	09/16/2015 23:52
2-Butanone (MEK)	ND	2.0	1	09/16/2015 23:52
t-Butyl alcohol (TBA)	ND	2.0	1	09/16/2015 23:52
n-Butyl benzene	ND	0.50	1	09/16/2015 23:52
sec-Butyl benzene	ND	0.50	1	09/16/2015 23:52
tert-Butyl benzene	ND	0.50	1	09/16/2015 23:52
Carbon Disulfide	**0.51**	0.50	1	09/16/2015 23:52
Carbon Tetrachloride	ND	0.50	1	09/16/2015 23:52
Chlorobenzene	ND	0.50	1	09/16/2015 23:52
Chloroethane	ND	0.50	1	09/16/2015 23:52
Chloroform	ND	0.50	1	09/16/2015 23:52
Chloromethane	ND	0.50	1	09/16/2015 23:52
2-Chlorotoluene	ND	0.50	1	09/16/2015 23:52
4-Chlorotoluene	ND	0.50	1	09/16/2015 23:52
Dibromochloromethane	ND	0.50	1	09/16/2015 23:52
1,2-Dibromo-3-chloropropane	ND	0.20	1	09/16/2015 23:52
1,2-Dibromoethane (EDB)	ND	0.50	1	09/16/2015 23:52
Dibromomethane	ND	0.50	1	09/16/2015 23:52
1,2-Dichlorobenzene	ND	0.50	1	09/16/2015 23:52
1,3-Dichlorobenzene	ND	0.50	1	09/16/2015 23:52
1,4-Dichlorobenzene	ND	0.50	1	09/16/2015 23:52
Dichlorodifluoromethane	ND	0.50	1	09/16/2015 23:52
1,1-Dichloroethane	ND	0.50	1	09/16/2015 23:52
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	09/16/2015 23:52
1,1-Dichloroethene	ND	0.50	1	09/16/2015 23:52
cis-1,2-Dichloroethene	**15**	0.50	1	09/16/2015 23:52
trans-1,2-Dichloroethene	ND	0.50	1	09/16/2015 23:52
1,2-Dichloropropane	ND	0.50	1	09/16/2015 23:52
1,3-Dichloropropane	ND	0.50	1	09/16/2015 23:52
2,2-Dichloropropane	ND	0.50	1	09/16/2015 23:52

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509408
Date Received:	9/11/15 16:59	**Extraction Method:**	SW5030B
Date Prepared:	9/16/15-9/17/15	**Analytical Method:**	SW8260B
Project:	0660; 2101 Williams St. San Leandro, CA	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M1-34.0 W	**1509408-001A**	**Water**	**09/10/2015 17:45**	**GC10**	**110297**

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	09/16/2015 23:52
cis-1,3-Dichloropropene	ND	0.50	1	09/16/2015 23:52
trans-1,3-Dichloropropene	ND	0.50	1	09/16/2015 23:52
Diisopropyl ether (DIPE)	ND	0.50	1	09/16/2015 23:52
Ethylbenzene	ND	0.50	1	09/16/2015 23:52
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	09/16/2015 23:52
Freon 113	ND	0.50	1	09/16/2015 23:52
Hexachlorobutadiene	ND	0.50	1	09/16/2015 23:52
Hexachloroethane	ND	0.50	1	09/16/2015 23:52
2-Hexanone	**1.0**	0.50	1	09/16/2015 23:52
Isopropylbenzene	ND	0.50	1	09/16/2015 23:52
4-Isopropyl toluene	ND	0.50	1	09/16/2015 23:52
Methyl-t-butyl ether (MTBE)	**36**	0.50	1	09/16/2015 23:52
Methylene chloride	ND	0.50	1	09/16/2015 23:52
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	09/16/2015 23:52
Naphthalene	ND	0.50	1	09/16/2015 23:52
n-Propyl benzene	ND	0.50	1	09/16/2015 23:52
Styrene	ND	0.50	1	09/16/2015 23:52
1,1,1,2-Tetrachloroethane	ND	0.50	1	09/16/2015 23:52
1,1,2,2-Tetrachloroethane	ND	0.50	1	09/16/2015 23:52
Tetrachloroethene	ND	0.50	1	09/16/2015 23:52
Toluene	**1.5**	0.50	1	09/16/2015 23:52
1,2,3-Trichlorobenzene	ND	0.50	1	09/16/2015 23:52
1,2,4-Trichlorobenzene	ND	0.50	1	09/16/2015 23:52
1,1,1-Trichloroethane	ND	0.50	1	09/16/2015 23:52
1,1,2-Trichloroethane	ND	0.50	1	09/16/2015 23:52
Trichloroethene	ND	0.50	1	09/16/2015 23:52
Trichlorofluoromethane	ND	0.50	1	09/16/2015 23:52
1,2,3-Trichloropropane	ND	0.50	1	09/16/2015 23:52
1,2,4-Trimethylbenzene	ND	0.50	1	09/16/2015 23:52
1,3,5-Trimethylbenzene	ND	0.50	1	09/16/2015 23:52
Vinyl Chloride	ND	0.50	1	09/16/2015 23:52
Xylenes, Total	ND	0.50	1	09/16/2015 23:52

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Date Prepared:	9/16/15-9/17/15	**Analytical Method:**	SW8260B
Project:	0660; 2101 Williams St. San Leandro, CA	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M1-34.0 W	1509408-001A	Water	09/10/2015 17:45	GC10	110297

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	94	70-130		09/16/2015 23:52
Toluene-d8	92	70-130		09/16/2015 23:52
4-BFB	105	70-130		09/16/2015 23:52

Analyst(s): AK

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Date Prepared:	9/16/15-9/17/15	**Analytical Method:**	SW8260B
Project:	0660; 2101 Williams St. San Leandro, CA	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M2-34.0 W	1509408-002A	Water	09/10/2015 17:15	GC10	110297

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	250	25	09/17/2015 00:34
tert-Amyl methyl ether (TAME)	ND	12	25	09/17/2015 00:34
Benzene	ND	12	25	09/17/2015 00:34
Bromobenzene	ND	12	25	09/17/2015 00:34
Bromochloromethane	ND	12	25	09/17/2015 00:34
Bromodichloromethane	ND	12	25	09/17/2015 00:34
Bromoform	ND	12	25	09/17/2015 00:34
Bromomethane	ND	12	25	09/17/2015 00:34
2-Butanone (MEK)	ND	50	25	09/17/2015 00:34
t-Butyl alcohol (TBA)	ND	50	25	09/17/2015 00:34
n-Butyl benzene	ND	12	25	09/17/2015 00:34
sec-Butyl benzene	ND	12	25	09/17/2015 00:34
tert-Butyl benzene	ND	12	25	09/17/2015 00:34
Carbon Disulfide	ND	12	25	09/17/2015 00:34
Carbon Tetrachloride	ND	12	25	09/17/2015 00:34
Chlorobenzene	ND	12	25	09/17/2015 00:34
Chloroethane	ND	12	25	09/17/2015 00:34
Chloroform	ND	12	25	09/17/2015 00:34
Chloromethane	ND	12	25	09/17/2015 00:34
2-Chlorotoluene	ND	12	25	09/17/2015 00:34
4-Chlorotoluene	ND	12	25	09/17/2015 00:34
Dibromochloromethane	ND	12	25	09/17/2015 00:34
1,2-Dibromo-3-chloropropane	ND	5.0	25	09/17/2015 00:34
1,2-Dibromoethane (EDB)	ND	12	25	09/17/2015 00:34
Dibromomethane	ND	12	25	09/17/2015 00:34
1,2-Dichlorobenzene	ND	12	25	09/17/2015 00:34
1,3-Dichlorobenzene	ND	12	25	09/17/2015 00:34
1,4-Dichlorobenzene	ND	12	25	09/17/2015 00:34
Dichlorodifluoromethane	ND	12	25	09/17/2015 00:34
1,1-Dichloroethane	ND	12	25	09/17/2015 00:34
1,2-Dichloroethane (1,2-DCA)	ND	12	25	09/17/2015 00:34
1,1-Dichloroethene	ND	12	25	09/17/2015 00:34
cis-1,2-Dichloroethene	**37**	12	25	09/17/2015 00:34
trans-1,2-Dichloroethene	ND	12	25	09/17/2015 00:34
1,2-Dichloropropane	ND	12	25	09/17/2015 00:34
1,3-Dichloropropane	ND	12	25	09/17/2015 00:34
2,2-Dichloropropane	ND	12	25	09/17/2015 00:34

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Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M2-34.0 W	1509408-002A	Water	09/10/2015 17:15	GC10	110297

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	12	25	09/17/2015 00:34
cis-1,3-Dichloropropene	ND	12	25	09/17/2015 00:34
trans-1,3-Dichloropropene	ND	12	25	09/17/2015 00:34
Diisopropyl ether (DIPE)	ND	12	25	09/17/2015 00:34
Ethylbenzene	ND	12	25	09/17/2015 00:34
Ethyl tert-butyl ether (ETBE)	ND	12	25	09/17/2015 00:34
Freon 113	ND	12	25	09/17/2015 00:34
Hexachlorobutadiene	ND	12	25	09/17/2015 00:34
Hexachloroethane	ND	12	25	09/17/2015 00:34
2-Hexanone	ND	12	25	09/17/2015 00:34
Isopropylbenzene	ND	12	25	09/17/2015 00:34
4-Isopropyl toluene	ND	12	25	09/17/2015 00:34
Methyl-t-butyl ether (MTBE)	**120**	12	25	09/17/2015 00:34
Methylene chloride	ND	12	25	09/17/2015 00:34
4-Methyl-2-pentanone (MIBK)	ND	12	25	09/17/2015 00:34
Naphthalene	ND	12	25	09/17/2015 00:34
n-Propyl benzene	ND	12	25	09/17/2015 00:34
Styrene	ND	12	25	09/17/2015 00:34
1,1,1,2-Tetrachloroethane	ND	12	25	09/17/2015 00:34
1,1,2,2-Tetrachloroethane	ND	12	25	09/17/2015 00:34
Tetrachloroethene	**290**	12	25	09/17/2015 00:34
Toluene	ND	12	25	09/17/2015 00:34
1,2,3-Trichlorobenzene	ND	12	25	09/17/2015 00:34
1,2,4-Trichlorobenzene	ND	12	25	09/17/2015 00:34
1,1,1-Trichloroethane	ND	12	25	09/17/2015 00:34
1,1,2-Trichloroethane	ND	12	25	09/17/2015 00:34
Trichloroethene	**55**	12	25	09/17/2015 00:34
Trichlorofluoromethane	ND	12	25	09/17/2015 00:34
1,2,3-Trichloropropane	ND	12	25	09/17/2015 00:34
1,2,4-Trimethylbenzene	ND	12	25	09/17/2015 00:34
1,3,5-Trimethylbenzene	ND	12	25	09/17/2015 00:34
Vinyl Chloride	ND	12	25	09/17/2015 00:34
Xylenes, Total	ND	12	25	09/17/2015 00:34

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Project:	0660; 2101 Williams St. San Leandro, CA	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M2-34.0 W	1509408-002A	Water	09/10/2015 17:15	GC10	110297

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	97	70-130		09/17/2015 00:34
Toluene-d8	93	70-130		09/17/2015 00:34
4-BFB	112	70-130		09/17/2015 00:34

Analyst(s): AK

(Cont.)

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Date Prepared:	9/16/15-9/17/15	**Analytical Method:**	SW8260B
Project:	0660; 2101 Williams St. San Leandro, CA	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M3-34.0 W	1509408-003A	Water	09/10/2015 18:15	GC10	110297

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	250	25	09/17/2015 01:15
tert-Amyl methyl ether (TAME)	ND	12	25	09/17/2015 01:15
Benzene	ND	12	25	09/17/2015 01:15
Bromobenzene	ND	12	25	09/17/2015 01:15
Bromochloromethane	ND	12	25	09/17/2015 01:15
Bromodichloromethane	ND	12	25	09/17/2015 01:15
Bromoform	ND	12	25	09/17/2015 01:15
Bromomethane	ND	12	25	09/17/2015 01:15
2-Butanone (MEK)	ND	50	25	09/17/2015 01:15
t-Butyl alcohol (TBA)	ND	50	25	09/17/2015 01:15
n-Butyl benzene	ND	12	25	09/17/2015 01:15
sec-Butyl benzene	ND	12	25	09/17/2015 01:15
tert-Butyl benzene	ND	12	25	09/17/2015 01:15
Carbon Disulfide	ND	12	25	09/17/2015 01:15
Carbon Tetrachloride	ND	12	25	09/17/2015 01:15
Chlorobenzene	ND	12	25	09/17/2015 01:15
Chloroethane	ND	12	25	09/17/2015 01:15
Chloroform	ND	12	25	09/17/2015 01:15
Chloromethane	ND	12	25	09/17/2015 01:15
2-Chlorotoluene	ND	12	25	09/17/2015 01:15
4-Chlorotoluene	ND	12	25	09/17/2015 01:15
Dibromochloromethane	ND	12	25	09/17/2015 01:15
1,2-Dibromo-3-chloropropane	ND	5.0	25	09/17/2015 01:15
1,2-Dibromoethane (EDB)	ND	12	25	09/17/2015 01:15
Dibromomethane	ND	12	25	09/17/2015 01:15
1,2-Dichlorobenzene	ND	12	25	09/17/2015 01:15
1,3-Dichlorobenzene	ND	12	25	09/17/2015 01:15
1,4-Dichlorobenzene	ND	12	25	09/17/2015 01:15
Dichlorodifluoromethane	ND	12	25	09/17/2015 01:15
1,1-Dichloroethane	ND	12	25	09/17/2015 01:15
1,2-Dichloroethane (1,2-DCA)	ND	12	25	09/17/2015 01:15
1,1-Dichloroethene	ND	12	25	09/17/2015 01:15
cis-1,2-Dichloroethene	ND	12	25	09/17/2015 01:15
trans-1,2-Dichloroethene	ND	12	25	09/17/2015 01:15
1,2-Dichloropropane	ND	12	25	09/17/2015 01:15
1,3-Dichloropropane	ND	12	25	09/17/2015 01:15
2,2-Dichloropropane	ND	12	25	09/17/2015 01:15

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Date Prepared:	9/16/15-9/17/15	**Analytical Method:**	SW8260B
Project:	0660; 2101 Williams St. San Leandro, CA	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M3-34.0 W	**1509408-003A**	**Water**	**09/10/2015 18:15**	**GC10**	**110297**

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	12	25	09/17/2015 01:15
cis-1,3-Dichloropropene	ND	12	25	09/17/2015 01:15
trans-1,3-Dichloropropene	ND	12	25	09/17/2015 01:15
Diisopropyl ether (DIPE)	ND	12	25	09/17/2015 01:15
Ethylbenzene	ND	12	25	09/17/2015 01:15
Ethyl tert-butyl ether (ETBE)	ND	12	25	09/17/2015 01:15
Freon 113	ND	12	25	09/17/2015 01:15
Hexachlorobutadiene	ND	12	25	09/17/2015 01:15
Hexachloroethane	ND	12	25	09/17/2015 01:15
2-Hexanone	ND	12	25	09/17/2015 01:15
Isopropylbenzene	ND	12	25	09/17/2015 01:15
4-Isopropyl toluene	ND	12	25	09/17/2015 01:15
Methyl-t-butyl ether (MTBE)	**97**	12	25	09/17/2015 01:15
Methylene chloride	ND	12	25	09/17/2015 01:15
4-Methyl-2-pentanone (MIBK)	ND	12	25	09/17/2015 01:15
Naphthalene	ND	12	25	09/17/2015 01:15
n-Propyl benzene	ND	12	25	09/17/2015 01:15
Styrene	ND	12	25	09/17/2015 01:15
1,1,1,2-Tetrachloroethane	ND	12	25	09/17/2015 01:15
1,1,2,2-Tetrachloroethane	ND	12	25	09/17/2015 01:15
Tetrachloroethene	**330**	12	25	09/17/2015 01:15
Toluene	ND	12	25	09/17/2015 01:15
1,2,3-Trichlorobenzene	ND	12	25	09/17/2015 01:15
1,2,4-Trichlorobenzene	ND	12	25	09/17/2015 01:15
1,1,1-Trichloroethane	ND	12	25	09/17/2015 01:15
1,1,2-Trichloroethane	ND	12	25	09/17/2015 01:15
Trichloroethene	**30**	12	25	09/17/2015 01:15
Trichlorofluoromethane	ND	12	25	09/17/2015 01:15
1,2,3-Trichloropropane	ND	12	25	09/17/2015 01:15
1,2,4-Trimethylbenzene	ND	12	25	09/17/2015 01:15
1,3,5-Trimethylbenzene	ND	12	25	09/17/2015 01:15
Vinyl Chloride	ND	12	25	09/17/2015 01:15
Xylenes, Total	ND	12	25	09/17/2015 01:15

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509408
Date Received:	9/11/15 16:59	**Extraction Method:**	SW5030B
Date Prepared:	9/16/15-9/17/15	**Analytical Method:**	SW8260B
Project:	0660; 2101 Williams St. San Leandro, CA	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M3-34.0 W	1509408-003A	Water	09/10/2015 18:15	GC10	110297

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	96	70-130		09/17/2015 01:15
Toluene-d8	93	70-130		09/17/2015 01:15
4-BFB	105	70-130		09/17/2015 01:15

Analyst(s): AK

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509408
Date Prepared:	9/15/15	**BatchID:**	110297
Date Analyzed:	9/15/15	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; 2101 Williams St. San Leandro, CA	**Sample ID:**	MB/LCS-110297 1509437-007BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	8.19	0.50	10	-	82	54-140
Benzene	ND	9.45	0.50	10	-	94	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	31.9	2.0	40	-	80	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	8.67	0.50	10	-	87	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	8.11	0.50	10	-	81	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	8.58	0.50	10	-	86	66-125
1,1-Dichloroethene	ND	9.20	0.50	10	-	92	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509408
Date Prepared:	9/15/15	**BatchID:**	110297
Date Analyzed:	9/15/15	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; 2101 Williams St. San Leandro, CA	**Sample ID:**	MB/LCS-110297 1509437-007BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	8.79	0.50	10	-	88	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	8.83	0.50	10	-	88	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	8.62	0.50	10	-	86	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	8.79	0.50	10	-	88	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	8.41	0.50	10	-	84	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509408
Date Prepared:	9/15/15	**BatchID:**	110297
Date Analyzed:	9/15/15	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; 2101 Williams St. San Leandro, CA	**Sample ID:**	MB/LCS-110297 1509437-007BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	23.9	24.2		25	95	97	70-130
Toluene-d8	23.9	23.1		25	96	93	70-130
4-BFB	2.60	2.18		2.5	104	87	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	9.03	9.25	10	ND	90	93	69-139	2.42	20
Benzene	10.2	10.2	10	ND	102	102	69-141	0	20
t-Butyl alcohol (TBA)	35.9	37.6	40	ND	90	94	41-152	4.75	20
Chlorobenzene	9.50	9.55	10	ND	95	95	77-120	0	20
1,2-Dibromoethane (EDB)	9.05	9.30	10	ND	90	93	76-135	2.76	20
1,2-Dichloroethane (1,2-DCA)	9.25	9.61	10	ND	92	96	73-139	3.82	20
1,1-Dichloroethene	9.60	9.68	10	ND	96	97	59-140	0.818	20
Diisopropyl ether (DIPE)	9.53	9.68	10	ND	95	97	72-140	1.62	20
Ethyl tert-butyl ether (ETBE)	9.68	9.84	10	ND	97	98	71-140	1.69	20
Methyl-t-butyl ether (MTBE)	9.58	9.85	10	ND	93	96	73-139	2.86	20
Toluene	9.56	9.50	10	ND	96	95	71-128	0.692	20
Trichloroethene	9.14	9.19	10	ND	91	91	64-132	0	20
Surrogate Recovery									
Dibromofluoromethane	24.6	24.4	25		98	98	70-130	0	20
Toluene-d8	22.9	22.9	25		92	92	70-130	0	20
4-BFB	2.10	2.05	2.5		84	82	70-130	2.59	20

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1509408 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Michael Deschenes
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Email: lab@pdenviro.com; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0660; 2101 Williams St. San Leandro, CA

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days;

Date Received: **09/11/2015**
Date Printed: **09/11/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
1509408-001	M1-34.0 W	Water	9/10/2015 17:45	☐	A											
1509408-002	M2-34.0 W	Water	9/10/2015 17:15	☐	A											
1509408-003	M3-34.0 W	Water	9/10/2015 18:15	☐	A											

Test Legend:

1	8260B_W	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Briana Cutino

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
QC Level: LEVEL 2
Work Order: 1509408
Project: 0660; 2101 Williams St. San Leandro, CA
Client Contact: Michael Deschenes
Date Received: 9/11/2015
Comments:
Contact's Email: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1509408-001A	M1-34.0 W	Water	SW8260B (VOCs)	5	VOA w/ HCl	☐	9/10/2015 17:45	5 days	Present	☐	
1509408-002A	M2-34.0 W	Water	SW8260B (VOCs)	5	VOA w/ HCl	☐	9/10/2015 17:15	5 days	Present	☐	
1509408-003A	M3-34.0 W	Water	SW8260B (VOCs)	5	VOA w/ HCl	☐	9/10/2015 18:15	5 days	Present	☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

CHAIN OF CUSTODY RECORD 1509408

PAGE 1 OF 1

P&D ENVIRONMENTAL, INC.

55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

PROJECT NUMBER: 0660

PROJECT NAME: 2101 Williams St. San Leandro, CA

SAMPLED BY: (PRINTED & SIGNATURE) Michael Bass-Deschenes

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): EPA 8260B	PRESERVATIVE	REMARKS
M1-34.0W	9/10/15	1745	H2O		5	X	ICE	NORMAL TAT
M2-34.0W	"	1715	"		5	X	"	"
M3-34.0W	"	1815	"		5	X	"	"

RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes — DATE 9-11-15 — TIME 1055
RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE) — DATE 9-11-15 — TIME 1700
RECEIVED BY: (SIGNATURE) — 9/11 15:05

RELINQUISHED BY: (SIGNATURE) — DATE — TIME
RECEIVED FOR LABORATORY BY: (SIGNATURE)

Total No. of Samples (This Shipment): 3
Total No. of Containers (This Shipment): 15

LABORATORY: McCAMPBELL ANALYTICAL INC.
LABORATORY CONTACT: ANGELA RYDELIUS
LABORATORY PHONE NUMBER: (925) 252-9262

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

REMARKS: 5 VOAs w HCl

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Sample Receipt Checklist

Client Name: **P & D Environmental** Date and Time Received: **9/11/2015 4:59:05 PM**

Project Name: **0660; 2101 Williams St. San Leandro, CA** LogIn Reviewed by: Briana Cutino

WorkOrder №: **1509408** Matrix: Water Carrier: Bernie Cummins (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Sample/Temp Blank temperature	Temp: 2.4°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET ICE)		

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes ☐	No ☐	NA ☑

** NOTE: If the "No" box is checked, see comments below.*

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1509352 A

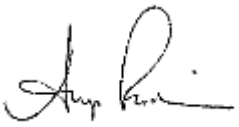
Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Paul King
Project P.O.:
Project Name: 0660; James River Corporation

Project Received: 09/10/2015

Analytical Report reviewed & approved for release on 09/18/2015 by:



Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0660; James River Corporation
WorkOrder: 1509352

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

S	spike recovery outside accepted recovery limits
b1	aqueous sample that contains greater than ~1 vol. % sediment
c7	Surrogate value diluted out of range
c9	Internal standard is out of acceptance criteria due to matrix interference therefore values are estimated

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/18/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M4-35.0 W	1509352-007A	Water	09/08/2015 11:15	GC10	110407

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	250	25	09/18/2015 12:59
tert-Amyl methyl ether (TAME)	ND	12	25	09/18/2015 12:59
Benzene	ND	12	25	09/18/2015 12:59
Bromobenzene	ND	12	25	09/18/2015 12:59
Bromochloromethane	ND	12	25	09/18/2015 12:59
Bromodichloromethane	ND	12	25	09/18/2015 12:59
Bromoform	ND	12	25	09/18/2015 12:59
Bromomethane	ND	12	25	09/18/2015 12:59
2-Butanone (MEK)	ND	50	25	09/18/2015 12:59
t-Butyl alcohol (TBA)	ND	50	25	09/18/2015 12:59
n-Butyl benzene	ND	12	25	09/18/2015 12:59
sec-Butyl benzene	ND	12	25	09/18/2015 12:59
tert-Butyl benzene	ND	12	25	09/18/2015 12:59
Carbon Disulfide	ND	12	25	09/18/2015 12:59
Carbon Tetrachloride	ND	12	25	09/18/2015 12:59
Chlorobenzene	ND	12	25	09/18/2015 12:59
Chloroethane	ND	12	25	09/18/2015 12:59
Chloroform	ND	12	25	09/18/2015 12:59
Chloromethane	ND	12	25	09/18/2015 12:59
2-Chlorotoluene	ND	12	25	09/18/2015 12:59
4-Chlorotoluene	ND	12	25	09/18/2015 12:59
Dibromochloromethane	ND	12	25	09/18/2015 12:59
1,2-Dibromo-3-chloropropane	ND	5.0	25	09/18/2015 12:59
1,2-Dibromoethane (EDB)	ND	12	25	09/18/2015 12:59
Dibromomethane	ND	12	25	09/18/2015 12:59
1,2-Dichlorobenzene	ND	12	25	09/18/2015 12:59
1,3-Dichlorobenzene	ND	12	25	09/18/2015 12:59
1,4-Dichlorobenzene	ND	12	25	09/18/2015 12:59
Dichlorodifluoromethane	ND	12	25	09/18/2015 12:59
1,1-Dichloroethane	ND	12	25	09/18/2015 12:59
1,2-Dichloroethane (1,2-DCA)	ND	12	25	09/18/2015 12:59
1,1-Dichloroethene	ND	12	25	09/18/2015 12:59
cis-1,2-Dichloroethene	ND	12	25	09/18/2015 12:59
trans-1,2-Dichloroethene	ND	12	25	09/18/2015 12:59
1,2-Dichloropropane	ND	12	25	09/18/2015 12:59
1,3-Dichloropropane	ND	12	25	09/18/2015 12:59
2,2-Dichloropropane	ND	12	25	09/18/2015 12:59

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/18/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M4-35.0 W	1509352-007A	Water	09/08/2015 11:15	GC10	110407

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	12	25	09/18/2015 12:59
cis-1,3-Dichloropropene	ND	12	25	09/18/2015 12:59
trans-1,3-Dichloropropene	ND	12	25	09/18/2015 12:59
Diisopropyl ether (DIPE)	ND	12	25	09/18/2015 12:59
Ethylbenzene	ND	12	25	09/18/2015 12:59
Ethyl tert-butyl ether (ETBE)	ND	12	25	09/18/2015 12:59
Freon 113	ND	12	25	09/18/2015 12:59
Hexachlorobutadiene	ND	12	25	09/18/2015 12:59
Hexachloroethane	ND	12	25	09/18/2015 12:59
2-Hexanone	ND	12	25	09/18/2015 12:59
Isopropylbenzene	ND	12	25	09/18/2015 12:59
4-Isopropyl toluene	ND	12	25	09/18/2015 12:59
Methyl-t-butyl ether (MTBE)	**160**	12	25	09/18/2015 12:59
Methylene chloride	ND	12	25	09/18/2015 12:59
4-Methyl-2-pentanone (MIBK)	ND	12	25	09/18/2015 12:59
Naphthalene	ND	12	25	09/18/2015 12:59
n-Propyl benzene	ND	12	25	09/18/2015 12:59
Styrene	ND	12	25	09/18/2015 12:59
1,1,1,2-Tetrachloroethane	ND	12	25	09/18/2015 12:59
1,1,2,2-Tetrachloroethane	ND	12	25	09/18/2015 12:59
Tetrachloroethene	**430**	12	25	09/18/2015 12:59
Toluene	ND	12	25	09/18/2015 12:59
1,2,3-Trichlorobenzene	ND	12	25	09/18/2015 12:59
1,2,4-Trichlorobenzene	ND	12	25	09/18/2015 12:59
1,1,1-Trichloroethane	ND	12	25	09/18/2015 12:59
1,1,2-Trichloroethane	ND	12	25	09/18/2015 12:59
Trichloroethene	**34**	12	25	09/18/2015 12:59
Trichlorofluoromethane	ND	12	25	09/18/2015 12:59
1,2,3-Trichloropropane	ND	12	25	09/18/2015 12:59
1,2,4-Trimethylbenzene	ND	12	25	09/18/2015 12:59
1,3,5-Trimethylbenzene	ND	12	25	09/18/2015 12:59
Vinyl Chloride	ND	12	25	09/18/2015 12:59
Xylenes, Total	ND	12	25	09/18/2015 12:59

(Cont.)

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Received:	9/10/15 20:35	**Extraction Method:**	SW5030B
Date Prepared:	9/18/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M4-35.0 W	1509352-007A	Water	09/08/2015 11:15	GC10	110407

Analytes	Result		RL	DF	Date Analyzed
Surrogates	REC (%)	Qualifiers	Limits		
Dibromofluoromethane	95		70-130		09/18/2015 12:59
Toluene-d8	95		70-130		09/18/2015 12:59
4-BFB	131	S	70-130		09/18/2015 12:59

Analyst(s): KF Analytical Comments: c7,c9

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Prepared:	9/18/15	**BatchID:**	110407
Date Analyzed:	9/18/15	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; James River Corporation	**Sample ID:**	MB/LCS-110407

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	8.33	0.50	10	-	83	54-140
Benzene	ND	9.52	0.50	10	-	95	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	29.8	2.0	40	-	75	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	9.19	0.50	10	-	92	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	8.83	0.50	10	-	88	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	8.29	0.50	10	-	83	66-125
1,1-Dichloroethene	ND	9.07	0.50	10	-	91	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Prepared:	9/18/15	**BatchID:**	110407
Date Analyzed:	9/18/15	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; James River Corporation	**Sample ID:**	MB/LCS-110407

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	8.38	0.50	10	-	84	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	8.51	0.50	10	-	85	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	8.46	0.50	10	-	85	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	8.95	0.50	10	-	90	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	8.96	0.50	10	-	90	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509352
Date Prepared:	9/18/15	**BatchID:**	110407
Date Analyzed:	9/18/15	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; James River Corporation	**Sample ID:**	MB/LCS-110407

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	23.7	24.4		25	95	97	70-130
Toluene-d8	23.1	22.8		25	93	91	70-130
4-BFB	2.47	2.07		2.5	99	83	70-130

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(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1509352 A **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Paul King
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Email: lab@pdenviro.com; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0660; James River Corporation

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 1 day;

Date Received: **09/10/2015**
Date Add-On: **09/17/2015**
Date Printed: **09/18/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1509352-007	M4-35.0 W	Water	9/8/2015 11:15	☐	A											

Test Legend:

1	8260B_W	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Jena Alfaro

Add-On Prepared By: Briana Cutino

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
Project: 0660; James River Corporation
Comments:

QC Level: LEVEL 2
Client Contact: Paul King
Contact's Email: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

Work Order: 1509352
Date Received: 9/10/2015
Date Add-On: 9/17/2015

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1509352-007A	M4-35.0 W	Water	SW8260B (VOCs)	5	VOA w/ HCl	9/8/2015 11:15	1 day	Present	☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

P&D ENVIRONMENTAL, INC.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

150935?

PROJECT NUMBER: 0660

PROJECT NAME: James River Corporation, 2101 Williams St. San Leandro, CA

SAMPLED BY: (PRINTED & SIGNATURE) Michael Bass-Deschenes

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): EPA 8260B	BC	PRESERVATIVE	REMARKS
M1-20.0W	9/8/15	~~1810~~	H2O		5	X	X	ICE	NORMAL TAT
M2-20.0W	9/8/15	1820	"		5	X	X	"	
M3-20.0W	9/8/15	1835	"		5	X		"	
M4-20.0W	9/8/15	1925	"		5	X		"	
M5-20.0W	9/9/15	1415	"		5	X		"	
M6-20.0W	9/9/15	1500	"		3	X		"	
M4-35.0W	9/9/15	11:15	"		5	X			

RELINQUISHED BY: (SIGNATURE) Michael Bass-Desch	DATE 9-10-15	TIME 1415	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment) 6	LABORATORY: MC CAMPBELL ANALYTICAL, INC.	
RELINQUISHED BY: (SIGNATURE)	DATE 9-10-15	TIME 1510	RECEIVED BY: (SIGNATURE)	Total No. of Containers (This Shipment) 28	LABORATORY CONTACT: ANGELA RYDELIUS	LABORATORY PHONE NUMBER: (925) 252-9262
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO		

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

* Additional Sample Recieved. Put on Hold

REMARKS: 5 VOAs with HCL

* Takin off hold 9/17 for 8260 - BC

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1509195

Report Created for: P & D Environmental

55 Santa Clara, Ste.240
Oakland, CA 94610

Project Contact: Michael Deschenes
Project P.O.:
Project Name: 0660; James River Corporation

Project Received: 09/04/2015

Analytical Report reviewed & approved for release on 09/11/2015 by:

Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: P & D Environmental
Project: 0660; James River Corporation
WorkOrder: 1509195

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

b1	aqueous sample that contains greater than ~1 vol. % sediment

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509195
Date Received:	9/4/15 18:15	**Extraction Method:**	SW5030B
Date Prepared:	9/9/15-9/11/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M5-34.0W	1509195-001A	Water	09/04/2015 11:30	GC16	110053

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	100	10	09/11/2015 01:25
tert-Amyl methyl ether (TAME)	ND	5.0	10	09/11/2015 01:25
Benzene	ND	5.0	10	09/11/2015 01:25
Bromobenzene	ND	5.0	10	09/11/2015 01:25
Bromochloromethane	ND	5.0	10	09/11/2015 01:25
Bromodichloromethane	ND	5.0	10	09/11/2015 01:25
Bromoform	ND	5.0	10	09/11/2015 01:25
Bromomethane	ND	5.0	10	09/11/2015 01:25
2-Butanone (MEK)	ND	20	10	09/11/2015 01:25
t-Butyl alcohol (TBA)	ND	20	10	09/11/2015 01:25
n-Butyl benzene	ND	5.0	10	09/11/2015 01:25
sec-Butyl benzene	ND	5.0	10	09/11/2015 01:25
tert-Butyl benzene	ND	5.0	10	09/11/2015 01:25
Carbon Disulfide	ND	5.0	10	09/11/2015 01:25
Carbon Tetrachloride	ND	5.0	10	09/11/2015 01:25
Chlorobenzene	ND	5.0	10	09/11/2015 01:25
Chloroethane	ND	5.0	10	09/11/2015 01:25
Chloroform	ND	5.0	10	09/11/2015 01:25
Chloromethane	ND	5.0	10	09/11/2015 01:25
2-Chlorotoluene	ND	5.0	10	09/11/2015 01:25
4-Chlorotoluene	ND	5.0	10	09/11/2015 01:25
Dibromochloromethane	ND	5.0	10	09/11/2015 01:25
1,2-Dibromo-3-chloropropane	ND	2.0	10	09/11/2015 01:25
1,2-Dibromoethane (EDB)	ND	5.0	10	09/11/2015 01:25
Dibromomethane	ND	5.0	10	09/11/2015 01:25
1,2-Dichlorobenzene	ND	5.0	10	09/11/2015 01:25
1,3-Dichlorobenzene	ND	5.0	10	09/11/2015 01:25
1,4-Dichlorobenzene	ND	5.0	10	09/11/2015 01:25
Dichlorodifluoromethane	ND	5.0	10	09/11/2015 01:25
1,1-Dichloroethane	ND	5.0	10	09/11/2015 01:25
1,2-Dichloroethane (1,2-DCA)	ND	5.0	10	09/11/2015 01:25
1,1-Dichloroethene	ND	5.0	10	09/11/2015 01:25
cis-1,2-Dichloroethene	**16**	5.0	10	09/11/2015 01:25
trans-1,2-Dichloroethene	ND	5.0	10	09/11/2015 01:25
1,2-Dichloropropane	ND	5.0	10	09/11/2015 01:25
1,3-Dichloropropane	ND	5.0	10	09/11/2015 01:25
2,2-Dichloropropane	ND	5.0	10	09/11/2015 01:25

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509195
Date Received:	9/4/15 18:15	**Extraction Method:**	SW5030B
Date Prepared:	9/9/15-9/11/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M5-34.0W	**1509195-001A**	**Water**	**09/04/2015 11:30**	**GC16**	**110053**

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	5.0	10	09/11/2015 01:25
cis-1,3-Dichloropropene	ND	5.0	10	09/11/2015 01:25
trans-1,3-Dichloropropene	ND	5.0	10	09/11/2015 01:25
Diisopropyl ether (DIPE)	ND	5.0	10	09/11/2015 01:25
Ethylbenzene	ND	5.0	10	09/11/2015 01:25
Ethyl tert-butyl ether (ETBE)	ND	5.0	10	09/11/2015 01:25
Freon 113	ND	5.0	10	09/11/2015 01:25
Hexachlorobutadiene	ND	5.0	10	09/11/2015 01:25
Hexachloroethane	ND	5.0	10	09/11/2015 01:25
2-Hexanone	ND	5.0	10	09/11/2015 01:25
Isopropylbenzene	ND	5.0	10	09/11/2015 01:25
4-Isopropyl toluene	ND	5.0	10	09/11/2015 01:25
Methyl-t-butyl ether (MTBE)	**160**	5.0	10	09/11/2015 01:25
Methylene chloride	ND	5.0	10	09/11/2015 01:25
4-Methyl-2-pentanone (MIBK)	ND	5.0	10	09/11/2015 01:25
Naphthalene	ND	5.0	10	09/11/2015 01:25
n-Propyl benzene	ND	5.0	10	09/11/2015 01:25
Styrene	ND	5.0	10	09/11/2015 01:25
1,1,1,2-Tetrachloroethane	ND	5.0	10	09/11/2015 01:25
1,1,2,2-Tetrachloroethane	ND	5.0	10	09/11/2015 01:25
Tetrachloroethene	**110**	5.0	10	09/11/2015 01:25
Toluene	ND	5.0	10	09/11/2015 01:25
1,2,3-Trichlorobenzene	ND	5.0	10	09/11/2015 01:25
1,2,4-Trichlorobenzene	ND	5.0	10	09/11/2015 01:25
1,1,1-Trichloroethane	ND	5.0	10	09/11/2015 01:25
1,1,2-Trichloroethane	ND	5.0	10	09/11/2015 01:25
Trichloroethene	**32**	5.0	10	09/11/2015 01:25
Trichlorofluoromethane	ND	5.0	10	09/11/2015 01:25
1,2,3-Trichloropropane	ND	5.0	10	09/11/2015 01:25
1,2,4-Trimethylbenzene	ND	5.0	10	09/11/2015 01:25
1,3,5-Trimethylbenzene	ND	5.0	10	09/11/2015 01:25
Vinyl Chloride	ND	5.0	10	09/11/2015 01:25
Xylenes, Total	ND	5.0	10	09/11/2015 01:25

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Date Received:	9/4/15 18:15	**Extraction Method:**	SW5030B
Date Prepared:	9/9/15-9/11/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M5-34.0W	1509195-001A	Water	09/04/2015 11:30	GC16	110053

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	105	70-130		09/11/2015 01:25
Toluene-d8	95	70-130		09/11/2015 01:25
4-BFB	87	70-130		09/11/2015 01:25

Analyst(s): KF Analytical Comments: b1

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509195
Date Received:	9/4/15 18:15	**Extraction Method:**	SW5030B
Date Prepared:	9/9/15-9/11/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M6-32.0W	1509195-002A	Water	09/04/2015 14:15	GC28	110053

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	09/09/2015 16:43
tert-Amyl methyl ether (TAME)	**0.56**	0.50	1	09/09/2015 16:43
Benzene	ND	0.50	1	09/09/2015 16:43
Bromobenzene	ND	0.50	1	09/09/2015 16:43
Bromochloromethane	ND	0.50	1	09/09/2015 16:43
Bromodichloromethane	ND	0.50	1	09/09/2015 16:43
Bromoform	ND	0.50	1	09/09/2015 16:43
Bromomethane	ND	0.50	1	09/09/2015 16:43
2-Butanone (MEK)	ND	2.0	1	09/09/2015 16:43
t-Butyl alcohol (TBA)	**86**	2.0	1	09/09/2015 16:43
n-Butyl benzene	ND	0.50	1	09/09/2015 16:43
sec-Butyl benzene	ND	0.50	1	09/09/2015 16:43
tert-Butyl benzene	ND	0.50	1	09/09/2015 16:43
Carbon Disulfide	ND	0.50	1	09/09/2015 16:43
Carbon Tetrachloride	ND	0.50	1	09/09/2015 16:43
Chlorobenzene	ND	0.50	1	09/09/2015 16:43
Chloroethane	ND	0.50	1	09/09/2015 16:43
Chloroform	ND	0.50	1	09/09/2015 16:43
Chloromethane	ND	0.50	1	09/09/2015 16:43
2-Chlorotoluene	ND	0.50	1	09/09/2015 16:43
4-Chlorotoluene	ND	0.50	1	09/09/2015 16:43
Dibromochloromethane	ND	0.50	1	09/09/2015 16:43
1,2-Dibromo-3-chloropropane	ND	0.20	1	09/09/2015 16:43
1,2-Dibromoethane (EDB)	ND	0.50	1	09/09/2015 16:43
Dibromomethane	ND	0.50	1	09/09/2015 16:43
1,2-Dichlorobenzene	ND	0.50	1	09/09/2015 16:43
1,3-Dichlorobenzene	ND	0.50	1	09/09/2015 16:43
1,4-Dichlorobenzene	ND	0.50	1	09/09/2015 16:43
Dichlorodifluoromethane	ND	0.50	1	09/09/2015 16:43
1,1-Dichloroethane	ND	0.50	1	09/09/2015 16:43
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	09/09/2015 16:43
1,1-Dichloroethene	ND	0.50	1	09/09/2015 16:43
cis-1,2-Dichloroethene	**4.9**	0.50	1	09/09/2015 16:43
trans-1,2-Dichloroethene	ND	0.50	1	09/09/2015 16:43
1,2-Dichloropropane	ND	0.50	1	09/09/2015 16:43
1,3-Dichloropropane	ND	0.50	1	09/09/2015 16:43
2,2-Dichloropropane	ND	0.50	1	09/09/2015 16:43

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509195
Date Received:	9/4/15 18:15	**Extraction Method:**	SW5030B
Date Prepared:	9/9/15-9/11/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M6-32.0W	1509195-002A	Water	09/04/2015 14:15	GC28	110053

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	09/09/2015 16:43
cis-1,3-Dichloropropene	ND	0.50	1	09/09/2015 16:43
trans-1,3-Dichloropropene	ND	0.50	1	09/09/2015 16:43
Diisopropyl ether (DIPE)	ND	0.50	1	09/09/2015 16:43
Ethylbenzene	ND	0.50	1	09/09/2015 16:43
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	09/09/2015 16:43
Freon 113	ND	0.50	1	09/09/2015 16:43
Hexachlorobutadiene	ND	0.50	1	09/09/2015 16:43
Hexachloroethane	ND	0.50	1	09/09/2015 16:43
2-Hexanone	ND	0.50	1	09/09/2015 16:43
Isopropylbenzene	ND	0.50	1	09/09/2015 16:43
4-Isopropyl toluene	ND	0.50	1	09/09/2015 16:43
Methyl-t-butyl ether (MTBE)	**11**	0.50	1	09/09/2015 16:43
Methylene chloride	ND	0.50	1	09/09/2015 16:43
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	09/09/2015 16:43
Naphthalene	ND	0.50	1	09/09/2015 16:43
n-Propyl benzene	ND	0.50	1	09/09/2015 16:43
Styrene	ND	0.50	1	09/09/2015 16:43
1,1,1,2-Tetrachloroethane	ND	0.50	1	09/09/2015 16:43
1,1,2,2-Tetrachloroethane	ND	0.50	1	09/09/2015 16:43
Tetrachloroethene	**1.5**	0.50	1	09/09/2015 16:43
Toluene	ND	0.50	1	09/09/2015 16:43
1,2,3-Trichlorobenzene	ND	0.50	1	09/09/2015 16:43
1,2,4-Trichlorobenzene	ND	0.50	1	09/09/2015 16:43
1,1,1-Trichloroethane	ND	0.50	1	09/09/2015 16:43
1,1,2-Trichloroethane	ND	0.50	1	09/09/2015 16:43
Trichloroethene	**5.4**	0.50	1	09/09/2015 16:43
Trichlorofluoromethane	ND	0.50	1	09/09/2015 16:43
1,2,3-Trichloropropane	ND	0.50	1	09/09/2015 16:43
1,2,4-Trimethylbenzene	ND	0.50	1	09/09/2015 16:43
1,3,5-Trimethylbenzene	ND	0.50	1	09/09/2015 16:43
Vinyl Chloride	**4.2**	0.50	1	09/09/2015 16:43
Xylenes, Total	ND	0.50	1	09/09/2015 16:43

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Analytical Report

Client:	P & D Environmental	**WorkOrder:**	1509195
Date Received:	9/4/15 18:15	**Extraction Method:**	SW5030B
Date Prepared:	9/9/15-9/11/15	**Analytical Method:**	SW8260B
Project:	0660; James River Corporation	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
M6-32.0W	1509195-002A	Water	09/04/2015 14:15	GC28	110053

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	110	70-130		09/09/2015 16:43
Toluene-d8	108	70-130		09/09/2015 16:43
4-BFB	101	70-130		09/09/2015 16:43

Analyst(s): KF Analytical Comments: b1

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509195
Date Prepared:	9/9/15	**BatchID:**	110053
Date Analyzed:	9/9/15	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; James River Corporation	**Sample ID:**	MB/LCS-110053 1509200-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	9.74	0.50	10	-	97	54-140
Benzene	ND	9.84	0.50	10	-	98	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	37.0	2.0	40	-	93	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	9.45	0.50	10	-	94	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	9.21	0.50	10	-	92	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	9.50	0.50	10	-	95	66-125
1,1-Dichloroethene	ND	10.2	0.50	10	-	102	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509195
Date Prepared:	9/9/15	**BatchID:**	110053
Date Analyzed:	9/9/15	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; James River Corporation	**Sample ID:**	MB/LCS-110053 1509200-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	9.76	0.50	10	-	98	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	9.36	0.50	10	-	94	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	9.43	0.50	10	-	94	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	9.88	0.50	10	-	99	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	9.62	0.50	10	-	96	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

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Quality Control Report

Client:	P & D Environmental	**WorkOrder:**	1509195
Date Prepared:	9/9/15	**BatchID:**	110053
Date Analyzed:	9/9/15	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	0660; James River Corporation	**Sample ID:**	MB/LCS-110053 1509200-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	26.6	27.1		25	107	108	70-130
Toluene-d8	27.5	27.2		25	110	109	70-130
4-BFB	2.54	2.63		2.5	102	105	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	11.4	11.8	10	ND	114	118	69-139	3.60	20
Benzene	10.0	10.3	10	ND	100	103	69-141	2.33	20
t-Butyl alcohol (TBA)	51.2	54.8	40	ND	128	137	41-152	6.86	20
Chlorobenzene	9.44	9.64	10	ND	94	96	77-120	2.15	20
1,2-Dibromoethane (EDB)	10.5	10.8	10	ND	105	108	76-135	2.75	20
1,2-Dichloroethane (1,2-DCA)	10.8	11.1	10	ND	108	111	73-139	2.79	20
1,1-Dichloroethene	10.2	10.6	10	ND	102	106	59-140	3.36	20
Diisopropyl ether (DIPE)	10.7	11.0	10	ND	107	110	72-140	2.60	20
Ethyl tert-butyl ether (ETBE)	10.6	10.9	10	ND	106	109	71-140	3.06	20
Methyl-t-butyl ether (MTBE)	11.4	11.7	10	ND	114	117	73-139	2.94	20
Toluene	9.64	9.88	10	ND	96	99	71-128	2.46	20
Trichloroethene	9.74	10.1	10	ND	95	99	64-132	3.50	20
Surrogate Recovery									
Dibromofluoromethane	27.7	28.1	25		111	112	70-130	1.29	20
Toluene-d8	26.4	26.6	25		106	106	70-130	0	20
4-BFB	2.55	2.52	2.5		102	101	70-130	1.16	20

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1509195 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Michael Deschenes
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Email: lab@pdenviro.com; Paul.King@pdenviro.c
cc/3rd Party:
PO:
ProjectNo: 0660; James River Corporation

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: 5 days;

Date Received: **09/04/2015**
Date Printed: **09/08/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1509195-001	M5-34.0W	Water	9/4/2015 11:30	☐	A											
1509195-002	M6-32.0W	Water	9/4/2015 14:15	☐	A											

Test Legend:

1	8260B_W	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: P & D ENVIRONMENTAL
QC Level: LEVEL 2
Work Order: 1509195
Project: 0660; James River Corporation
Client Contact: Michael Deschenes
Date Received: 9/4/2015
Comments:
Contact's Email: lab@pdenviro.com; Paul.King@pdenviro.com; pdking0000@aol.com

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1509195-001A	M5-34.0W	Water	SW8260B (VOCs)	2	VOA w/ HCl	☐	9/4/2015 11:30	5 days	5%+	☐	
1509195-002A	M6-32.0W	Water	SW8260B (VOCs)	2	VOA w/ HCl	☐	9/4/2015 14:15	5 days	5%+	☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

1509195

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

P&D ENVIRONMENTAL, INC.

55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

PROJECT NUMBER: 0660

PROJECT NAME: JAMES RIVER CORPORATION
2101 WILLIAMS ST.
SAN LEANDRO, CA

SAMPLED BY: (PRINTED & SIGNATURE) MICHAEL BASS-DESCHENES

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): EPA 8260B	PRESERVATIVE	REMARKS
MS-34.0 W	9/4/15	1130	H2O		5	X	ICE	NORMAL TAT
MG-32.0 W	"	1415	"		5	X	"	" "

RELINQUISHED BY: (SIGNATURE) Michael Bass-Deschenes — DATE 9/4/15 — TIME 4:12
RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE) — DATE 9/4 — TIME 18:15
RECEIVED BY: (SIGNATURE) — DATE 9/4 — TIME 18:16

RELINQUISHED BY: (SIGNATURE) — DATE — TIME
RECEIVED FOR LABORATORY BY: (SIGNATURE)

Total No. of Samples (This Shipment): 2
Total No. of Containers (This Shipment): 10

LABORATORY: McCAMPBELL ANALYTICAL, INC.
LABORATORY CONTACT: ANGELA RYDELIUS
LABORATORY PHONE NUMBER: (925) 252-9262

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (Y) NO

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

REMARKS: 5 VOAs WITH HCL

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Sample Receipt Checklist

Client Name:	**P & D Environmental**	Date and Time Received:	**9/4/2015 6:15:00 PM**
Project Name:	**0660; James River Corporation**	LogIn Reviewed by:	Maria Venegas
WorkOrder №:	**1509195** Matrix: Water	Carrier:	Client Drop-In

Chain of Custody (COC) Information

Chain of custody present?	Yes	☑	No	☐	
Chain of custody signed when relinquished and received?	Yes	☑	No	☐	
Chain of custody agrees with sample labels?	Yes	☑	No	☐	
Sample IDs noted by Client on COC?	Yes	☑	No	☐	
Date and Time of collection noted by Client on COC?	Yes	☑	No	☐	
Sampler's name noted on COC?	Yes	☑	No	☐	

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes	☐	No	☐	NA ☑
Shipping container/cooler in good condition?	Yes	☑	No	☐	
Samples in proper containers/bottles?	Yes	☑	No	☐	
Sample containers intact?	Yes	☑	No	☐	
Sufficient sample volume for indicated test?	Yes	☑	No	☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes	☑	No	☐	
Sample/Temp Blank temperature	Temp: 4.2°C				NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes	☑	No	☐	NA ☐
Sample labels checked for correct preservation?	Yes	☑	No	☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes	☐	No	☐	NA ☑
Samples Received on Ice?	Yes	☑	No	☐	
(Ice Type: WET ICE)					

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes	☐	No	☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes	☐	No	☐	NA ☑

** NOTE: If the "No" box is checked, see comments below.*

Comments: