East of 4th Avenue Cleanup Implementation Report

STERICYCLE GEORGETOWN SITE

SEATTLE, WASHINGTON

November 2017

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STERICYCLE ENVIRONMENTAL SOLUTIONS

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APPENDICIES

East of 4th Avenue Cleanup Implementation Report

Stericycle Georgetown

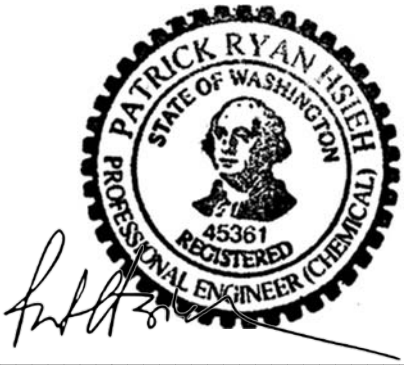
Seattle, Washington

October 30, 2017

Project STRCL-001

This report was prepared by the staff of Dalton, Olmsted, & Fuglevand, Inc., under the supervision of the engineer whose seal and signature appear hereon.

The findings, recommendations, specifications, or professional opinions have been prepared in are presented within the limits described by the client, in accordance with generally accepted professional engineering and geologic practices in Western Washington for the nature of services authorized by the client at the time the services were provided. No warranty is expressed or implied.



Patrick Hsieh, PE
Senior Engineer

1.0 INTRODUCTION

Dalton, Olmsted, and Fuglevand, Inc. (DOF), has prepared this Cleanup Implementation Report on behalf of Stericycle Environmental Solutions, Inc. (Stericycle). It documents the cleanup activities conducted for the eastern part of Stericycle's Georgetown site under Agreed Order DE 7347, consistent with the requirements of WAC 173-340-400 and the Cleanup Action Plan (Ecology, 2010). The objective of this report is to cumulatively report the different cleanup components in one document, documenting the completion of construction activities required.

1.1 Background

In accordance with the Agreed Order and 2010 Cleanup Action Plan, Stericycle prepared and Washington State Department of Ecology (Ecology) approved an Engineering Design Report (EDR) in 2011 (Amec, 2011). The EDR laid out a plan for submitting documentation of cleanup activities as they progressed because the cleanup included multiple areas and different treatment strategies. The cleanup activities required in the CAP are summarized below, along with the construction reporting approach for each cleanup component. Figure 1 shows an overview of the site area.

Hydraulic Control and Groundwater Pre-Treatment

A new building was constructed in 2012 to house the groundwater pretreatment system, upgrading from the original temporary building used when the system was initially constructed as part of an interim measure. The system was upgraded as part of this relocation project. Construction details were reported to Ecology in the January 2013 PSC Area Implementation Report (Amec, 2013a). Ecology issued a conditional approval letter in April 2013 (Ecology, 2013a) without comment related to the groundwater pretreatment system. The system continues to run effectively and routine operations are reported to Ecology as part of quarterly progress reports, consistent with the Long Term Monitoring Plan included in the EDR.

Soil Vapor Extraction (SVE)

A 15-well SVE system was installed in 2011 and operated from August 2012 to December 2014, including reconfiguration of part of the system in 2013. Appendix A shows the location of the SVE wells. Five primary reports documented implementation of the SVE remedy:

- The January 2013 PSC Area Implementation Report (Amec, 2013a) included construction documentation;
- A June 2012 memorandum documented completion of dewatering necessary prior to SVE system startup (Amec, 2012a);
- A September 2012 memorandum documenting initial startup activities (AMEC, 2012b);
- A September 2013 memorandum described design revisions made as part of startup (Amec, 2013b);

- A March 2014 memorandum[1] summarized startup and optimization of the SVE system (Amec, 2014a); and
- A December 2014 memorandum documented completion of SVE (Amec, 2014b).

Ecology issued a letter in January 2015 confirming completion of the SVE work on the Stericycle property, and allowing for implementation of the In-Situ Bioremediation cleanup task (Ecology, 2015a). The SVE action is complete but Stericycle has maintained the infrastructure installed for SVE on the neighboring Union Pacific Railroad (UPRR) property to be used as part of a contingent remedy should concentrations of petroleum–related volatile organic compounds (VOCs) trigger additional corrective actions (discussed further in Section 2.2).

Excavation and Off-Site Disposal of Affected Soil and Enhanced Groundwater Bioremediation

Two hundred cubic yards (297 tons) of soil were excavated in January 2012 from an area of the former Amalgamated Sugar Company property owned by Stericycle that was suspected of containing concentrations of polychlorinated biphenyls (PCBs) above 10 milligrams per kilogram (mg/kg); see Figures 2 and 3. Soil was disposed of offsite. Construction details were reported to Ecology in the January 2013 PSC Area Implementation Report (Amec, 2013a). Ecology issued a conditional approval letter in April 2013 (Ecology, 2013a) with minor comments requesting that additional information be provided in this later Implementation Report, as discussed further in Section 2.3.

Nearly 5,000 tons of soil were excavated in fall 2012 from three areas of the UPRR property that neighbors Stericycle to the east (Figure 4). The areas were excavated based on PCB and chlorinated VOC concentrations (with depths varying from three to nine feet deep) and located along the property boundary with Stericycle. Soil was disposed of offsite. An electron donor material (emulsified vegetable oil) was added to the deepest sections of the excavation areas prior to backfill to enhance ongoing bioremediation of the groundwater for the remaining low concentrations of chlorinated VOCs. Construction details were reported to Ecology in the July 2013 Revised Argo Yard Area Cleanup Implementation Report (Amec, 2013c). Ecology issued a conditional approval letter in September 2013 (Ecology, 2013b) with minor comments requesting that additional information be provided in this later Implementation Report, as discussed further in Section 2.3.

These cleanup actions are complete.

In-Situ Groundwater Bioremediation

An enhanced in-situ biomediation system was implemented in 2016 and will run for four years to reduce degradable contaminants in groundwater behind the subsurface barrier wall at the Stericycle property (Figure 5). A technical memorandum was issued in March 2017 describing the first year operations and optimization (DOF, 2017). Other implementation documentation is provided as part of Section 2.4 of this report. This cleanup action is underway and anticipated to be completed in 2020.

[1] Ecology responded to this memorandum with a comment letter on April 14, 2014, which PSC addressed via a letter on May 27, 2014.

Paving

An 1,850 square foot area in the southeast part of the Stericycle property that was previously unpaved was paved with asphalt in February 2012 to reduce the potential for human contact with soil containing residual concentrations of contaminants (see Figure 2). Construction details were reported to Ecology in the January 2013 PSC Area Implementation Report (Amec, 2013a). Ecology issued a conditional approval letter in April 2013 (Ecology, 2013a) without comment related to the surface cover. This action is complete.

1,4-Dioxane Groundwater Remediation

In 2015, Stericycle agreed to implement a contingent remedy for 1,4-dioxane in groundwater in the area downgradient of the site and the Agreed Order was revised to reflect this. The following primary documents have been prepared in support of this action:

- 1,4-Dioxane Remediation Approach Focused Feasibility Study (FFS) (AMEC, 2015b)
- 1,4-Dioxane Remedial Design/Remedial Action Work Plan [RD/RA Work Plan] (AMEC, 2015a)
- Revised ISCO Pilot Study Work Plan (DOF and AMEC, 2016)
- Technical Memorandum: ISB Phase I and ISCO Phase II Results and Downgradient Area Pilot Study Work Plan (DOF, 2016)
- Technical Memorandum: ISB and ISCO Phase II Downgradient Area Revised Pilot Study Work Plan (DOF, 2017)

In-situ chemical oxidation (ISCO) and in situ bioremediation (ISB) were the preferred remedies selected in the FFS. The purpose of these remedial actions is to attain groundwater cleanup standards for 1,4-dioxane in the downgradient area within a reasonable restoration timeframe. The full-scale ISCO remedial action was designed to aggressively reduce 1,4-dioxane mass in the most contaminated areas of the groundwater plume in order to accelerate the attenuation of 1,4-dioxane to eventually decrease concentrations to cleanup levels.

The RD/RA Work Plan originally proposed four phases of work: Phase I included bench scale studies for both ISCO and ISB, Phase II included in-situ pilot scale work for both (if necessary), Phase III was full scale implementation for both (if necessary), and Phase IV was implementation reporting. ISB was recognized as an emerging technology for 1,4-dioxane remediation, with the potential that bench or pilot results would show ISB was not favorable to use onsite. Further ISB implementation would cease if bench scale testing determined ISB was unlikely to be favorable in-situ.

Bench testing of both methods has been completed and indicates that ISB with bioaugmentation is a possible in-situ treatment remedy. Initial pilot testing of ISCO prompted additional pilot testing utilizing different oxidant delivery methods. Pilot testing of these revised ISCO methods, and field pilot testing of ISB are currently underway and status reports are being provided as part of quarterly progress reports.

Institutional Controls

Since contaminants will remain in place and a conditional point of compliance has been established as part of the site remedy, institutional controls are required. Restrictive covenants and other administrative mechanisms have been developed. The status of institutional controls was reviewed as part of the 2015 Five Year Review (Ecology, 2015b). Many of the controls identified in the EDR are in place. A deed restriction has been drafted and reviewed by Ecology and the property owner for the neighboring UPRR property and should be signed by the end of 2017 after paving of one remaining area is paved in November 2017. A deed restriction will be executed for the Stericycle property at the completion of ISB.

Monitored Natural Attenuation and Vapor Intrusion

For groundwater contamination outside of the subsurface barrier wall, there is continued reliance on monitored natural attenuation, in conjunction with the Vapor Intrusion program, as discussed in the 2015 Ecology Five Year Review (Ecology, 2015b). These programs continue to run effectively and routine operations are reported to Ecology as part of quarterly progress reports, consistent with the Long Term Monitoring Plan included in the EDR.

1.2 Report Requirements

A cleanup implementation report (as-built report) is required to document construction completed for implementation of the EDR. This implementation report has been prepared in accordance with WAC 173-340-400(6)(b) and Section VII.4 of the Agreed Order.

2.0 CONSTRUCTION SUMMARY

Construction of the various cleanup activities for the Stericycle Georgetown site have been underway since approval of the EDR in 2011. This section references the documents that contain implementation details required under WAC 173-340-400 and the CAP and presents information not previously submitted to Ecology.

2.1 Hydraulic Control and Groundwater Pre-Treatment

No new information is presented in this implementation report for the hydraulic control and groundwater pre-treatment system. The major system changes were documented in the 2013 PSC Area Implementation Report (Amec, 2013a). Minor system changes are documented in the quarterly progress reports produced under the Long Term Monitoring Plan and in periodic updates to the system Operations and Maintenance Plan.

2.2 Soil Vapor Extraction

No new information is presented in this implementation report for the SVE system. This task is complete and documented in reports listed in Section 1.1.

One component of the system was not decommissioned after system shutdown in 2014. The three SVE wells located on the neighboring UPRR property, outside of the subsurface barrier wall (SVE-U1, SVE-U2, and SVE-U3) and one radius of influence well in their vicinity were left in place with associated piping that currently terminates at the Stericycle/UPRR property boundary closest to these wells (Appendix A). The VOCs detected at these wells were primarily toluene, ethylbenzene, and xylenes, and accumulated light non-aqueous phase liquid during initial operations when the water table in this area was high; the water table was not lowered in this area during SVE operations since it is outside the subsurface barrier wall and not affected by the groundwater pumping inside the wall.

After completion of SVE, Stericycle and Ecology agreed that future groundwater monitoring results would be assessed to evaluate if groundwater concentrations at wells surrounding this area show diminishing contaminant mass. If data indicate that trend is occurring the remaining SVE wells may be abandoned at that point. Stericycle additionally agreed to complete a temporary groundwater boring downgradient of these three SVE wells in 2015. Results of that sampling event were documented in a May 2015 report to Ecology (Amec, 2015). The sample from the temporary boring showed no elevated concentrations of VOCs above cleanup levels and neither ethylbenzene nor xylenes were detected at all.

Figure 6 shows the trend in several petroleum-related compounds in groundwater sampled at the two nearest monitoring wells in the area of SVE treatment on Argo Yard. Groundwater will continue to be monitored and reported as part of quarterly progress reports and re-evaluated as part of the 2020 Five Year Review.

2.3 Excavation and Off-Site Disposal of Affected Soil and Enhanced Groundwater Bioremediation

The primary construction documentation for excavation and disposal of affected soil and enhanced groundwater bioremediation (on UPRR property excavations) was provided in the 2013 PSC Area Implementation Report (Amec, 2013a) and Revised Argo Yard Area Cleanup Implementation Report

(Amec, 2013c). Ecology requested that the following additional documentation be included in this final Cleanup Implementation Report.

1. An as-built figure for the soil excavation area on the former Amalgamated Sugar Property that clearly depicts the dimensions and specifications of the materials (fill material, "liner", paving, etc.) now in place.
2. A plan view figure for the soil excavation area on the former Amalgamated Sugar Property that shows historic soil sample PCB concentrations in the area near the excavation, distinguishing where soil has been subsequently removed.
3. Discussion of soil and groundwater contamination remaining post-excavation in all areas and progress towards restoration timeframe goals defined in the CAP.
4. Conduct a post-remediation pathway/receptor assessment for UPRR.

Items 1 and 2 are addressed by new Figures 2 and 3. Items 3 and 4 are discussed below in Section 2.3.1.

2.3.1 Residual Concentrations and Receptor Assessment

Following soil excavation work, Stericycle performed post-excavation sampling of Argo Yard soils. Overall concentrations of constituents of concern (COCs) in the post-excavation samples were much lower than the concentrations detected in the pre-excavation sampling. Concentrations above site cleanup levels still exist within the excavated area for various COCs, but the overall contaminant levels are much reduced. However, PCBs were found at high concentrations in the post excavation samples, including levels above 10 mg/kg total PCBs. The high PCB detections from the post-excavation samples were from scattered locations throughout the excavation, indicating that PCB concentrations are sporadic, rather than consistent. Figure 4 and Table 1 summarize residual concentrations based on the soil sampling performed in 2012.

Groundwater has been monitored since the completion of soil excavation (and SVE) on Argo Yard. Residual concentrations and trends in groundwater contaminant decline were assessed as part of the Five Year Review completed in 2015 (Ecology, 2015). Results of that evaluation found that while concentrations were declining at most locations, it was too early to determine if the actions completed will be adequate to successfully meet cleanup levels within the restoration timeframe established in the CAP (year 2032) at all locations. This is further discussed in Section 3.3. Notably, concentrations of VOCs targeted by the enhanced bioremediation that was part of the Argo Yard remedy have shown a notable response after 2012, as illustrated in Figures 7 and 8. The trends show the anticipated decline, while also providing useful information about seasonal variation and possible rebound that will be monitored as the system equilibrates post-construction.

In the meantime, Stericycle has worked in cooperation with UPRR and Ecology to finalize language for an environmental covenant. As part of developing that covenant and addressing Ecology comments on the Argo Yard Implementation Report (Amec, 2013c), Stericycle agreed to pave an additional area of Argo Yard where soil excavation was conducted, leaving all exposed areas of the cleanup area defined in the EDR on UPRR property fully paved, as shown in Figure 2. Paving of this final area is anticipated to be completed by the end of 2017. The environmental covenant, which assumes paving of this final area, will be recorded once paving is complete. Stericycle and UPRR shared construction completion information and long term control plans for this area of Argo Yard with the federal Environmental

Protection Agency as part of finalizing the draft covenant to allow EPA to comment on any additional requirements based on the Toxic Substances Control Act (regulating PCBs). No comments were received. Specifics of the covenant are discussed further in Section 3.2, Institutional Controls.

2.4 In-Situ Groundwater Bioremediation

Periodic updates on progress of the in-situ groundwater bioremediation (ISB) system have been submitted as part of quarterly progress reports and a technical memorandum was issued in March 2017 describing the first year operations and optimization (DOF, 2017). Additional construction details are included in this section.

2.4.1 Well Construction

In September 2015 Stericycle commenced construction of the ISB remedy in accordance with the EDR. Forty-eight groundwater wells were installed and developed onsite during fourth quarter 2015, both extraction and injection wells, to design depths of either 20 or 35 feet below ground surface (bgs). Well logs prepared by Amec Foster Wheeler and the survey report prepared by Goldsmith Land Development Services are included in Appendix B. A map of the ISB extraction and injection well locations is provided as Figure 5.

2.4.2 Baseline Sampling

Baseline groundwater sampling required under the EDR prior to ISB implementation was completed during in November 2015. Results were reported in the ISB Technical Memorandum (DOF, 2017).

2.4.3 Injection Skid Construction

Stericycle contracted with IO Environmental to manufacture an ISB skid for use in the ISB remediation, in early 2016. The skid was modified as part of Year 1 operations as described below in Section 2.4.4. As-built drawings of the skid are included in Appendix A.

2.4.4 Year 1 Operations

In April 2016, ISB injections of corn syrup commenced at a treatment cell around extraction well EW-3. In May 2016, ISB injections continued at a treatment cell around extraction well EW-1. Fouling and excessive water level drawdown in the extraction well led to shutting down this initial recirculation event early and discussing reconfiguration of the injection approach with Ecology. The revised approach was approved by Ecology via email on June 23, 2016. The following modifications to design were made:

- The ISB skid was modified to extract from two extraction wells at once and inject at eight injections wells, and injection cell well layouts were adjusted based on this revised approach.
- Modelling was updated to estimate time for substrate to make it back to the extraction wells based on the lower flow data recorded during pump tests conducted during the initial injection round. The time for substrate breakthrough is estimated to range from 9 to 52 days depending on the cell configuration and related flow paths.
- In order to minimize fouling, cells will be recirculated for approximately one day after substrate injection has stopped and one day prior to the anticipated day substrate would make it back to the extraction well.
- The target dose of substrate for the target area was lowered to 150 mg/L, down from 500 mg/L but still within the range AFCEE guidance recommended (50-500 mg/L).

- Total Organic Carbon samples will be collected from several injection wells that are not in use during each recirculation.

In August 2016, the injection and recirculation was restarted and completed at cells including extraction wells EW-4, EW-6, EW-1, and EW-2, as agreed to with Ecology. An ISB Technical Memorandum (DOF, 2017) describing these initial events and associated sampling was submitted to Ecology in March 2017.

2.4.5 Remaining Tasks

Year 2 operations are underway, with groundwater monitoring conducted in July 2017 and next round injections occurring this fall, 2017. Results will continue to be reported as part of quarterly progress reports and more frequently should operations warrant additional discussion with Ecology regarding optimization of the system. Per the EDR, following the eighth and final injection, the ISB system will be decommissioned upon approval by Ecology. The ISB wells will be abandoned and the controls and equipment decontaminated and disconnected.

2.4.6 Waste Management

Wastes generated as part of ISB implementation include: concrete slurry and cores, soil cuttings, decontamination water, well development and purge water, and excess corn syrup. All waste was labeled and containerized on site (in covered roll-off bins, drums, and poly totes) and was sampled and profiled for disposal by Stericycle following the Waste Management Plan in the EDR. These practices remain in place as operation of the system continues.

2.5 Paving

No new information is presented in this implementation report for paving of previously unpaved areas of the Stericycle property. This task is complete and documented in the 2013 PSC Area Implementation Report (Amec, 2013a). Maintenance is addressed regularly and managed by Stericycle as part of Long Term Monitoring and quarterly Progress reporting.

3.0 POST-CONSTRUCTION CONDITIONS

This section describes the aspects of cleanup related to contingent remedies and long-term monitoring and controls that are part of the overall cleanup.

3.1 1,4-Dioxane Groundwater Remediation

As described in Section 1.1, the 1,4-dioxane groundwater contingent remedy is underway with pilot testing of ISCO and ISB currently being conducted. Once the pilot tests are complete, Stericycle will summarize the findings and present them to Ecology for review with recommendations on how to proceed for full scale remediation in the downgradient area as described in the 2016 Downgradient Area Pilot Study Work Plan (DOF, 2016).

3.2 Institutional Controls

Administrative controls such as access restrictions and worker communications have been in place for the Stericycle site since the start of the cleanup. Institutional controls (ICs) are in place for both the neighboring Stone, Drew, and Ashe and Aronson properties, as described in previous documents.

UPRR Property (Argo Yard)

UPRR has agreed to a combination of administrative controls, institutional controls, and communications for the Stericycle-affected portion of Argo Yard. These controls are necessary to restrict groundwater recovery within the Argo Yard cleanup area, limit the potential for exposure to COC-affected soils, protect future indoor receptors from vapor intrusion, and maintain the effectiveness and protectiveness of the implemented action. The draft restrictive covenant for UPRR is included in Appendix C. Stericycle has additionally established a long term access agreement with UPRR to allow Stericycle access to perform designated monitoring tasks on UPRR property. ICs included in the environmental covenant on the UPRR property include:

- Not engaging in activities that may impact or interfere with the remedial action without prior approval from Ecology except in the event of an emergency.
- Protection of human health and the environment- preventing release of residual contamination; Ecology permission for activity that may threaten continued protection provided by the remedy.
- Continued operation, maintenance, and monitoring of remedial actions carrying with any conveyance of property.
- Restricting leases to uses and activities consistent with the covenant and notifications to lessees.
- Approval procedures for proposed activities inconsistent with the covenant.
- Industrial land use in perpetuity.
- Ongoing containment of soil/waste material by maintenance of cover.
- No new stormwater infiltration facilities or ponds within contaminated areas within areas of residual contamination unless approved by Ecology.
- Special restrictions for enclosed spaces to protect from the potential for vapor intrusion.

- Restriction on any groundwater use.
- Maintenance and access to groundwater monitoring wells.
- Fencing and signage requirements.

Stericycle Property (Inside Barrier Wall)

The ICs associated with the Stericycle facility, as identified in the EDR, include:

- Prohibiting activities on the site that may interfere with the cleanup action, operation and maintenance, monitoring, or other measures necessary to assure the integrity of the cleanup action and continued protection of human health and the environment. *Such activities would include those that complete exposure pathways to remaining contaminated media (soil or groundwater). An example would be if capping was removed and a utility trench was dug in the Barrier Wall Area, where contaminated soil and groundwater are expected to remain.*
- Prohibiting activities that may result in the release of a hazardous substance that was contained as a part of the cleanup action. *Such activities would primarily include those that damage the barrier wall or cause a failure in the maintenance of an inward gradient around the barrier wall.*
- Requiring notice to Ecology of the owner's intent to convey any interest in the property and requiring the owner to include notice of this restrictive covenant in any instrument conveying interest of the property.
- Requiring the land owner to restrict leases to uses and activities consistent with the restrictive covenant and notify all lessees of the restrictions on the use of the property.
- Requiring notice and approval by Ecology of any proposal to use the property in a manner that is inconsistent with the restrictive covenant. *Such use could include redevelopment of the site, or building of new structures on the site.*
- Granting Ecology and its designated representatives the right to enter the property at reasonable times for the purpose of evaluating compliance with the CAP and other required plans, including the right to take samples, inspect any remedial actions, and inspect records.
- Prohibiting activities related to pumping of groundwater to the surface for drinking or other uses (such as lawn watering), where site groundwater chemical concentrations exceed potable cleanup standards.
- Maintenance of asphalt and concrete surface cover.

Per the Agreed Order, Stericycle will finalize language with Ecology and record restrictive covenants for Stericycle property within 10 days of completion of the ISB program in the Stericycle Area.

Property Outside Barrier Wall

Specific controls on property owned by Stericycle and SAD Properties, LLC, outside the barrier wall but east of the conditional point of compliance where COC-impacted groundwater and/or soil remain include:

- Prohibition on the pumping of groundwater to the surface for drinking or other uses (such as lawn watering), where site groundwater chemical concentrations exceed potable cleanup standards;
- Evaluation of vapor intrusion pathway in the event of any future construction of enclosed spaces (buildings);
- Protection of workers performing work in the subsurface who may be exposed to remaining soil or groundwater contamination; and
- Proper management of any potentially contaminated excavated soil or groundwater removed as part of future construction projects.

Specific controls on property owned by multiple owners (private and governmental) outside the barrier wall and west of the conditional point of compliance where COC-impacted groundwater remains include annual public notice of project status and continued operation of the vapor intrusion and mitigation program. Controls also include:

- Annual notifications to property owners and tenants in this area, identifying site areas where groundwater contamination exceeds potable cleanup standards, reminding these individuals that production wells in the area are prohibited (where this is the case, and per which authorities), and alerting the individuals to the potential adverse health effects of using this groundwater for drinking or other purposes (such as lawn watering); and
- Annual notifications to utility entities serving this area, identifying site areas where groundwater contamination exceeds potable cleanup standards, and alerting the entities to the potential adverse health effects of contacting this groundwater or inhaling vapors resulting from contamination.

3.3 Monitored Natural Attenuation and Vapor Intrusion

The cleanup designed in the EDR relied on monitored natural attenuation of contaminants in groundwater over time to reach cleanup levels within the restoration timeframe, defined in the Agreed Order as the year 2032. In the interim, the vapor intrusion program is maintained as one of the methods used to increase protection of exposure to receptors downgradient of the Stericycle facility.

The five year review performed in 2015 (Ecology, 2015) was the first full assessment of progress towards meeting groundwater cleanup levels. Ecology found that while concentrations of many groundwater contaminants had significantly decreased since 2010, others – in particular areas and depths – had not. The five year review memo submitted by Stericycle as part of the five year review process (AMEC, 2014) noted that based on monitoring trends it appears that some contaminants may not attain 2010 groundwater cleanup levels by 2032. From Ecology's review, it was uncertain if the following contaminants would be reduced to cleanup levels by then:

- Tetracholoroethene at CG-5-S1, CG-103-S1, and CG-124-WT.
- Vinyl Chloride at CG-102-S2, CG-131-40, CG-134-40, CG-119-40, CG-149-WT, and CG-104-I.

- Trichloroethene at CG-126-WT, CG-127-WT, CG-131-WT, CG-132-WT, CG-157-WT, CG-103-S1, and CG-124-WT.
- Petroleum-related compounds such as ethylbenzene, trimethylbenzenes, and xylenes at CG-154-WT.
- Cyanide at CG-158-WT and CG-121-70.
- PCBs at CG-154-WT, CG-155-WT, and CG-156-WT.
- 1,4-dioxane – currently being remediated via active remedy.

As part of this implementation report, updated trend charts of those particular compounds and wells were prepared and are included in Appendix D. Monitoring will continue and the next in-depth assessment of progress towards attaining cleanup levels will be completed as part of the 2020 Five Year Review.

Until VOC concentrations in shallow (water table zone) groundwater decrease to levels protective of indoor air quality, a vapor intrusion program is needed to ensure the protection of indoor receptors. As part of the five year review, Ecology found that Stericycle's vapor intrusion program continues to effectively protect these receptors from vapor intrusion-related health risks, but did have limitations that Stericycle should acknowledge and continually make efforts to reduce the probability that receptors could be exposed to vapor intrusion- caused indoor air contamination. To address these concerns Stericycle reviewed and created revised cleanup level tables after the five year review for use in the vapor intrusion program. These tables were submitted to Ecology and have been in use as part of vapor intrusion program since.

4.0 REFERENCES

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5.0 CLOSING

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Tables

TABLE 1
UPRR ARGO YARD POST-EXCAVATION SOIL SAMPLE CONCENTRATIONS
Stericycle Georgetown Facility
Seattle, Washington

Sample ID	Soil Cleanup	Method C	1A-B-1	1A-B-2	1A-B-3	1A-B-4	1A-B-5	1A-B-6	1A-B-7	1A-B-7	1A-B-8	1A-B-9	1A-C-1	1A-FS-1	1A-FS-2	1A-S-1	1A-S-2	1A-S-3	1A-S-4	1A-S-5	1A-S-6	1A-S-7	1A-S-8
Date	Level	Cleanup Level	9/13/2012	9/13/2012	9/20/2012	9/12/2012	9/21/2012	9/13/2012	9/25/2012	9/27/2012	9/13/2012	9/13/2012	9/25/2012	9/14/2012	9/21/2012	9/20/2012	9/13/2012	9/13/2012	9/13/2012	9/13/2012	9/20/2012	9/14/2012	9/12/2012
Analyte																							
Conventionals (mg/Kg)																							
Cyanide, Total	0.1	70000	**0.21 J**	0.21 UJ	**6.99**	0.08 J	**0.34**	**0.12 J**	**0.63**	**0.39 J**	0.21 UJ	**0.13 J**	0.21 U	0.21 U	0.21 U	0.10 J	**1.05 J**	**0.64 J**	**0.24 J**	0.09 J	**0.19 J**	**0.12 J**	**1.95 J**
Metals (mg/Kg)																							
Arsenic	7.3	87.5	3.63	1.3	3.82	1.64	2.83	9.48	2.16	2.15	1.08	3.49	1.35	2.38	2.35	1.73	5.61	3.22	1.93	1.77	1.54	2.08	11.4
Barium	3.28	700000	**137 J**	**24.3 J**	**1840**	**26.5**	**134**	**141 J**	**34.4 J**	**21.7 J**	**19.2 J**	**121 J**	**17.3 J**	**47.9 J**	**23.9**	**29.2**	**32.2 J**	**48.5 J**	**146 J**	**47.5 J**	**43.7**	**14.9 J**	**458**
Cadmium	0.05	3500	**0.214**	0.02	**0.489**	**0.077**	**0.123**	**0.416**	**0.243**	**0.054**	0.02	**0.202**	0.036	0.044	**0.067**	**0.06**	**1.71**	**0.319**	**0.386**	**0.282**	**0.074**	0.028	**0.388**
Chromium	200	10500	16.4	4.54	81.4	10.6 J	19.7	12.4	6.89	5.42	4.56	14.9	4.89	6.37	5.11	5.14	127	16.7	13.1	10.2	7.88	5.14	33.8 J
Copper	36.4	140000	36.1 J	7.54 J	**42.1**	9.38	10.9	**37.3 J**	9.2	7.11	7.12 J	32.5 J	7.06	10.2	9.23	9.88	**104 J**	**53.3 J**	20.4 J	17.7 J	7.58	9.68	27.2
Lead	500	1000	89.5 J	1.150 J	**659 J**	3.45	69.2 J	84.8 J	11.5	2.52	1.110 J	75.5 J	1.29	8.08	1.77 J	4.45 J	38.3 J	68.7 J	28.9 J	22.9 J	6.62 J	20.3	292
Mercury	0.07	2	**0.108**	0.010 J	**0.087**	0.018 J	0.03	0.063	0.017 J	0.018 J	0.006 J	**0.121**	0.007 J	0.007 J	0.006 J	0.02	**0.582**	0.026	0.055	0.027	**0.075**	0.036	0.044
Nickel	38.2	70000	13.1	5.2	15.2	7.01	7.26	12.7	8.08	8.82	4.99	12.2	5.7	6.86	6.89	4.45	17.6	14.2	15	11.3	10.5	6.23	11.4
Selenium	0.506	17500	0.2 J	1.0 U	0.2 J	1.0 U	0.2 J	0.3 J	1.0 U	1.0 U	0.8 U	0.9 U	1.0 U	1.0 U	0.7 U	0.1 U	**0.6 J**	0.5 J	0.2 J	0.2 J	0.2 J	0.2 J	1.0 U
Silver	0.318	17500	0.135 J	0.011 J	0.118 J	0.079	0.023	0.078 J	0.032	0.014 J	0.011 J	0.216 J	0.01 J	0.01 J	0.012 J	0.023 J	0.157 J	0.111 J	0.041 J	0.038 J	0.039 J	0.015 J	0.048
Zinc	101	1050000	73.7	13.2	**143**	18.9	48.7	93.9	25.2	15.2	11.5	76	12.8	32	27.4	16.6	37.9	76.1	62.5	43.9	31.9	71	83
PCBs (µg/Kg)																							
Aroclor 1016	1458		530 U	5.3 U	2100 U	5.3 U	5.3 U	56 U	5700 U	10 U	5.3 U	53 U	5.3 U	10 U	10 U	2.1 U	29000 U	6.8 U	540 U	530 U	520 U	5.4 U	530 U
Aroclor 1221	NE		1100 U	11 U	2100 U	11 U	11 U	120 U	12000 U	20 U	11 U	110 U	11 U	20 U	20 U	2.1 U	58000 U	14 U	1100 U	1100 U	1100 U	11 U	1100 U
Aroclor 1232	NE		530 U	5.3 U	2100 U	5.3 U	5.3 U	56 U	5700 U	10 U	5.3 U	53 U	5.3 U	10 U	10 U	2.1 U	29000 U	6.8 U	540 U	530 U	520 U	5.4 U	530 U
Aroclor 1242	1458	65600	530 U	5.3 U	64000	5.3 U	5.3 U	56 U	5700 U	220	5.3 U	53 U	5.3 U	10 U	10 U	2.1 U	29000 U	6.8 U	540 U	530 U	520 U	5.4 U	530 U
Aroclor 1248	NE		9200	12	2100 U	260	5.3 U	910	18000 D	10 U	5.3 U	1200	5.3 U	110	19	27	290000	180	13000	25000	8100	5.4 U	29000
Aroclor 1254	1458		530 U	5.3 U	2100 U	5.3 U	5.3 U	56 U	5700 U	10 U	5.3 U	53 U	5.3 U	10 U	10 U	2.1 U	29000 U	220	540 U	530 U	**7300**	5.4 U	530 U
Aroclor 1260	1458		530 U	5.3 U	2100 U	30	5.3 U	520	5700 U	21	5.3 U	820	5.3 U	41	4.6 J	2.1 U	**130000**	180	540 U	530 U	**5400**	38	530 U
SVOCs (µg/Kg)																							
2,4-Dimethylphenol	153	70000000	210 U	43 U	**160 J**	100 U	250 U	230 U	50 UJ	50 U	43 U	210 U	50 U	42 U	49 U	50 U	1200 U	540 U	840 U	220 U	980 U	43 U	250 UJ
2-Methylnaphthalene	360	10000000	7.8	5.0 U	180	5.0 U	25 J	63	21	10 U	0.51 J	16	9.9 U	1.8 J	9.8 U	9.9 U	160 J	110	**460**	180	200 U	2.2 J	11
2-Methylphenol	41.8	200000000	42 U	8.5 U	**68 J**	20 U	50 U	45 U	10 U	10 U	8.5 U	42 U	9.9 U	8.4 U	9.8 U	9.9 U	**120 J**	110 U	170 U	43 U	200 U	8.5 U	50 UJ
4-Methylphenol	230	--	42 UJ	8.5 UJ	130	20 UJ	50 U	45 UJ	4.9 J	10 U	8.5 UJ	42 UJ	9.9 U	8.4 U	9.8 U	9.9 U	230 UJ	110 UJ	170 UJ	43 UJ	110 J	8.5 U	50 UJ
Benz(a)anthracene	143	180000	53	1.1 J	**510**	0.96 J	**590**	140	29	27	4.3 U	45	9.9 U	34	9.8 U	9.9 U	**480 J**	78	**440**	**170**	200 U	6.9	22
Benzo(a)pyrene	257	17979	**260**	5.0 U	**570**	5.0 U	**850**	190	34	27	4.3 U	92	9.9 U	32	9.8 U	9.9 U	**700 J**	110	**560**	250	75 J	9.9	33
Benzo(b)fluoranthene	466	180000	270	5.0 U	**1400**	1.1 J	**1400**	300	87	43	4.3 U	140	9.9 U	62	9.8 U	3.6 J	**1100 J**	190	**1100**	**500**	140 J	16	68
Benzo(g,h,i)perylene	NE	--	510	5.0 U	660 J	1.3 J	900	210	20	22	4.3 U	180	9.9 U	33	9.8 U	26 J	730 J	140	810	400	130 J	12	70
Benzo(k)fluoranthene	432	2000000	80	5.0 U	**400**	5.0 U	**470**	110	20	17	4.3 U	51	9.9 U	23	9.8 U	9.9 U	390 J	71	340	160	200 U	5.8	24
Benzoic Acid	200	--	1000 U	200 U	2000 U	400 U	1000 U	1000 U	200 U	200 UJ	200 U	1000 U	200 UJ	200 U	200 U	200 U	**3500 J**	2200 U	4000 U	1000 U	4000 U	130 J	1000 U
Bis(2-ethylhexyl) Phthalate	54923	9000000	180 J	85 U	750 J	86 J	55 J	57 J	220	26 J	85 U	90 J	99 U	84 U	11 J	13 J	3200	1100 U	580 J	150 J	2000 U	85 U	260 J
Chrysene	144	20000000	75	1.1 J	**1000**	1.4 J	**1100**	**260**	65	40	4.3 U	79	9.9 U	65	9.8 U	9.9 U	**760 J**	**150**	**790**	**300**	96 J	16	44
Dibenz(a,h)anthracene	642	18000	110	5.0 U	220	5.0 U	280	59	13	6.1 J	4.3 U	44	9.9 U	11	9.8 U	9.9 U	260 J	62	250	110	200 U	2.4 J	16
Dibenzofuran	291	4000000	6.2	5.0 U	100 U	5.0 U	50 U	9.0	10 U	10 U	4.3 U	8.1	9.9 U	1.3 J	9.8 U	9.9 U	52 J	40	110	54	200 U	1.4 J	1.4 J
Di-n-butyl Phthalate	1140	400000000	84 U	17 U	140 J	40 U	100 U	89 U	85	20 U	17 U	84 U	20 U	17 U	20 U	20 U	310 J	220 U	340 U	85 U	400 U	17 U	72 J
Di-n-octyl Phthalate	1555556	--	42 U	8.5 U	100 U	20 U	50 U	45 U	10 U	10 U	8.5 U	42 U	9.9 U	8.4 U	8.3 J	12	170 J	110 U	170 U	43 U	200 U	8.5 U	50 U
Fluoranthene	4570	--	71	1.0 J	520	1.0 J	660	210	59	27	4.3 U	70	9.9 U	20	9.8 U	4.2 J	690 J	110	610	270	200 U	23	30
Indeno(1,2,3-cd)pyrene	2000	180000	390	5.0 U	690	5.0 U	930	230	48	24	4.3 U	140	9.9 U	36	9.8 U	9.9 U	830 J	140	850	410	140 J	12	61
Naphthalene	264	70000000	13	5.0 U	--	5.0 U	--	61	--	--	4.3 U	19	--	1.7 J	--	--	**290 J**	87	**1100**	**480**	--	2.3 J	13
Pentachlorophenol	150	328000	420 U	85 U	76 J	200 U	500 U	450 U	13 J	100 U	85 U	420 U	99 UJ	84 U	98 U	99 U	2300 U	1100 U	1700 U	43 J	2000 U	85 U	70 J
Phenanthrene	486	--	40	5.0 U	180	5.0 U	160	75	21	4.7 J	4.3 U	40	9.9 U	8.0	9.8 U	4.6 J	300 J	120	350	180	200 U	15	12
Phenol	204	1000000000	130 U	26 U	**330**	60 U	150 U	140 U	30 U	3.6 J	26 U	130 U	30 U	26 U	30 U	30 U	690 U	330 U	510 U	27 J	590 U	26 U	28 J
Pyrene	182000	--	77	0.94 J	650	4.1 J	830	210	40	30	4.3 U	72	9.9 U	24	9.8 U	4.1 J	830 J	110	800	290	84 J	22	29
TPH (mg/Kg)																							
Diesel Range Hydrocarbons	2000	--	40	27 U	810	27 U	44	45	79	38	27 U	27 U	26 U	27 U	27 U	28 U	700	81	340	320	730	27 U	26 U
Lube Oil Range Hydrocarbons	2000	--	370	27 U	1600	27 U	73	330	180	37	27 U	79	26 U	27 U	27 U	28 U	970	410	750	620	1600	27 U	46
TPH (as gasoline)	30	--	14	2.5 U	**45**	3.5 U	3.3 U	2 J	7.5	3.2	2.5 U	10	3.1 U	2.5 U	3.7 U	2.5 U	15	24	20	2.1 J	2.3 J	2.5 U	3.5 U
VOCs (µg/Kg)																							
1,1,1-Trichloroethane	79.5	7000000000	**170**	0.83 J	30	2.1 J	10	4.4 J	20	2.7 J	0.47 J	**230**	0.3 J	4.9 J	2.0 J	35	**350**	**12000**	**120**	22	0.85 J	4.6 J	0.32 J
1,1-Dichloroethane	144	700000000	24	0.26 J	9.2	0.86 J	8.3	4.8 U	8.0	1.0 J	6.1 U	37	6.8 U	2.3 J	1.3 J	0.67 J	8.2 J	**410**	35 J	3.2 J	0.24 J	0.65 J	0.2 J
1,1-Dichloroethene	17.5	--	0.4 J	3.8 U	0.6 J	6.3 U	5.5 U	4.8 U	6.6 UJ	5.3 U	6.1 U	0.63 J	6.8 U	5.8 U	5.9 U	5.6 U	0.89 J	**25 J**	64 U	6.3 U	5.8 U	5.9 U	6.4 U
1,2,4-Trichlorobenzene	405	4530000	18 U	15 U	3.2 J	26 U	22 U	19 U	27 U	21 U	25 U	21 U	27 U	23 U	24 U	23 U	35 UJ	400 U	22 J	26 U	24 U	24 U	26 U
1,2,4-Trimethylbenzene	147	--	5.5 J	15 U	83	0.16 J	0.44 J	0.1 J	58 J	21 U	0.22 J	3.1 J	27 U	0.092 J	24 U	23 U	7.8 J	25 J	**730**	26 U	1.7 J	0.12 J	0.39 J
1,2-Dichlorobenzene	288	315000000	4.4 UJ	3.8 U	34	6.3 U	5.5 U	4.8 U	3.3 J	3.3 J	6.1 U	5.3 U	6.8 U	5.8 U	5.9 U	5.6 U	8.6 UJ	98 U	64 U	6.3 U	5.8 U	5.9 U	6.4 U
1,2-Dichloroethane	5	1442000	1.5 J	3.8 UJ	1.2 J	6.3 UJ	5.5 U	4.8 UJ	1.7 J	0.29 J	6.1 UJ	1.6 J	6.8 U	5.8 U	5.9 U	5.6 U	**12 J**	98 U	64 U	6.3 UJ	0.33 J	5.9 UJ	6.4 UJ
1,3,5-Trimethylbenzene	24.5	35000000	2.9 J	15 U	**52**	26 U	0.14 J	19 U	25 J	2.1 J	25 U	1.8 J	27 U	23 U	24 U	23 U	4.2 J	400 U	**330**	26 U	1.2 J	24 U	26 U
2-Hexanone	126	--	18 U	15 U	7.3 J	26 U	22 U	19 U	27 U	21 U	25 U	21 U	27 U	23 U	24 U	23 U	35 U	4000 U	2600 U	26 U	24 U	24 U	26 U
4-Isopropyltoluene	249	--	0.23 J	15 U	3.1 J	26 U	0.11 J	19 U	27 U	21 U	25 U	0.16 J	27 U	23 U	24 U	23 U	0.29 J	400 U	47 J	26 U	24 U	24 U	26 U
4-Methyl-2-pentanone	265	280000000	15 J	15 U	39	26 U	22 U	19 U	4.6 J	21 U	25 U	9.7 J	27 U	23 U	24 U	23 U	13 J	4000 U	2600 U	26 U	2.6 J	24 U	26 U
Acetone	1760	3150000000	210	15 U	210	32 U	41 U	200	82	38 U	37 U	210	27 U	23 U	25 U	33	170	4000 U	2600 U	51	110	42 U	70
Benzene	5	2386000	1.3 J	0.36 J	7.8 U	0.18 J	5.5 U	1.8 J	6.6 U	5.3 U	0.23 J	1.8 J	6.8 U	0.49 J	5.9 U	5.6 U	2.8 J	98 U	**30 J**	1.2 J	5.8 U	0.76 J	0.36 J
Chloroethane	658	--	4.4 U	3.8 U	7.8 U	6.3 U	5.5 U	4.8 U	6.6 U	5.3 U	6.1 U	5.3 U	6.8 U	5.8 U	5.9 U	5.6 U	8.6 U	98 U	64 U	6.3 U	5.8 U	5.9 U	6.4 U
Chloroform	5	35000000	0.47 J	3.8 U	0.62 J	0.18 J	1.4 J	0.13 J	0.35 J	5.3 U	6.1 U	0.64 J	6.8 U	0.23 J	0.21 J	5.6 U	1.1 J	**22 J**	64 U	0.31 J	5.8 U	5.9 U	6.4 U

TABLE 1
UPRR ARGO YARD POST-EXCAVATION SOIL SAMPLE CONCENTRATIONS
Stericycle Georgetown Facility
Seattle, Washington

Sample ID	Soil Cleanup	Method C	1A-B-1	1A-B-2	1A-B-3	1A-B-4	1A-B-5	1A-B-6	1A-B-7	1A-B-7	1A-B-8	1A-B-9	1A-C-1	1A-FS-1	1A-FS-2	1A-S-1	1A-S-2	1A-S-3	1A-S-4	1A-S-5	1A-S-6	1A-S-7	1A-S-8
Date	Level	Cleanup Level	9/13/2012	9/13/2012	9/20/2012	9/12/2012	9/21/2012	9/13/2012	9/25/2012	9/27/2012	9/13/2012	9/13/2012	9/25/2012	9/14/2012	9/21/2012	9/20/2012	9/13/2012	9/13/2012	9/13/2012	9/13/2012	9/20/2012	9/14/2012	9/12/2012
Analyte																							
cis-1,2-Dichloroethene	9.93	7000000	9.6	2.1 J	**53**	8.0	**50**	0.25 J	**77**	**32**	0.26 J	**15**	6.8 U	**11**	**10**	5.6 U	4.1 J	**18 J**	**570**	**19**	6.5	7.0	7.3
cis-1,3-Dichloropropene	5	--	4.4 U	3.8 U	7.8 U	6.3 U	5.5 U	4.8 U	6.6 U	5.3 U	6.1 U	5.3 U	6.8 U	5.8 U	5.9 U	5.6 U	8.6 U	98 U	64 U	6.3 U	5.8 U	5.9 U	6.4 U
Ethylbenzene	802	350000000	2.0 J	3.8 U	26	6.3 U	5.5 U	0.5 J	76	3.1 J	2.7 J	1.3 J	6.8 U	5.8 U	5.9 U	5.6 U	2.0 J	18 J	510	6.3 U	1.0 J	5.9 U	0.25 J
Isopropylbenzene	15.2	350000000	0.38 J	15 U	3.7 J	26 U	22 U	19 U	3.2 J	0.13 J	25 U	0.28 J	27 U	23 U	24 U	23 U	0.43 J	400 U	**51 J**	26 U	0.15 J	24 U	26 U
Methylene Chloride	10.5	17500000	8.7 U	7.5 U	16 U	13 U	11 U	9.5 U	14 U	11 U	13 U	11 U	14 U	12 U	12 U	12 U	18 U	**51 J**	**33 J**	13 U	12 U	12 U	13 U
Naphthalene	264	--	18 UJ	15 U	49	26 U	22 U	19 U	27 U	21 U	25 U	21 U	27 U	23 U	0.19 J	23 U	35 UJ	400 U	**3200**	26 U	24 U	24 U	26 U
n-Butylbenzene	152	--	18 U	15 U	21 J	26 U	22 U	19 U	27 U	21 U	25 U	21 U	27 U	23 U	24 U	23 U	0.44 J	400 U	260 U	26 U	24 U	24 U	26 U
n-Propylbenzene	225	350000000	0.76 J	15 U	11 J	26 U	22 U	19 U	7.0 J	0.35 J	25 U	0.44 J	27 U	23 U	24 U	23 U	1.0 J	400 U	110 J	26 U	0.35 J	24 U	26 U
sec-Butylbenzene	46.1	--	0.22 J	15 U	3.0 J	26 U	22 U	19 U	2.5 J	0.18 J	25 U	21 U	27 U	23 U	24 U	23 U	0.24 J	400 U	24 J	26 U	24 U	24 U	26 U
Styrene	299	700000000	4.4 U	3.8 U	7.8 U	6.3 U	5.5 U	4.8 U	0.84 J	5.3 U	6.1 U	5.3 U	6.8 U	5.8 U	5.9 U	5.6 U	8.6 U	98 U	41 J	6.3 U	5.8 U	5.9 U	6.4 U
Tetrachloroethene	3.1	35000000	**44**	**10**	**110**	**8.4**	**31**	**65**	**71**	**11**	2.1 J	**43**	1.2 J	**13**	**4.8 J**	1.4 J	**290**	**120**	**590**	**280**	**20**	**140**	2.4 J
Toluene	256	280000000	16 J	3.8 U	160	6.3 U	6.1	9.4	45	5.1 J	150	12	4.2 J	2.8 J	5.9 U	4.3 J	31	98 U	**1300**	6.3 U	8.5	2.3 J	6.4 U
Total Xylenes	180	700000000	36	7.6 U	170	0.29 J	1.5 J	1.5 J	93 J	4.0 J	12	21	14 U	0.25 J	12 U	11 U	59	84 J	**2000**	13 U	7.3 J	12 U	1.5 J
trans-1,2-Dichloroethene	9.69	70000000	1.3 J	3.8 U	1.9 J	6.3 U	1.6 J	4.8 U	1.5 J	0.36 J	6.1 U	2.2 J	6.8 U	0.46 J	0.4 J	5.6 U	0.79 J	98 U	**13 J**	0.75 J	5.8 U	0.44 J	6.4 U
trans-1,3-Dichloropropene	5	--	4.4 U	3.8 U	7.8 U	6.3 U	5.5 U	4.8 U	6.6 U	5.3 U	6.1 U	5.3 U	6.8 U	5.8 U	5.9 U	5.6 U	8.6 U	98 U	64 U	6.3 U	5.8 U	5.9 U	6.4 U
Trichloroethene	2.8	1050000	**110**	**3.8**	**130**	**14**	**110 J**	**150**	**150**	**25**	**18**	**130**	1.7 J	**17**	**21 J**	2.1 J	**260**	**950**	**1000**	**110**	**3.4 J**	**45**	**3.4 J**
Trichlorofluoromethane	1700	--	4.4 U	3.8 U	7.8 U	6.3 U	0.26 J	4.8 U	0.2 J	5.3 U	6.1 U	5.3 U	6.8 U	5.8 U	5.9 U	5.6 U	8.6 U	98 U	64 U	6.3 U	5.8 U	5.9 U	6.4 U
Vinyl Chloride	5	87500	4.4 U	3.8 U	1.3 J	6.3 U	5.5 U	4.8 U	6.6 U	5.3 U	6.1 U	5.3 U	6.8 U	5.8 U	5.9 U	5.6 U	8.6 U	98 U	64 U	6.3 U	5.8 U	5.9 U	6.4 U

Notes
D = Result obtained from a dilution
J = Value is estimated
U = Analyte was not detected at the reporting limit presented.
Bold indicates a detection above the Stericycle Cleanup Action Plan Soil Cleanup Level
Shading indicates a detection above the MTCA Method C Cleanup Level

Abbreviations
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
PAHs = polyaromatic hydrocarbons
PCBs = polychlorinated biphenyls
SVOCs = semivolatile organic compounds
TPH = total petroleum hydrocarbons
VOCs = volatile organic compounds

TABLE 1
UPRR ARGO YARD POST-EXCAVATION SOIL SAMPLE CONCENTRATIONS
Stericycle Georgetown Facility
Seattle, Washington

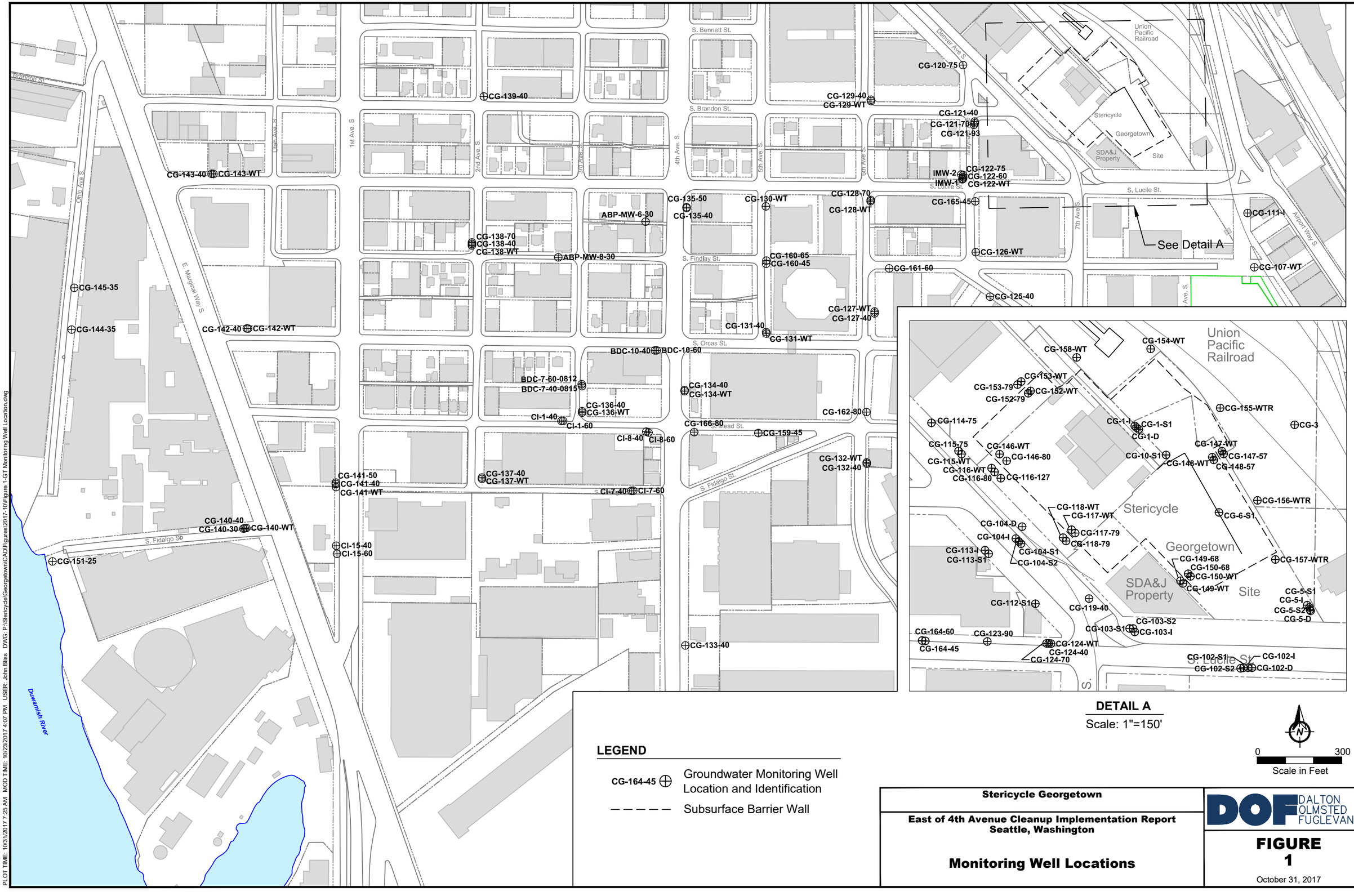
Sample ID	Soil Cleanup	Method C	1A-S-9	1A-S-10	1A-S-11	1A-S-12	1A-S-13	1A-S-14	1A-S-15	1A-S-16	1B-B-1	1B-B-2	1B-S-1	1B-S-2	1B-S-3	1B-S-4	1B-S-5	1B-S-6	1B-S-7	1B-S-8
Date	Level	Cleanup Level	9/12/2012	9/13/2012	9/21/2012	9/13/2012	9/24/2012	9/13/2012	9/25/2012	9/13/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012
Analyte																				
Conventionals (mg/Kg)																				
Cyanide, Total	0.1	70000	0.22 UJ	**0.54 J**	**0.66**	0.10 J	**6.71**	**0.16 J**	0.21 U	**0.40 J**	0.21 UJ	**0.57 J**	**13.9 J**	0.23 UJ	0.27 UJ	**0.19 J**	**0.41 J**	**1.94 J**	0.23 UJ	**0.20 J**
Metals (mg/Kg)																				
Arsenic	7.3	87.5	3.05	5.88	3.29	2.2	3.18	3.18	1.92	1.65	2.08	4.46	6.89	2.29	**10.4**	1.84	3.34	5.47	4.37	**11.5**
Barium	3.28	700000	**65.8**	**145 J**	**152**	**43.0 J**	**186 J**	**186**	**21.3 J**	**17.0 J**	**45.1**	**679**	**576**	**25.9**	**148**	**29.7**	**1060**	**399**	**417**	**342**
Cadmium	0.05	3500	0.045	**0.372**	**0.685**	**0.089**	**0.076**	**0.076**	0.026	0.025	**0.137**	**0.18**	**0.265**	0.041	**0.161**	0.037	**0.177**	**1.76**	**0.343**	**2.14**
Chromium	200	10500	5.39 J	15.9	46.4	6.13	7.58	7.58	5.73	5.53	6.75 J	13.9 J	72.7 J	5.75 J	10.1 J	7.26 J	21.2 J	67.9 J	17.2 J	45.5 J
Copper	36.4	140000	12	**70.1 J**	25.4	12.2 J	17.8 J	17.8	8.16	7.55 J	16.2	**40.1**	25.1	9.91	29.9	10.4	**103**	**81.9**	**53.7**	**79.1**
Lead	500	1000	52.2	98.3 J	164 J	8.920 J	13.0 J	13	1.49	1.320 J	7.03	31.3	347	12.9	9.65	1.76	13.7	234	80.1	180
Mercury	0.07	2	0.039	**0.124**	**0.217**	0.022	0.022	0.022	0.007 J	0.008 J	0.041 J	**0.359 J**	**0.125 J**	0.036 J	0.051 J	0.014 J	0.028 J	**0.321 J**	0.055 J	**0.2 J**
Nickel	38.2	70000	6.42	13.9	10	6.86	6.57	6.57	6.73	6.28	6.48	12	18.7	7.76	11.6	8.5	13.5	16.2	16.2	23.2
Selenium	0.506	17500	1 U	1.0 U	0.1 J	0.8 U	0.2 J	0.2 J	1.0 U	0.7 U	0.2 J	0.3 J	0.2 J	1.0 U	**0.7 J**	1.3 U	**0.6 J**	0.3 J	0.5 J	**0.7 J**
Silver	0.318	17500	0.096	0.081 J	0.047	0.025 J	0.034 J	0.034	0.011 J	0.013 J	0.024	0.107	0.186	0.02 J	0.065	0.03	0.105	**0.789**	0.129	**0.381**
Zinc	101	1050000	69.6	87.3	68.7	25.8	31.4	31.4	14.4	14.5	34.6	63.9	**291**	68	58.2	37.4	25.6	**220**	62.3	**335**
PCBs (µg/Kg)																				
Aroclor 1016	1458		5.4 U	55 U	540 U	5.3 U	99 U	5.6 U	5.2 U	5.2 U	1900 U	38 U	190 U	38 U	38 U	38 U	38 U	1900 U	38 U	7600 U
Aroclor 1221	NE		11 U	110 U	1100 U	11 U	200 U	12 U	11 U	11 U	1900 U	38 U	190 U	38 U	38 U	38 U	38 U	1900 U	38 U	7600 U
Aroclor 1232	NE		5.4 U	55 U	540 U	5.3 U	99 U	5.6 U	5.2 U	5.2 U	1900 U	38 U	190 U	38 U	38 U	38 U	38 U	1900 U	38 U	7600 U
Aroclor 1242	1458	65600	5.4 U	55 U	540 U	5.3 U	99 U	5.6 U	5.2 U	5.2 U	1900 U	38 U	**5700**	38 U	38 U	38 U	38 U	1900 U	280	7600 U
Aroclor 1248	NE		5.4 U	1800	22000	37	2100	32	8.2	5.2 U	58000 J	580	190 U	370	38 U	38 U	38 U	74000 J	38 U	7600 U
Aroclor 1254	1458		5.4 U	55 U	540 U	5.3 U	1200	5.6 U	5.2 U	5.2 U	1900 U	38 U	**1800**	38 U	38 U	38 U	39	1900 U	280	**220000**
Aroclor 1260	1458		5.4 U	820	540 U	29	99 U	18	5.2 U	5.2 U	**8800 J**	170	1500	110	38 U	38 U	38 U	**9300 J**	170	7600 U
SVOCs (µg/Kg)																				
2,4-Dimethylphenol	153	70000000	100 U	220 U	1300 U	85 U	99 U	220 U	50 U	41 U	100 U	500 U	250 U	18 J	50 U	50 U	500 U	41 J	1000 U	1300 U
2-Methylnaphthalene	360	10000000	15	36	170 J	3.1 J	110	2.5 J	10 U	0.65 J	4.7 J	38	20	6.8	0.92 J	0.81 J	7.3	54	110	**490**
2-Methylphenol	41.8	200000000	20 U	44 U	250 U	17 U	20 U	44 U	10 U	8.2 U	20 U	100 U	50 U	20 U	9.9 U	10 U	99 U	50 U	200 U	250 U
4-Methylphenol	230	--	20 UJ	44 UJ	250 U	17 UJ	20 U	44 UJ	10 U	8.2 UJ	20 U	100 U	50 U	20 U	9.9 U	10 U	99 U	63	200 U	250 U
Benz(a)anthracene	143	180000	**150**	**380**	**150 J**	19	130	43	10 U	1.2 J	39	**520**	**800**	15	5.7	0.73 J	3.2 J	**490**	**550**	**290**
Benzo(a)pyrene	257	17979	**340**	**400**	160 J	24	110	67	10 U	0.79 J	48	**730**	**1300**	21	6.2	5.0 U	2.3 J	**640**	**620**	**330**
Benzo(b)fluoranthene	466	180000	**470**	**800**	370	39	410	85	10 U	1.7 J	79	**1000**	**2300**	34	11	1.2 J	5.0	**1000**	**990**	**760**
Benzo(g,h,i)perylene	NE	--	320	410	260	27	250	61	10 U	1.1 J	47	670	1500	49	7.5	5.0 U	3.1 J	660	520	380
Benzo(k)fluoranthene	432	2000000	180	290	110 J	15	110	32	10 U	4.1 U	30	380	**760**	9.7	3.4 J	5.0 U	1.7 J	330	410	220
Benzoic Acid	200	--	400 U	1000 U	5000 U	400 U	400 UJ	1000 U	200 UJ	200 U	400 U	2000 U	1000 UJ	400 UJ	200 U	200 U	2000 U	**630 J**	4000 U	5000 U
Bis(2-ethylhexyl) Phthalate	54923	9000000	200 U	97 J	2100 J	26 J	130 J	440 U	100 U	82 U	37 J	1000 U	280 J	24 J	99 U	100 U	990 U	400 J	2000 U	16000
Chrysene	144	20000000	**570**	**720**	**300**	23	**310**	62	10 U	1.4 J	57	**700**	**1200**	21	9.5	5.0 U	3.9 J	**760**	**930**	**750**
Dibenz(a,h)anthracene	642	18000	67	150	250 U	7.9	68	19	10 U	4.1 U	13	210	450	7.4	1.3 J	5.0 U	2 J	200	210	160
Dibenzofuran	291	4000000	9.4	14	250 U	1.2 J	20 U	1.2 J	10 U	4.1 U	3.0 J	18	6.3	2.8 J	5.0 U	5.0 U	4.6 J	16	81	130
Di-n-butyl Phthalate	1140	400000000	40 U	87 U	230 J	34 U	20 J	88 U	20 U	17 U	40 U	200 U	99 U	40 U	20 U	20 U	200 U	100 U	400 U	470 J
Di-n-octyl Phthalate	1555556	--	20 U	44 U	250 U	17 U	20 U	44 U	10 U	8.2 U	20 U	100 U	50 U	20 U	9.9 U	10 U	99 U	50 U	200 U	250 U
Fluoranthene	4570	--	760	420	210 J	35	150	66	10 U	1.1 J	56	690	510	20	9.6	5.0 U	9.2	470	860	540
Indeno(1,2,3-cd)pyrene	2000	180000	350	440	230 J	24	250	56	10 U	1.1 J	49	810	1600	33	6.1	5.0 U	1.9 J	750	610	470
Naphthalene	264	70000000	45	32	--	3.5 J	--	3.3 J	--	0.92 J	5.9	45	28	4.3 J	1.2 J	0.94 J	12	53	110	**320**
Pentachlorophenol	150	328000	200 U	440 U	2500 U	170 U	22 J	440 U	100 UJ	82 U	200 UJ	1000 UJ	500 U	200 U	99 UJ	100 UJ	990 UJ	64 J	2000 UJ	2500 UJ
Phenanthrene	486	--	**680**	100	160 J	15	47	20	10 U	4.1 U	24	250	88	15	3.4 J	5.0 U	11	96	360	470
Phenol	204	1000000000	8.4 J	130 U	750 U	51 U	60 U	140 U	30 U	25 U	60 U	300 U	150 U	60 U	4.3 J	4 J	300 U	150 U	600 U	750 U
Pyrene	182000	--	880	440	260	35	170	71	10 U	1.2 J	54	640	660	36	9.2	5.0 U	7.4	500	1000	610
TPH (mg/Kg)																				
Diesel Range Hydrocarbons	2000	--	27 U	38	830	27 U	120	28 U	26 U	26 U	26 U	44	80	28 U	34 U	37 U	68	150	330	390
Lube Oil Range Hydrocarbons	2000	--	27 U	210 J	1500	310	200	68	26 U	26 U	34	240	390	39	34 U	37 U	86	460	1400	720
TPH (as gasoline)	30	--	3.6 U	2.4 J	**42**	2.5 U	12	2.5 U	3.5 U	3.1 U	2.7 U	3.8 J	20	1.8 J	2.1 J	12	3.4 J	27	6.9	**140**
VOCs (µg/Kg)																				
1,1,1-Trichloroethane	79.5	7000000000	8.9	3.4 J	22	0.31 J	17	5.3 J	4.0 J	0.86 J	2.1 J	15	**1500**	6.3	21	**3400**	13	**290**	4.6 U	73
1,1-Dichloroethane	144	700000000	0.68 J	5.2 U	11	5.8 U	11	5.4 U	2.4 J	6.0 U	1.3 J	54	**210**	3.3 J	2.6 J	**230**	53	**620**	4.6 U	**270**
1,1-Dichloroethene	17.5	--	5.8 U	5.2 U	0.4 J	5.8 U	0.32 J	5.4 U	5.8 U	6.0 U	5.2 U	9.2 U	57 U	6.2 U	7.2 U	120 U	8.1 U	42 U	0.61 J	65 U
1,2,4-Trichlorobenzene	405	4530000	24 U	21 U	24 U	23 U	25 U	22 U	24 U	24 U	21 U	37 UJ	230 U	25 U	29 U	450 U	33 UJ	170 U	19 UJ	260 U
1,2,4-Trimethylbenzene	147	--	0.13 J	21 U	24 U	23 U	75	0.11 J	24 U	24 U	0.073 J	1.4 J	**410**	0.22 J	0.41 J	110 J	0.53 J	**440**	0.8 J	**2600**
1,2-Dichlorobenzene	288	315000000	5.8 U	5.2 U	1.3 J	5.8 U	0.55 J	5.4 U	5.8 U	6.0 U	5.2 U	9.2 UJ	57 U	6.2 U	7.2 U	120 U	8.1 UJ	42 U	4.6 UJ	65 U
1,2-Dichloroethane	5	1442000	5.8 UJ	5.2 UJ	0.61 J	5.8 UJ	1.4 J	5.4 UJ	1.9 J	6.0 UJ	5.2 U	9.2 UJ	57 U	0.83 J	7.2 U	120 UJ	8.1 UJ	**130**	4.6 UJ	65 U
1,3,5-Trimethylbenzene	24.5	35000000	24 U	21 U	0.9 J	23 U	**25 J**	22 U	0.13 J	24 U	21 U	0.4 J	**230**	25 U	0.23 J	**27 J**	33 UJ	**140 J**	0.17 J	**1300**
2-Hexanone	126	--	24 U	21 U	24 U	23 U	25 U	22 U	24 U	24 U	21 U	37 UJ	2300 U	25 U	29 U	4500 U	33 U	1700 U	19 U	2600 U
4-Isopropyltoluene	249	--	24 U	21 U	24 U	23 U	25 U	22 U	24 U	24 U	21 U	37 UJ	43 J	25 U	29 U	40 J	33 UJ	210	19 UJ	**350**
4-Methyl-2-pentanone	265	280000000	24 U	21 U	7.3 J	23 U	33	22 U	24 U	24 U	21 U	37 U	2300 U	25 U	29 U	4500 U	33 U	**840 J**	19 U	**23000**
Acetone	1760	3150000000	73	49	110	29 U	200	43	200	42 U	21 U	220	2300 U	38 U	40 U	4500 U	79	1700 U	89	2600 U
Benzene	5	2386000	1.2 J	0.83 J	5.9 U	0.29 J	**8.2**	1.2 J	5.8 U	0.39 J	0.25 J	1.4 J	57 U	0.68 J	1.1 J	**47 J**	1.2 J	**130**	4.1 J	**51 J**
Chloroethane	658	--	5.8 U	5.2 U	5.9 U	5.8 U	6.3 U	5.4 U	5.8 U	6.0 U	5.2 U	9.2 U	57 U	6.2 U	7.2 U	120 U	8.1 U	42 U	4.6 U	65 U
Chloroform	5	35000000	5.8 U	5.2 U	4.5 J	5.8 U	0.47 J	0.28 J	5.8 U	0.42 J	0.34 J	1.5 J	57 U	0.61 J	1.6 J	120 U	0.8 J	42 U	4.6 U	65 U

TABLE 1
UPRR ARGO YARD POST-EXCAVATION SOIL SAMPLE CONCENTRATIONS
Stericycle Georgetown Facility
Seattle, Washington

Sample ID	Soil Cleanup	Method C	1A-S-9	1A-S-10	1A-S-11	1A-S-12	1A-S-13	1A-S-14	1A-S-15	1A-S-16	1B-B-1	1B-B-2	1B-S-1	1B-S-2	1B-S-3	1B-S-4	1B-S-5	1B-S-6	1B-S-7	1B-S-8
Date	Level	Cleanup Level	9/12/2012	9/13/2012	9/21/2012	9/13/2012	9/24/2012	9/13/2012	9/25/2012	9/13/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012
Analyte																				
cis-1,2-Dichloroethene	9.93	7000000	1.8 J	0.41 J	**37**	5.8 U	**84**	0.31 J	**44**	1.6 J	**13**	**28**	**7300**	**45**	5.9 J	**3600**	**89**	**220**	3.3 J	**410**
cis-1,3-Dichloropropene	5	--	5.8 U	5.2 U	5.9 U	5.8 U	6.3 U	5.4 U	5.8 U	6.0 U	5.2 U	9.2 U	57 U	6.2 U	7.2 U	120 U	8.1 U	42 U	4.6 U	65 U
Ethylbenzene	802	350000000	5.8 U	5.2 U	9.3	5.8 U	220	5.4 U	0.32 J	6.0 U	5.2 U	9.2 UJ	330	6.2 U	7.2 U	25 J	8.1 U	520	0.26 J	**1700**
Isopropylbenzene	15.2	350000000	24 U	21 U	0.14 J	23 U	2.2 J	22 U	24 U	24 U	21 U	37 UJ	**47 J**	25 U	29 U	450 U	33 U	**69 J**	19 U	**850**
Methylene Chloride	10.5	17500000	12 U	11 U	12 U	12 U	13 U	11 U	12 U	12 U	11 U	19 U	230 U	13 U	15 U	**52 J**	**91**	170 U	9.2 U	260 U
Naphthalene	264	--	24 U	21 U	24 U	23 U	25 U	22 U	24 U	24 U	21 U	37 UJ	54 J	25 U	29 U	90 J	33 UJ	270	19 UJ	**650**
n-Butylbenzene	152	--	24 U	21 U	24 U	23 U	25 U	22 U	24 U	24 U	21 U	37 UJ	36 J	25 U	29 U	16 J	33 UJ	41 J	19 UJ	**320**
n-Propylbenzene	225	350000000	24 U	21 U	0.46 J	23 U	8.7 J	22 U	24 U	24 U	21 U	37 UJ	140 J	25 U	29 U	450 U	33 UJ	62 J	19 UJ	**330**
sec-Butylbenzene	46.1	--	24 U	21 U	24 U	23 U	1.8 J	22 U	24 U	24 U	21 U	37 UJ	25 J	25 U	29 U	450 U	33 UJ	19 J	19 UJ	**230 J**
Styrene	299	700000000	5.8 U	5.2 U	0.4 J	5.8 U	6.3 U	5.4 U	5.8 U	6.0 U	5.2 U	9.2 UJ	57 U	6.2 U	7.2 U	120 U	8.1 U	42 U	4.6 U	**680**
Tetrachloroethene	3.1	35000000	**29**	**8.7**	**13**	2.5 J	**29**	**15**	**12**	1.7 J	**14**	**24 J**	**3400**	**46**	**150**	**14000**	**17**	**180**	4.6 U	**25 J**
Toluene	256	280000000	5.8 U	5.2 U	21	5.8 U	**290**	5.4 U	5.8 U	6.0 U	5.2 U	9.2 U	**1200**	6.2 U	7.2 U	220	8.1 U	**6100**	4.6 U	**1400**
Total Xylenes	180	700000000	12 U	0.2 J	15	12 U	**250**	0.21 J	0.59 J	12 U	10 U	2 J	**2100**	0.49 J	0.54 J	**210 J**	16 U	**2000**	0.82 J	**46000**
trans-1,2-Dichloroethene	9.69	70000000	5.8 U	5.2 U	0.66 J	5.8 U	0.98 J	5.4 U	0.74 J	6.0 U	0.43 J	1.4 J	**190**	0.91 J	0.93 J	**100 J**	4.1 J	**47**	0.51 J	**32 J**
trans-1,3-Dichloropropene	5	--	5.8 U	5.2 U	5.9 U	5.8 U	6.3 U	5.4 U	5.8 U	6.0 U	5.2 U	9.2 UJ	57 U	6.2 U	7.2 U	120 U	8.1 U	42 U	4.6 U	65 U
Trichloroethene	2.8	1050000	**73**	**57**	**20**	**10**	**160**	**300**	**33**	**22**	**38**	**22**	**7200**	**73**	**2900**	**18000**	**170**	**550**	**13**	**52 J**
Trichlorofluoromethane	1700	--	5.8 U	5.2 U	0.11 J	5.8 U	0.11 J	0.19 J	5.8 U	6.0 U	5.2 U	1.0 J	57 U	6.2 U	0.3 J	36 J	8.1 U	42 U	4.6 U	65 U
Vinyl Chloride	5	87500	5.8 U	5.2 U	5.9 U	5.8 U	0.44 J	5.4 U	5.8 U	6.0 U	5.2 U	4.3 J	31 J	6.2 U	7.2 U	120 U	0.74 J	**10 J**	**9.6**	**17 J**

Notes
D = Result obtained from a dilution
J = Value is estimated
U = Analyte was not detected at the reporting limit presented.
Bold indicates a detection above the Stericycle Cleanup Action Plan Soil C
Shading indicates a detection above the MTCA Method C Cleanup Level

Figures



DETAIL A

Scale: 1"=150'

LEGEND

CG-164-45 ⊕ Groundwater Monitoring Well Location and Identification

– – – – – Subsurface Barrier Wall

0 300

Scale in Feet

Stericycle Georgetown

East of 4th Avenue Cleanup Implementation Report
Seattle, Washington

Monitoring Well Locations

DALTON OLMSTED FUGLEVAND

FIGURE 1

October 31, 2017

PLOT TIME: 10/31/2017 7:25 AM MOD TIME: 10/23/2017 4:07 PM USER: John Bliss DWG: P:\Stericycle\Georgetown\CAD\Figures\2017-10\Figure 1-GT Monitoring Well Location.dwg

Union Pacific Railroad

UPRR Argo Land

GATE

Maintenance Shop

SEE FIGURE 3

Foundation wall

CONCRETE FOUNDATION WALL

SVE SYSTEM

FORMER WHITE SATIN SUGAR BUILDING

GROUNDWATER PRETREATMENT BUILDING

GATE

GATE

FORMER TASCO PROPERTY

SDA & J BUILDING

GATE

S. Lucile St.

Denver Ave S.

CG-154-WT
EX-3
EW-3
EW-5
CG-147-57
CG-147-WT
CG-148-WT
CG-148-57
EX-4
CG-158-WT
EW-4
CG-1-S1
CG-1-D
CG-1-I
CG-10-S1
CG-6-S1
CG-157-WTR
CG-5-S1
CG-5-I
CG-5-S2
CG-5-D
EW-6
CG-153-WT
CG-153-79
CG-152-WT
CG-152-79
EW-1
EW-2
EX-2
CG-150-68
CG-150-WT
CG-149-68
CG-149-WT
CG-102-D
CG-102-I
CG-102-S1
CG-102-S2
CG-146-80
CG-146-WT
EX-1
CG-117-WT
CG-117-79
CG-116-WT
CG-116-127
CG-116-80
CG-118-WT
CG-118-79
CG-114-75
CG-115-75
CG-115-WT
CG-104-D
CG-104-I
CG-104-S1
CG-104-S2
CG-119-40
CG-103-S2
CG-103-S1
CG-103-I

LEGEND

- CG-153-WT Groundwater Monitoring Well
- EW-3 Groundwater Extraction Well
- Excavation Area
- New 3" Pavement
- New 6" Pavement
- Existing Surface Cover
- Proposed Extent of New Asphalt From Revised EDR
- Building / Overhang
- Property Boundary / Fenceline
- Subsurface Barrier Wall
- Tank
- Catch Basin
- Sump

0 60
Scale in Feet

Stericycle Georgetown

East of 4th Avenue Cleanup Implementation Report
Seattle, Washington

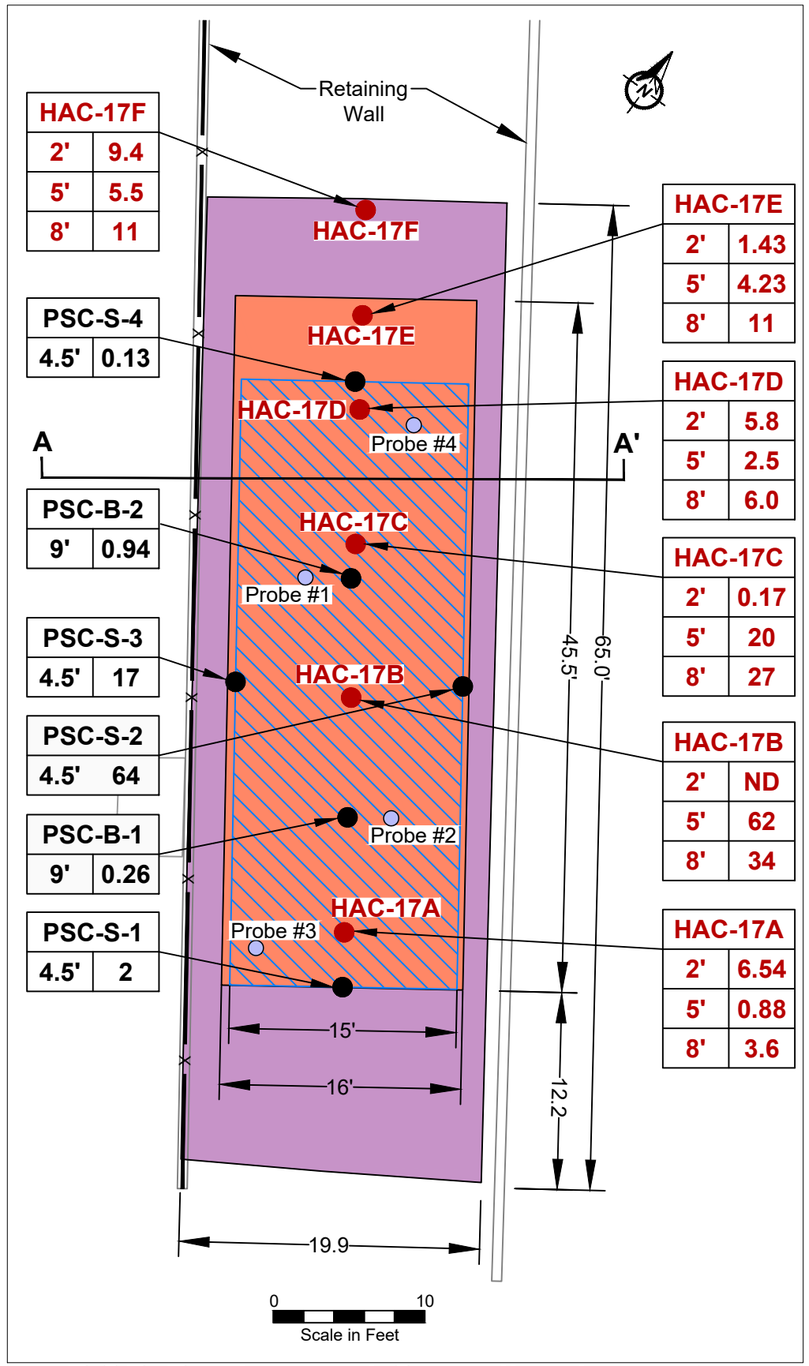
Excavation and Surface Cover Area As-Built

DOF DALTON OLMSTED FUGLEVAND

FIGURE 2

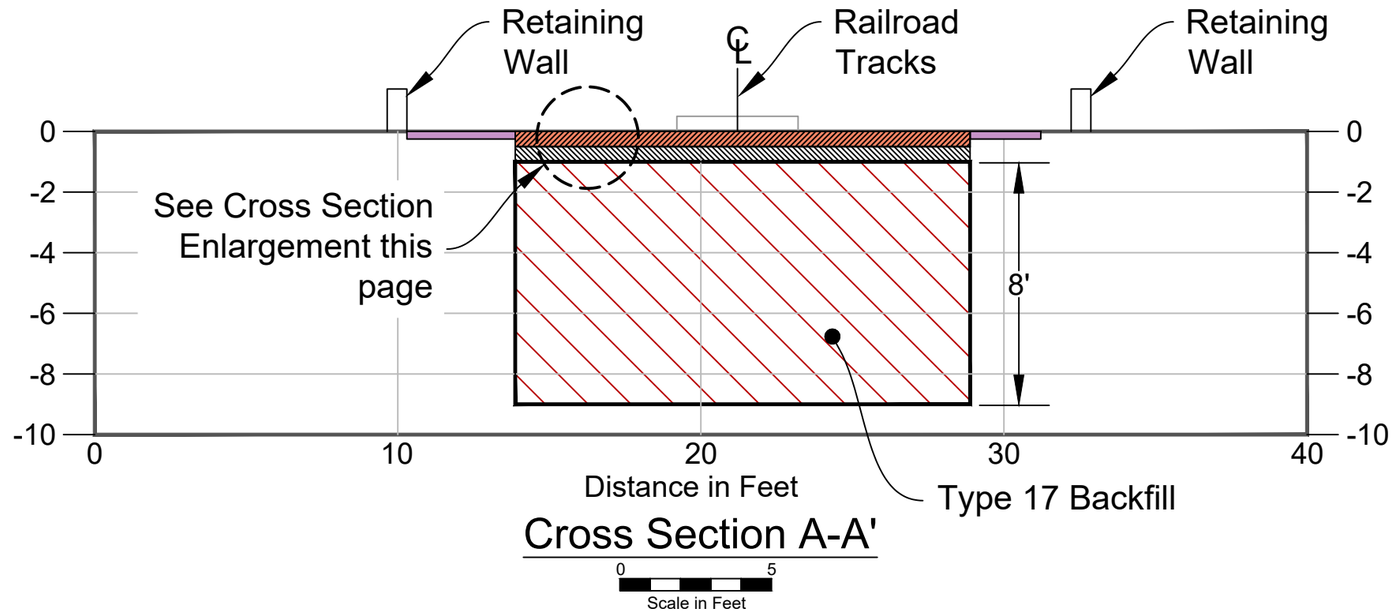
November 2, 2017

PLOT TIME: 11/2/2017 1:10 PM MOD TIME: 11/2/2017 1:09 PM USER: John Bliss DWG: P:\Stericycle\Georgetown\CAD\Figures\2017-10\Figure 2-GT Excavation and Surface Cover As-Built.dwg



PCB Paving and Sampling Layout

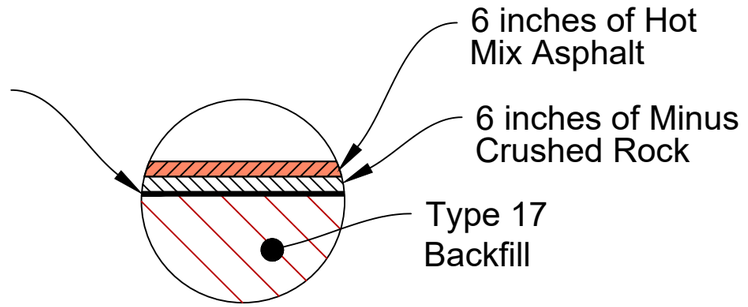
(See Figure 2 for Location)



Cross Section A-A'

0 5

Scale in Feet



Cross Section Enlargement

Not to Scale

LEGEND

- Waste Characterization Boring Location
- Pre- Excavation Soil Sample
- Post-Excavation Soil Sample
- Excavation Area
- New 3" Pavement
- New 6" Pavement

SAMPLE KEY

Site ID	
Sample Depth (ft)	Total PCB Concentration (mg/kg)

Stericycle Georgetown

East of 4th Avenue Cleanup Implementation Report
Seattle, Washington

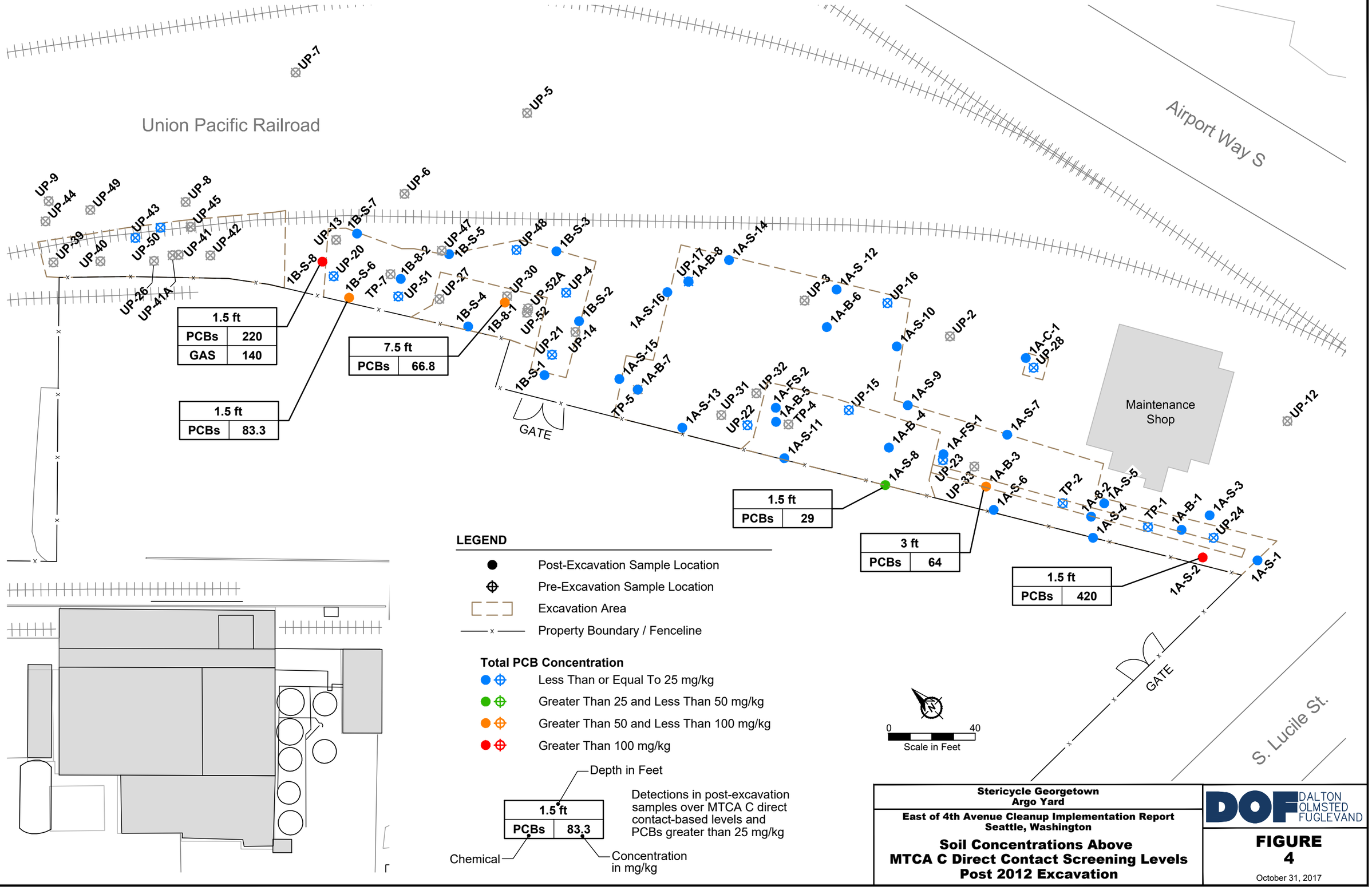
PCB Area Excavation Detail

DALTON OLMSTED FUGLEVAND

FIGURE 3

October 31, 2017

PLOT TIME: 10/31/2017 7:28 AM MOD TIME: 10/18/2017 2:53 PM USER: John Bliss DWG: P:\Stericycle\Georgetown\CAD\Figures\2017-10\Figure 3-GT PCB Area Excavation Detail.dwg



PLOT TIME: 10/31/2017 11:02 AM MOD TIME: 10/31/2017 7:36 AM USER: John Bliss DWG: P:\Stericycle\Georgetown\CAD\Figures\2017-10\Figure 4-GT Soil Concentrations Above MTCA.dwg

Stericycle Georgetown
Argo Yard

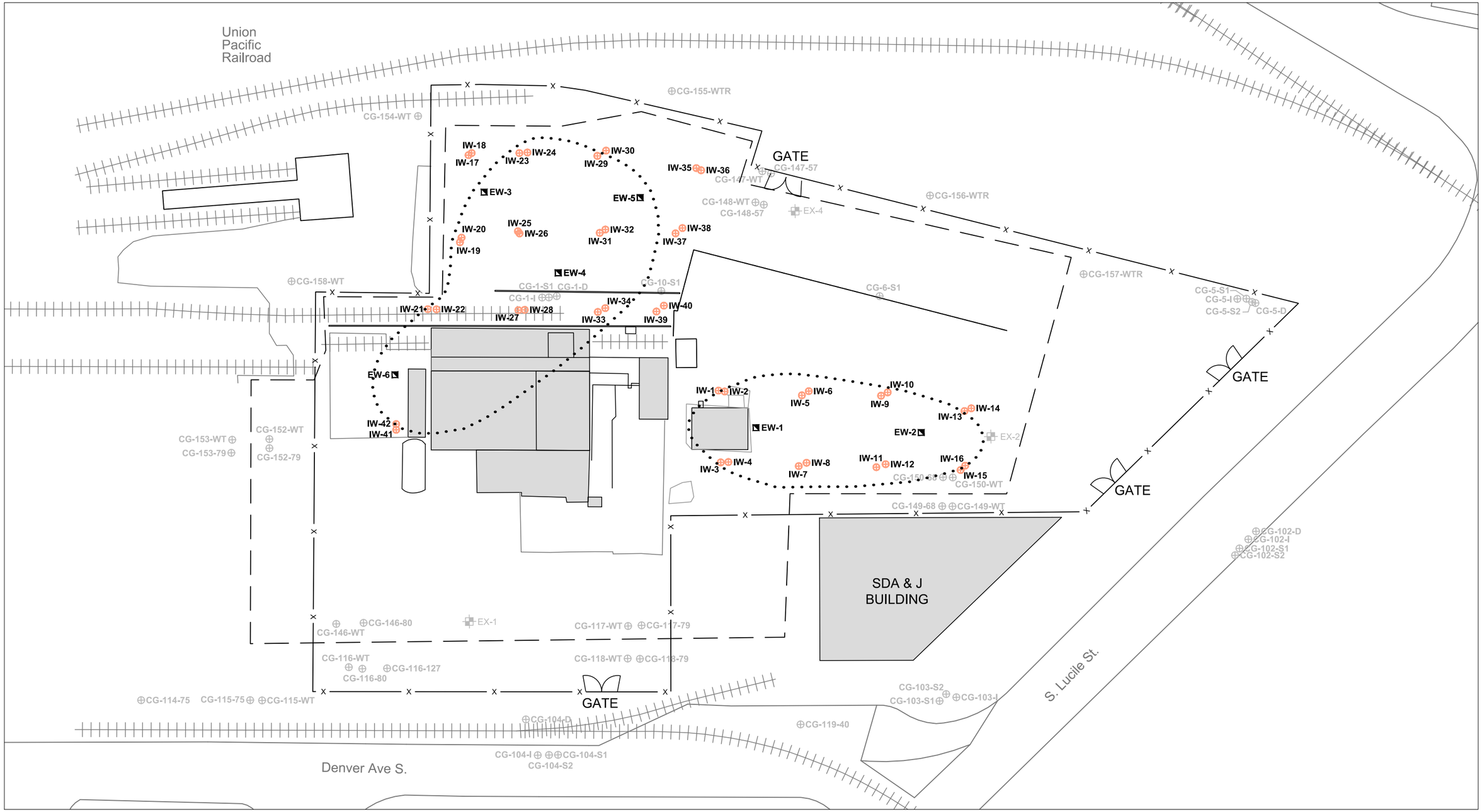
East of 4th Avenue Cleanup Implementation Report
Seattle, Washington

Soil Concentrations Above MTCA C Direct Contact Screening Levels Post 2012 Excavation

DOF DALTON OLMSTED FUGLEVAND

FIGURE 4

October 31, 2017



LEGEND

- EW-3 — Bioremediation Extraction Well
- IW-28 — Bioremediation Injection Well Pairs
- CG-153-WT — Groundwater Monitoring Well
- EX-1 — Existing Groundwater Extraction Well
- Suspected DNAPL Area
- Building / Overhang
- Property Boundary / Fenceline
- Location of Existing Barrier Wall

0 60
Scale in Feet

Stericycle Georgetown

East of 4th Avenue Cleanup Implementation Report
Seattle, Washington

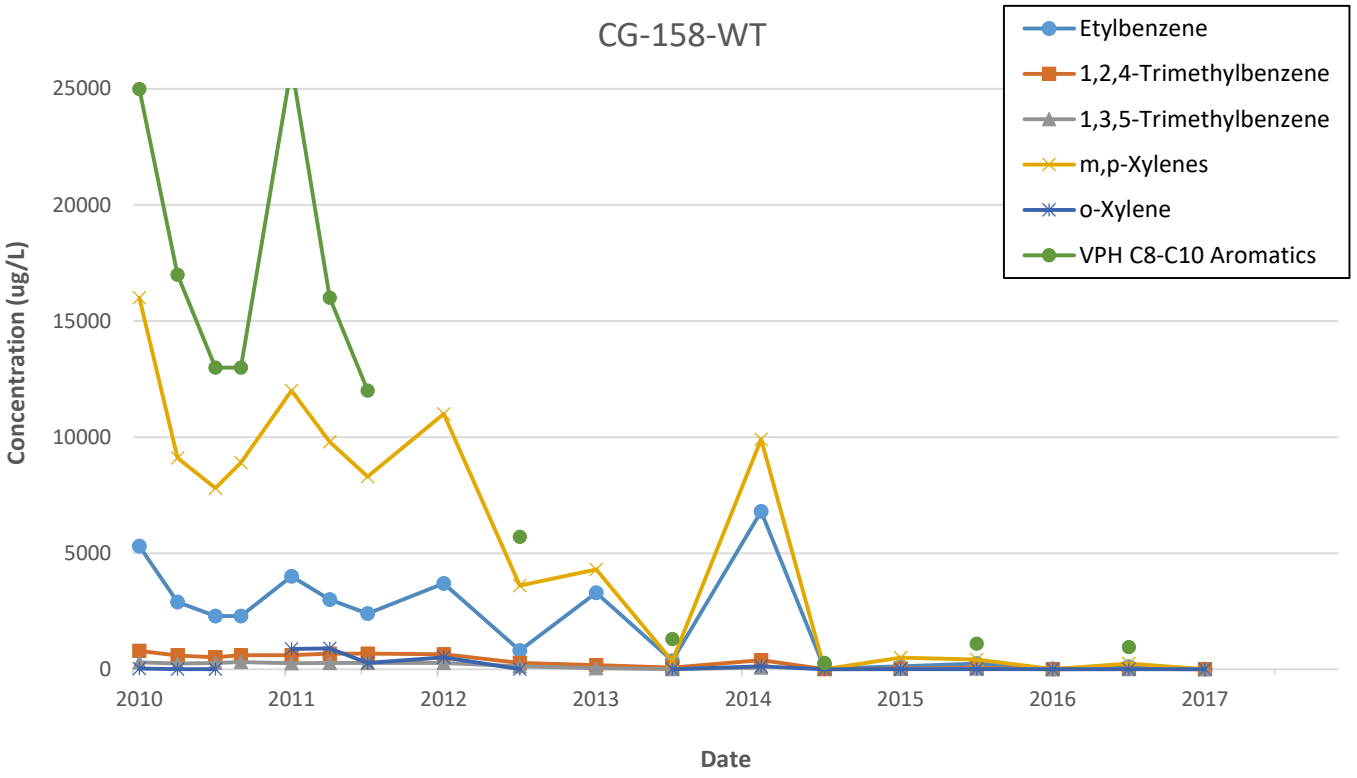
ISB Well Locations

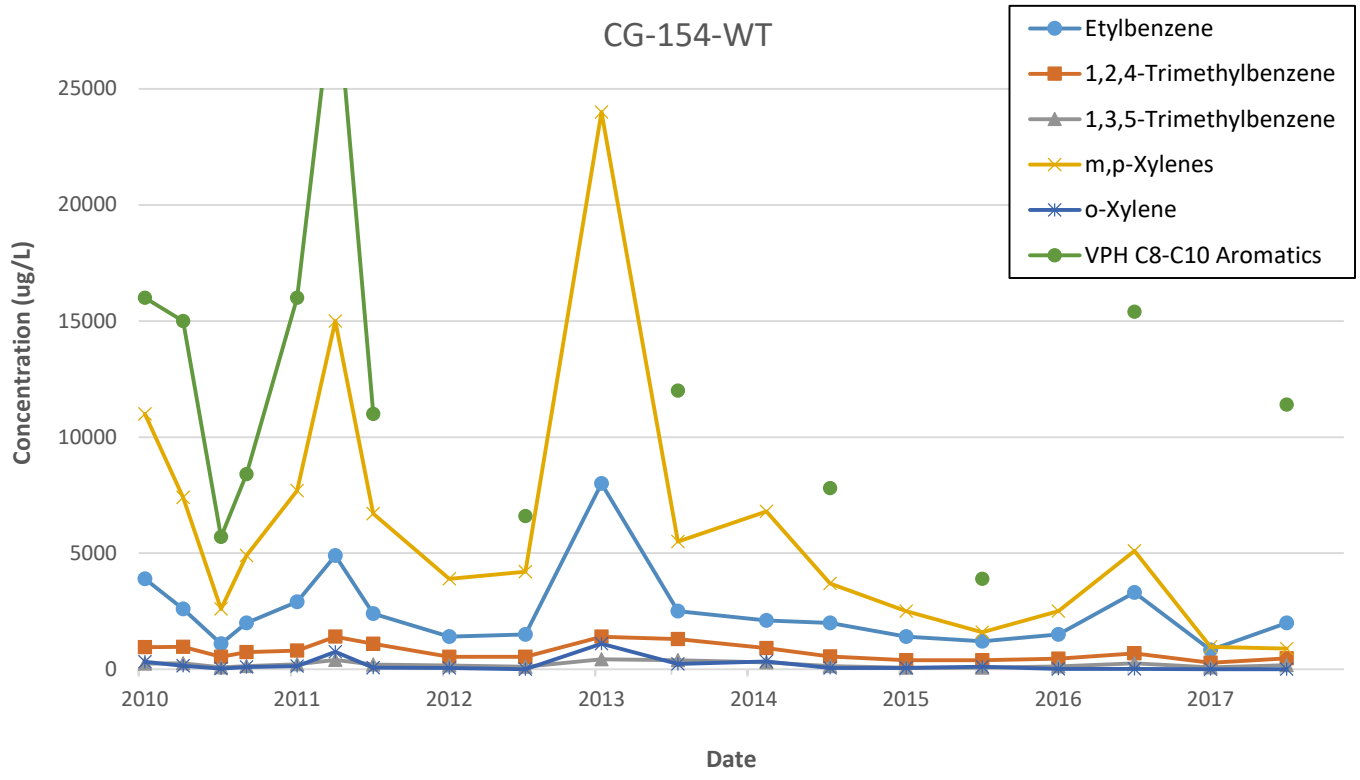
DALTON OLMSTED FUGLEVAND

FIGURE 5

October 31, 2017

PLOT TIME: 10/31/2017 7:38 AM MOD TIME: 10/30/2017 11:49 AM USER: John Bliss DWG: P:\Stericycle\Georgetown\CAD\Figures\2017-10\Figure 5-GT ISB Cell Locations.dwg



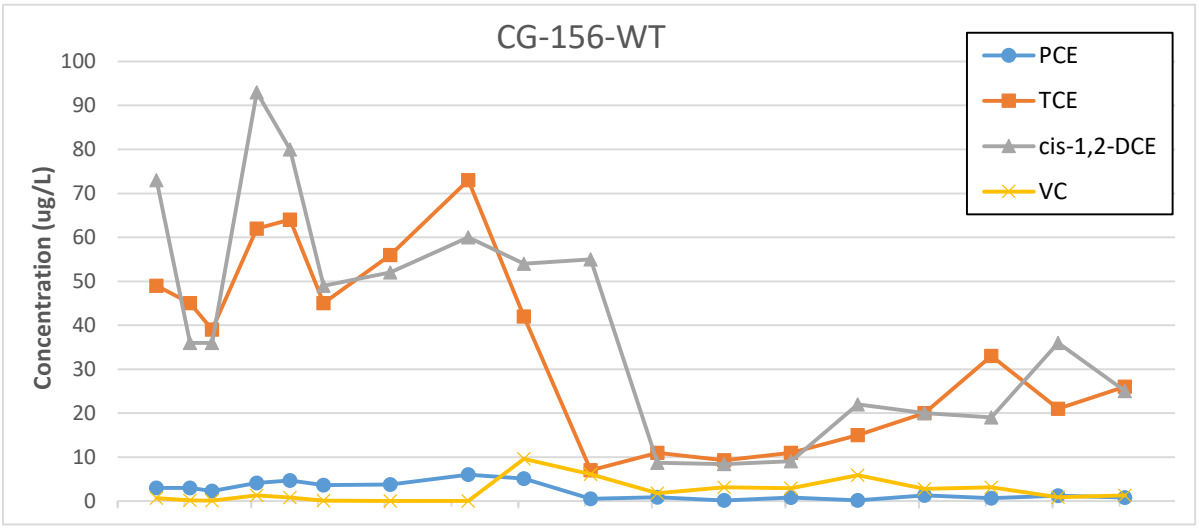


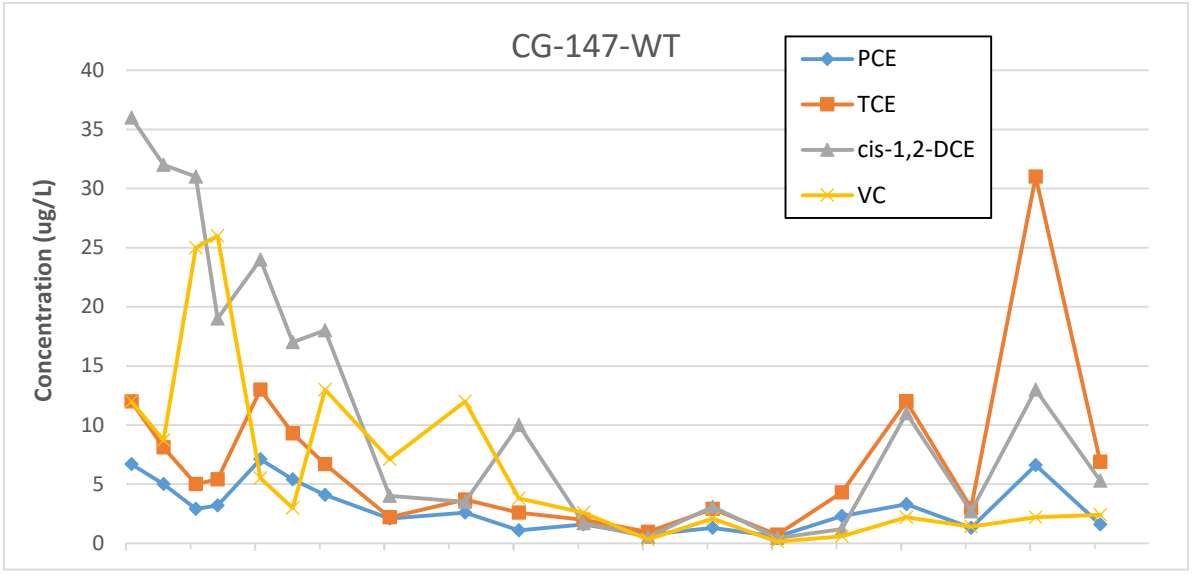
DOF

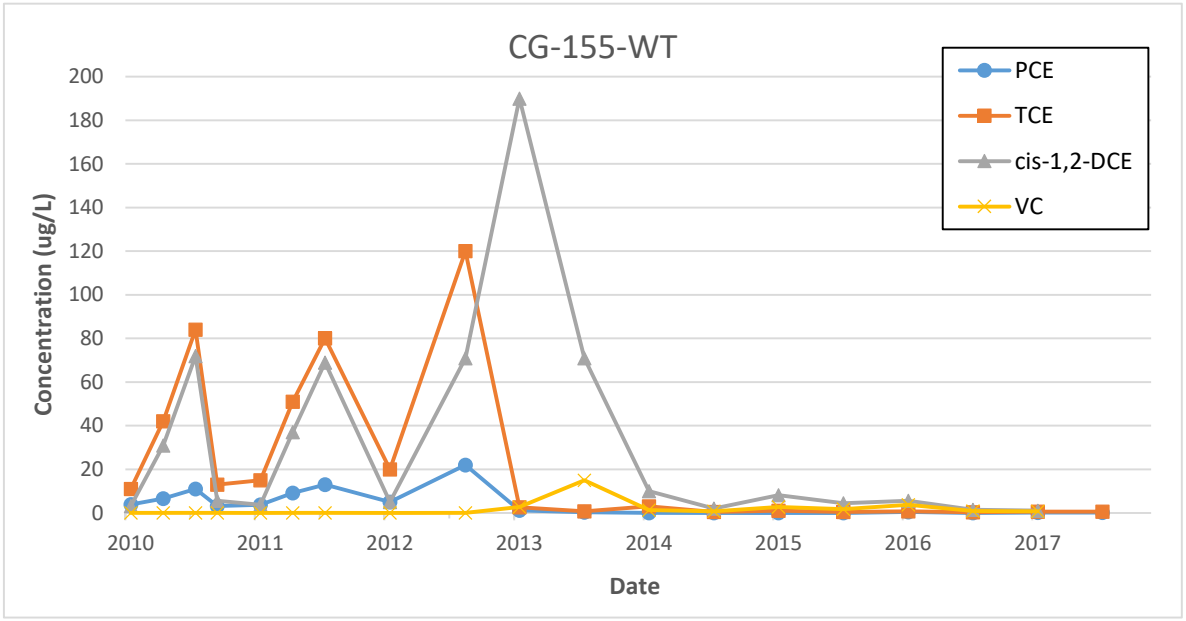
Argo Yard UPRR Petroleum Groundwater Concentrations

Stericycle Georgetown Facility

Figure 6





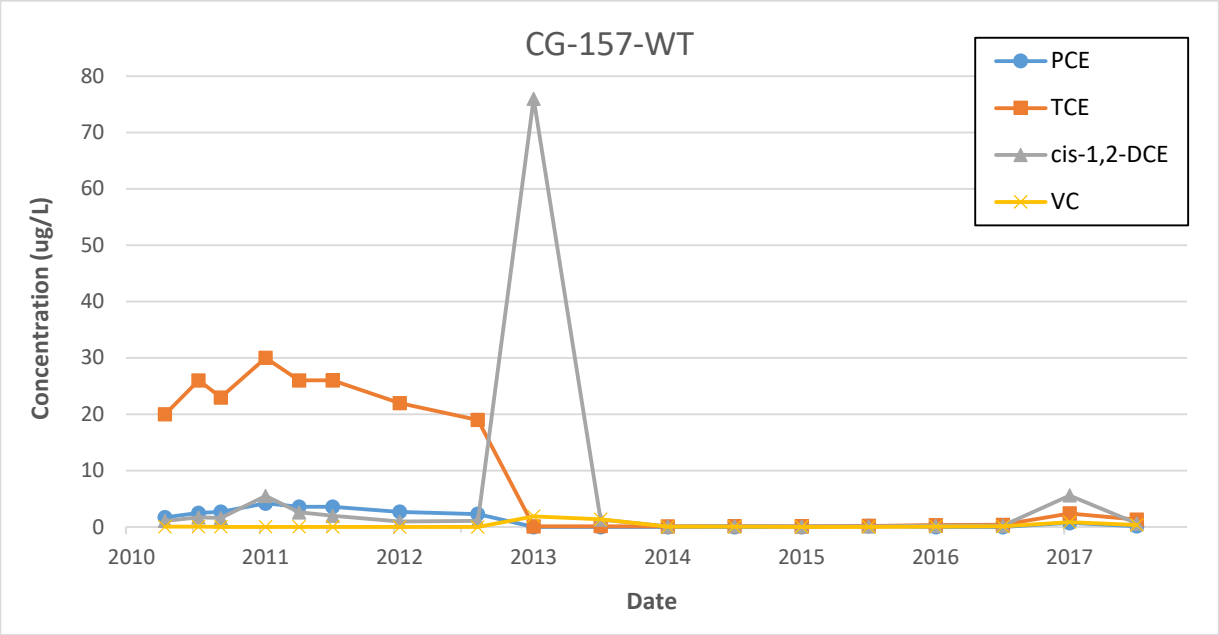


DOF

Argo Yard UPRR Groundwater Concentrations

Stericycle Georgetown Facility

Figure 7



DOF

Argo Yard UPRR Groundwater Concentrations
Stericycle Georgetown Facility

Figure 8

Appendix A
Completed Construction-
Soil Vapor Extraction System, ISB Injection Skid

SOIL VAPOR EXTRACTION SYSTEM

SOIL VAPOR EXTRACTION WELL

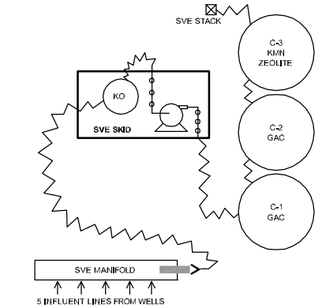
RADIUS OF INFLUENCEMONITORING POINT

RADIUS OF INFLUENCE MONITORING POINT
(FORMER SOIL VAPOR EXTRACTION WELL)

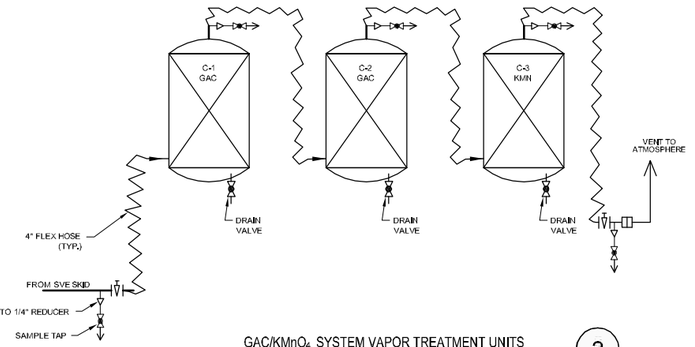
3" SCH 40 PVC PIPING PATHWAY TO CATOX SYSTEM MANIFOLD

3" SCH 40 PVC PIPING PATHWAY TO SVE SYSTEM GAC/$KMnO_4$ MANIFOLD

CLEANOUTS



GAC/$KMnO_4$ SYSTEM LAYOUT DETAIL
SCALE: NTS
1



GAC/$KMnO_4$ SYSTEM VAPOR TREATMENT UNITS
SCALE: NTS
2

CG-154-WT
CG-155-WT-R
SVE-U3
SVE-U2
SVE-U1
EX-3
SVE-15
SVE-14
SVE-13
CG-147-WT
CG-147-57
GATE
CG-156-WT-R
CG-148-WT
CG-148-57
EX-4
PIPE UNIONS
CG-158-WT
CG-1-S1
CG-10-S1
V-4
V-3
V-2
V-1
CATOX EQUIPMENT SKID
SVE-12
CG-6-S1
SVE-11
SVE-10
FOUNDATION WALL
CATOX MANIFOLD
GAC/$KMnO_4$ STACK LOCATION
VAPOR TREATMENT UNITS 2
GAC/$KMnO_4$ EQUIPMENT SKID 1
OVERHANG
CONCRETE PLATFORM
FORMER WHITE SATIN SUGAR BUILDING
GAC/$KMnO_4$ MANIFOLD LOCATION
BOILER BUILDING
GROUNDWATER PRETREATMENT SYSTEM
SVE-9
SVE-8
CONCRETE
CG-153-WT
CG-153-79
CG-152-WT
CG-152-79
EX-2
CG-150-68
CG-150-WT
CG-149-68
CG-149-WT
SVE-7
SVE-5
SVE-6
SVE-4
RAMP
CONCRETE
SAD BUILDING
MAINTENANCE SHOP
CG-157-WT-R
CG-5-S1
CG-5-D
CG-5-I
CG-5-S2-R
GATE
CG-102-D
CG-102-I
CG-102-S1
CG-102-S2
CG-146-WT
CG-146-80
EX-1
CG-117-WT
CG-117-79
CG-116-WT
CG-116-127
CG-116-80
CG-118-WT
CG-118-79
CG-114-75
CG-115-75
CG-115-WT
GATE
CG-104-D
CG-104-I
CG-104-S1
CG-104-S2
CG-119-40
CG-103-S1
CG-103-S2
CG-103-I
Denver Ave S.
S. Lucile St.
7th Ave S.
S. Brandon St.
CG-113-I
CG-113-S1
CG-112-S1

EXPLANATION

GROUNDWATER MONITORING NETWORK

SHALLOW MONITORING WELL

INTERMEDIATE MONITORING WELL

DEEP MONITORING WELL

OTHER FEATURES

EXISTING GROUNDWATER EXTRACTION WELL

BUILDING

PROPERTY BOUNDARY

FENCE

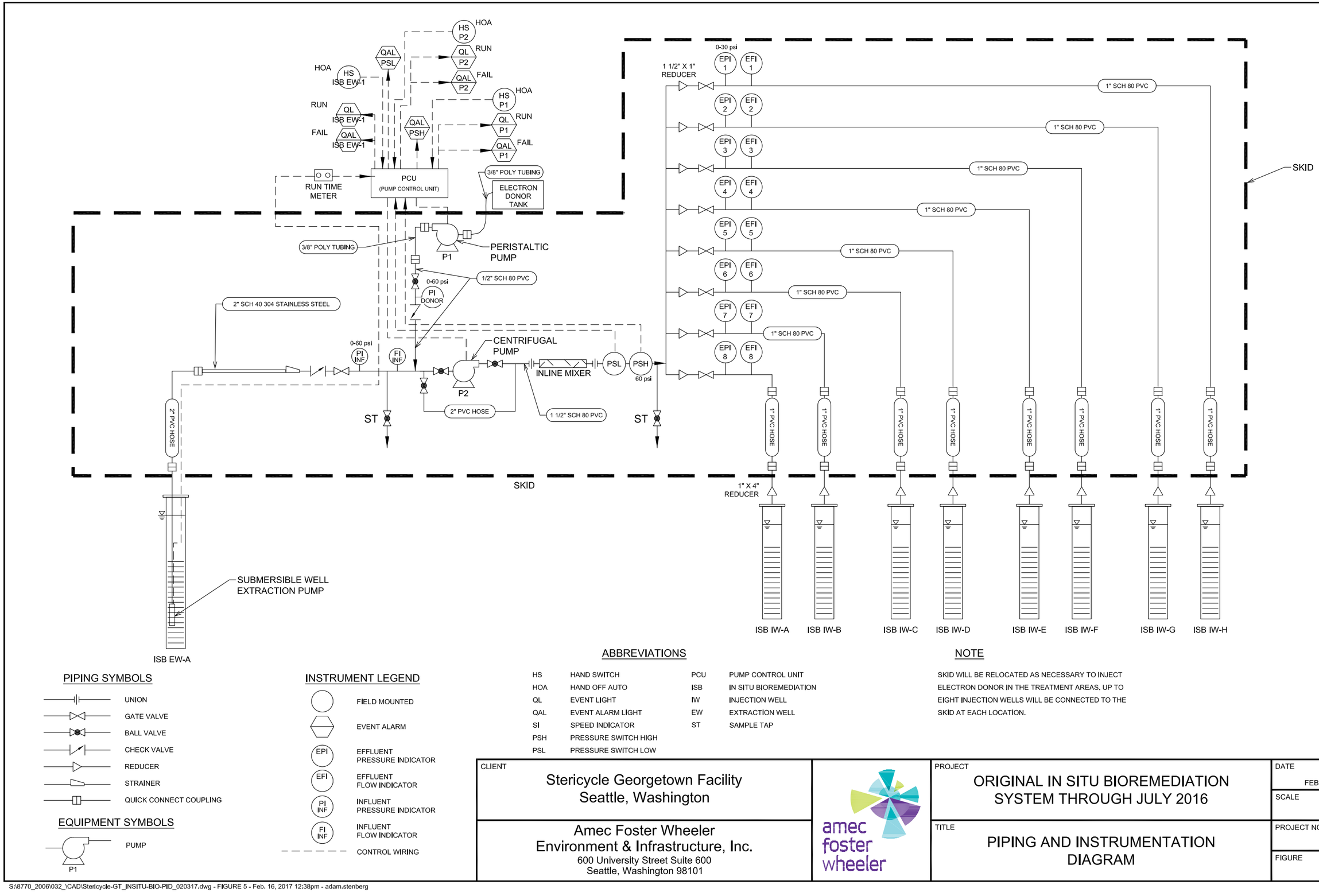
LOCATION OF EXISTING BARRIER WALL

0 30 60
APPROXIMATE SCALE IN FEET

SOIL VAPOR EXTRACTION SITE PLAN
PSC Georgetown Facility
Seattle, Washington

By: APS	Date: 03/17/14	Project No. 08770
amec		Figure **A-1**

Plot Date: 03/17/14 - 11:19am, Plotted by: mlks.stenberg
Drawing Path: S:\8770_2006\As Built\, Drawing Name: PSC-GT_SVE-As-Built_031714.dwg



PIPING SYMBOLS

- UNION
- GATE VALVE
- BALL VALVE
- CHECK VALVE
- REDUCER
- STRAINER
- QUICK CONNECT COUPLING

EQUIPMENT SYMBOLS

- PUMP (P1)

INSTRUMENT LEGEND

- FIELD MOUNTED
- EVENT ALARM
- EPI — EFFLUENT PRESSURE INDICATOR
- EFI — EFFLUENT FLOW INDICATOR
- PI INF — INFLUENT PRESSURE INDICATOR
- FI INF — INFLUENT FLOW INDICATOR
- CONTROL WIRING

ABBREVIATIONS

HS	HAND SWITCH	PCU	PUMP CONTROL UNIT
HOA	HAND OFF AUTO	ISB	IN SITU BIOREMEDIATION
QL	EVENT LIGHT	IW	INJECTION WELL
QAL	EVENT ALARM LIGHT	EW	EXTRACTION WELL
SI	SPEED INDICATOR	ST	SAMPLE TAP
PSH	PRESSURE SWITCH HIGH		
PSL	PRESSURE SWITCH LOW		

NOTE

SKID WILL BE RELOCATED AS NECESSARY TO INJECT ELECTRON DONOR IN THE TREATMENT AREAS. UP TO EIGHT INJECTION WELLS WILL BE CONNECTED TO THE SKID AT EACH LOCATION.

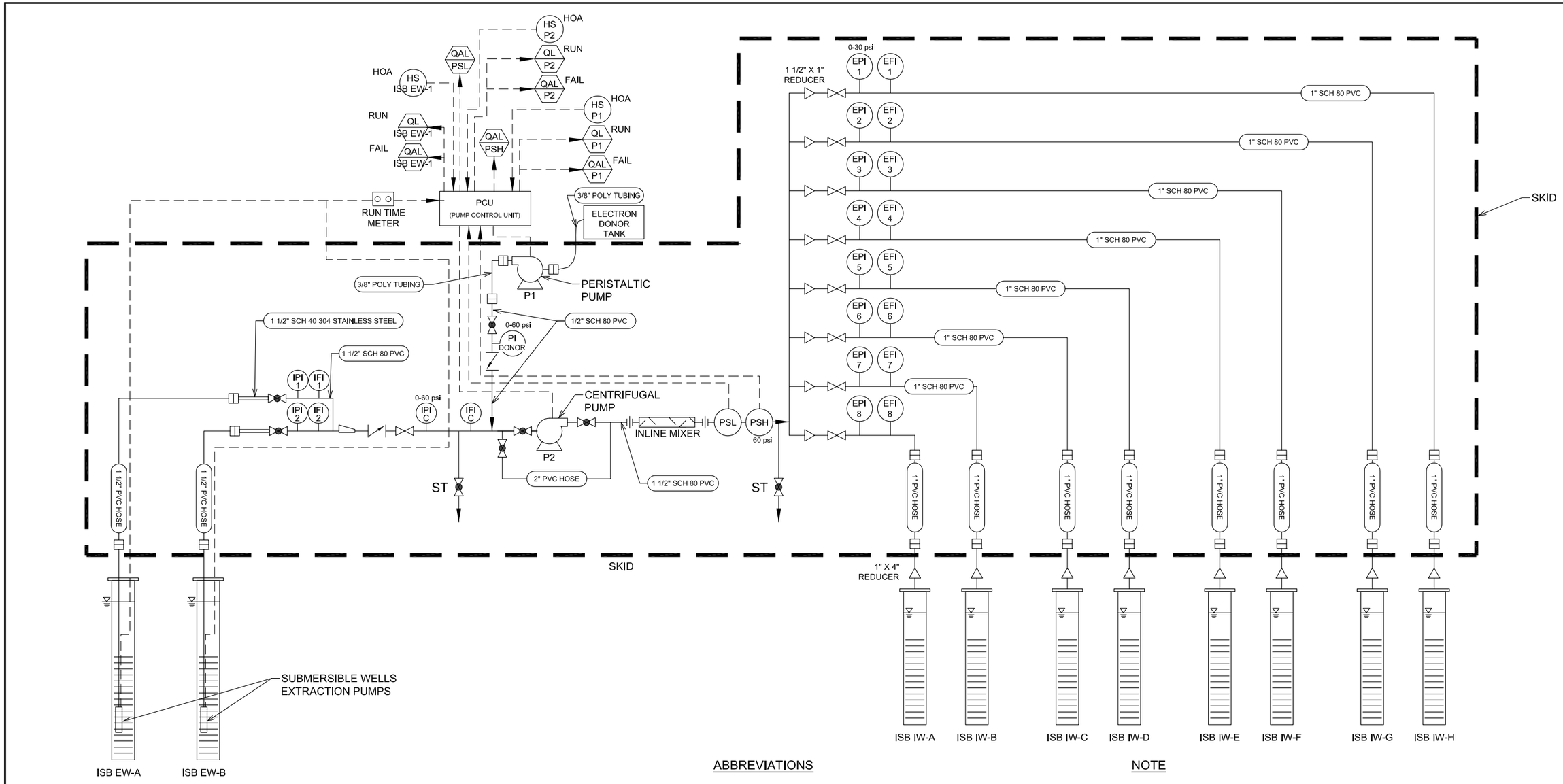
CLIENT
Stericycle Georgetown Facility
Seattle, Washington

Amec Foster Wheeler
Environment & Infrastructure, Inc.
600 University Street Suite 600
Seattle, Washington 98101

PROJECT
ORIGINAL IN SITU BIOREMEDIATION SYSTEM THROUGH JULY 2016

TITLE
PIPING AND INSTRUMENTATION DIAGRAM

DATE: FEBRUARY 2017
SCALE: AS SHOWN
PROJECT NO.: 08770
FIGURE: 5



PIPING SYMBOLS

- UNION
- GATE VALVE
- BALL VALVE
- CHECK VALVE
- REDUCER
- STRAINER
- QUICK CONNECT COUPLING

EQUIPMENT SYMBOLS

- PUMP (P1)

INSTRUMENT LEGEND

- FIELD MOUNTED
- EVENT ALARM
- EPI — EFFLUENT PRESSURE INDICATOR
- EFI — EFFLUENT FLOW INDICATOR
- IPI — INFLUENT PRESSURE INDICATOR
- IFI — INFLUENT FLOW INDICATOR
- CONTROL WIRING

ABBREVIATIONS

HS	HAND SWITCH	PCU	PUMP CONTROL UNIT
HOA	HAND OFF AUTO	ISB	IN SITU BIOREMEDIATION
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QAL	EVENT ALARM LIGHT	EW	EXTRACTION WELL
SI	SPEED INDICATOR	ST	SAMPLE TAP
PSH	PRESSURE SWITCH HIGH		
PSL	PRESSURE SWITCH LOW		

NOTE

SKID WILL BE RELOCATED AS NECESSARY TO INJECT ELECTRON DONOR IN THE TREATMENT AREAS. UP TO EIGHT INJECTION WELLS WILL BE CONNECTED TO THE SKID AT EACH LOCATION.

CLIENT
Stericycle Georgetown Facility
Seattle, Washington

Amec Foster Wheeler
Environment & Infrastructure, Inc.
600 University Street Suite 600
Seattle, Washington 98101

PROJECT
MODIFIED IN SITU BIOREMEDIATION SYSTEM AFTER JULY 2016

TITLE
PIPING AND INSTRUMENTATION DIAGRAM

DATE: FEBRUARY 2017
SCALE: AS SHOWN
PROJECT NO.: 08770
FIGURE: 6

Appendix B
ISB Well Construction Logs and Survey

GOLDSMITH
LAND DEVELOPMENT SERVICES

November 10, 2015

AMEC Environmental & Infrastructure
600 University Street
One Union Square
Suite: 600
Seattle, WA 98101

Attention: Jennifer Bellamy, LG

Re: Philip Services Georgetown Facility (Monitor Well Locations)

Dear Jennifer,

At your request, we have obtained Y (northing), X (easting), and Z (elevation) coordinates for 48 monitor well locations at the Philip Services Georgetown Facility. The information was obtained on November 5 and 6, 2015 and reflects conditions at that time. The horizontal locations are to the center of the existing monitor well casing. The elevations shown reflect the casing lid (Z_1) of the monitor well and either the North rim of the PVC pipe in each extraction well or the top of fitting in each injection well (Z). It is our understanding that AMEC Foster Wheeler will apply their own vertical adjustment to the injection well top of fitting elevations to obtain the top of PVC elevation.

Monitor Well Designation	HGG Point Number	Northing (Y)	Easting (X)	Elevation (Z) (Top PVC Pipe or Top Fitting)	(Z_1) (Top Casing)
IW-2	50002	205696.0	1272495.3	22.18	22.04
IW-1	50003	205699.2	1272493.0	22.08	21.88
IW-5	50004	205659.4	1272527.3	22.23	22.06
IW-6	50005	205658.1	1272532.2	22.24	22.04
EW-1	50006	205666.0	1272492.6	22.70	22.07
IW-3	50007	205666.8	1272461.5	22.64	22.44
IW-4	50008	205663.5	1272465.0	22.66	22.50
IW-7	50009	205629.9	1272493.9	22.17	21.96
IW-8	50010	205627.8	1272498.8	22.05	21.86
IW-11	50011	205594.3	1272527.3	22.28	22.04
IW-12	50012	205591.4	1272532.7	22.24	22.03
EW-2	50013	205589.2	1272562.6	22.05	21.54
IW-15	50014	205555.0	1272562.8	21.82	21.59
IW-16	50015	205554.8	1272566.8	21.77	21.60
IW-14	50016	205577.1	1272595.4	21.97	21.80
IW-13	50017	205579.0	1272591.2	21.98	21.76
IW-10	50018	205621.9	1272566.1	22.30	22.09
IW-9	50019	205623.4	1272561.7	22.33	22.17
IW-36	50020	205803.3	1272585.1	18.34	18.17
IW-35	50021	205806.4	1272584.0	18.30	18.08
IW-38	50022	205786.5	1272550.8	18.89	18.74
IW-37	50023	205787.3	1272545.4	18.82	18.64

1215 114th Ave SE, Bellevue, WA 98004 | PO Box 3565, Bellevue, WA 98009
T: 425.462.1080 F: 425.462.7719 www.goldsmithengineering.com

Monitor Well Designation	HGG Point Number	Northing (Y)	Easting (X)	Elevation (Z) (Top PVC Pipe or Top Fitting)	(Z_1) (Top Casing)
EW-5	50024	205818.9	1272546.1	18.69	18.01
IW-30	50025	205854.9	1272552.5	18.76	18.62
IW-29	50026	205856.5	1272546.3	18.66	18.48
IW-32	50027	205820.7	1272516.5	18.44	18.28
IW-31	50028	205821.8	1272512.5	18.43	18.22
IW-39	50029	205761.8	1272501.7	18.52	18.34
IW-40	50030	205761.0	1272507.6	18.50	18.34
IW-34	50033	205786.4	1272480.9	18.20	18.06
IW-33	50034	205788.1	1272475.9	18.27	18.05
IW-28	50035	205822.1	1272444.9	18.41	18.18
IW-27	50036	205824.8	1272442.0	18.42	18.20
EW-4	50037	205823.1	1272476.3	18.26	17.56
IW-26	50038	205857.8	1272477.2	17.80	17.59
IW-25	50039	205859.5	1272477.5	17.78	17.52
IW-24	50040	205889.6	1272517.3	18.21	18.00
IW-23	50041	205893.0	1272513.5	18.13	17.86
IW-18	50042	205914.6	1272492.7	17.84	17.63
IW-17	50043	205915.1	1272490.4	17.80	17.54
EW-3	50044	205891.9	1272480.5	17.72	16.90
IW-20	50045	205882.2	1272450.0	17.40	17.18
IW-19	50046	205880.9	1272447.2	17.41	17.12
IW-22	50047	205862.2	1272406.6	18.16	17.90
IW-21	50048	205866.2	1272402.9	18.18	18.05
EW-6	50050	205852.4	1272358.9	20.84	20.32
IW-42	50051	205830.3	1272337.1	20.73	20.46
IW-41	50052	205827.8	1272334.5	20.76	20.52

For the purpose of this survey, we have utilized site benchmarks established by Goldsmith and Associates, Inc. in a prior survey. Enclosed with this letter is a copy of our letter (dated April 4, 2001) which discusses general control and datum utilized.

Should you have any questions regarding the nature of this survey, please do not hesitate to call.

Sincerely,

Mark A. Mauger

Mark A. Mauger, P.L.S. | GOLDSMITH

Sr. Survey Project Manager | 425.462.1080
mmauger@goldsmithengineering.com

Hugh G. Goldsmith & Associates, Inc.

MAME WINNER
1995 Best Community Land Use
1994 Community of the Year
1994 Best Community Land Use
1992 Best Community Land Use
1990 Environmental Award
1990 Best Planned Community
1989 Best Community Land Use Plan
1987 Best Community Land Use Plan

April 4, 2001

Philip Services Corp.
955 Powell Avenue S.W.
Renton, WA 98055

Attention: Carolyn Mayer

Re: Georgetown Facility

Dear Carolyn:

At your request, we have obtained Y (Northing), X (Easting), and Z (Elevation) coordinates for the monitoring wells and soil sample locations at your Georgetown Facility. The information was obtained in March 2001 and reflects conditions at that time. All horizontal locations are to the approximate center of the existing monitor well or a painted location provided by Philip Services personnel. The elevations shown were obtained at the north side of the PVC pipe or blue cap affixed to said pipe (Z) of the wells and to either the rim, asphalt or natural ground immediately adjacent (Z_1) of the wells and soil sample locations.

For the purposes of this survey, we have utilized City of Seattle GPS survey control to bring horizontal and vertical control to the site. Horizontal information shown on Exhibit A (HGG data) is based on Washington State Plane Coordinate System, North Zone (North American Datum 1983/91). The basis of position is an existing 4″ diameter concrete monument with a ⅜″ diameter pin in case at the intersection of S. Stacy Street and 1st Avenue S. Monument has a ½″ brass tag stamped 1547 and is designated "City of Seattle GPS Survey Control Point #803," with a published coordinate of North 215869.69 (grid), East 1270024.19 (grid), Elevation 16.63 feet (NAVD 88). Units are expressed in U.S. survey feet. The basis of bearing is GPS derived Washington State Plane Coordinate System based on occupation of the above mentioned basis of position and simultaneous occupation of control points adjacent to the project area. A combination factor of 0.999992700 was applied to all GPS measurements to establish project coordinates for two control points within the project area resulting in the following values. Note: Only the basis of position is, therefore, a true grid state plane coordinate.

PST-2 Found 2½″ square concrete monument with nail in case at intersection of Maynard Avenue S. and S. Lucille Street
North 205426.72, East 1271995.22, Elevation 19.25 feet (project coordinate)

PST-11 Set PK with flasher 8.0 southwest of southwest railroad tracks on southwest side E. Marginal Way S. and 7.0 northwest of southeast edge of pavement of drive to "J.A. Jack & Sons, Inc." approximately at the southwest corner of intersection of S. Brandon Street and E. Marginal Way
North 205737.80, East 1278999.16, Elevation 16.29 feet (project coordinate)

Consulting Engineers
Surveyors
Planners
Since 1958

P.O. Box 3565, Bellevue, WA 98009
1215 114th Avenue SE
Bellevue, WA 98004
(425) 462-1080 FAX 462-7719

Philip Services Corp.
Attention: Carolyn Mayer
April 4, 2001

The vertical information shown hereon is based on the North American Vertical Datum of 1988 (NAVD 88). The master benchmark utilized for this survey was the above noted City of Seattle GPS Survey Control Point #803.

A ground based traverse was then run through existing City of Seattle monumentation and HGG GPS Survey Control Points, at which time the monitor wells and soil sample locations were surveyed. Vertical information was obtained using trigonometric levels and a closed loop traversing method which resulted in closures within 0.1 foot vertically.

The information shown on Exhibit "B" (converted HDA data) was taken from a map labeled *"Chempro Georgetown Facility Well Locations"* by Horton Dennis & Associates (HDA) dated 4/07/95. For the purposes of this conversion we have accepted the monument found at the intersection of S. Lucille Street and Denver Avenue S. as the HDA Basis of Position (HDA coordinate value 10,000, 10,000). The Basis of Bearing was the monumented centerline of S. Lucille Street east of said Basis of Position, held as N 89°57'28" E per HDA. A separate vertical comparison to the HDA data was obtained by running levels to the benchmark shown on the above referenced plan. Nine wells were then relocated as a check by Hugh G. Goldsmith & Associates, Inc. (HGG) personnel on 3/28/01. This resulted in a translation between HDA data and HGG data of:

Delta Y = +195414.589'
Delta X = +1262434.125'
Delta Z = +9.14'

In addition, HDA data was Rotated + 01°37'39" to fit the HGG bearing system. As a result, all monitoring data (HGG and HDA) is now based on a common datum as described above.

If we can be of further assistance to you on this matter, please do not hesitate to call.

Very truly yours,

HUGH G. GOLDSMITH & ASSOCIATES, INC.

Mark A. Mauger, P.L.S.

Hugh G. Goldsmith & Associates, Inc.

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. EW-1**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/10/15 / DATE FINISHED: 10/9/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 35.5 / SCREEN INTERVAL (ft.): 15.48-34.92
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.70 COMPL. / CASING: 6`` Schedule 40 PVC
SAMPLING METHOD: HSA	LOGGED BY: S. Welter
HAMMER WEIGHT: 300 / DROP: 30	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					CONCRETE	Traffic Rated Well Box
1					PEA GRAVEL.	
					CONCRETE	Portland Cement
2					Sluff from coring.	
			12	4.7	POORLY GRADED SAND WITH GRAVEL (SP): dark yellowish brown (10YR 3/4), moist, 80% medium dense fine to medium sand, 15% fine to coarse gravel, 5%	
3			20			
			14			
4			3	11.3	nonplastic fines, with trace wood debris.	
			4		Silt Stringer.	
5			5		Coarse Sand Lens with burnt wood debris.	12`` diameter Borehole
			5	1.4	POORLY-GRADED SAND with SILT (SP-SM): very dark	
6			5		brown (10YR 2/2), moist, 85% loose, fine to medium	6`` Schedule 40 PVC Well Casing
			7		grain sand, 10% nonplastic fines, 5% fine gravel, with trace burnt wood debris.	
7			12	0.9	POORLY-GRADED SAND (SP): very dark brown	
			14		(10YR 2/2), moist, 95% loose, fine to medium grain	
8			17		sand, 5% non plastic fines.	Cetco Bentonite Medium Chips
			22	5.7	SAA but with trace gravel.	
9			10			
			11			
10			12	4.7		
			16		Silt Stringer.	
11			12			
			8	2.8		
12			6			
			7			
			78	1.1	Wet. Silt Stringer.	
13			14			
			4			Colorado Silica Sand 10/20
14			8	0.5	Silt Stinger. Silt Stinger.	
15			8			
			8		POORLY-GRADED SAND (SP): black (10YR 2/1),	
16			4	0.8	moist, 95% medium dense, fine to medium grain sand, 5% nonplastic fines.	
			9			
17			12			
			6	0.6		
18						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. EW-1 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18			10			
			10			
19			10	0.1		
			12			
20			10			
			9	0		
21			10			
			8			
22			6	0	SAA but loose sand.	
			8			
23			9			
			7	0.1		
24			9			
			9			
25			10	0		6`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
			10			
26			10			
			6	0		
27			6			
			7			
28			7	0		Colorado Silica Sand 8/12
			8		Silt stinger.	
29			10			
			10	0		
30			11		Silt stinger.	
			9			
31			10	0		
			14			
32			7		Silty Sand lens	
			12	0	Silt Stringer.	
33			16			
			17		Silt Stringer.	
34			10	0		
			12		Silt Stringer.	
35			9			6`` Schedule 40 PVC Endcap
					Bottom of boring at 35.5 feet.	
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. EW-2**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/9/15 / DATE FINISHED: 10/8/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 35.5 / SCREEN INTERVAL (ft.): 14.23-33.65
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.31 COMPL. / CASING: 6`` Schedule 40 PVC
SAMPLING METHOD: HSA	LOGGED BY: S. Welter
HAMMER WEIGHT: 300 DROP: 30	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					CONCRETE	Traffic Rated Well Box
1					PEA GRAVEL	
2					CONCRETE	Portland Cement
3			15 13 15	14	POORLY GRADED SAND WITH GRAVEL (SP): very dark brown (10YR 2/2), moist, 80% medium dense fine to medium sand, 15% fine to coarse gravel, 5% nonplastic fines and burnt wood debris present. Silt Stringer intermixed with wood debris. Burnt Wood Debris and hydrocarbon-like odor.	
4			2 3	0.8		
5			4 4	3.9		12`` diameter Borehole
6			4 7			6`` Schedule 40 PVC Well Casing
7			6 6		Silt Lens.	
8			7 7	0.5	POORLY-GRADED SAND (SP): very dark brown (10YR 2/2), moist, 95% loose, fine to medium grain sand, 5% non plastic fines.	Cetco Bentonite Medium Chips
9			8 10			
10			7 10	1.8		
11			9 12	0.6		
12			14 14		POORLY-GRADED SAND (SP): very dark brown (10YR 2/2), moist, 90% loose, fine to coarse grain sand, 5% non plastic fines, 5% fine gravel.	
13			8 12	0	POORLY-GRADED SAND (SP): black (10YR 2/1), moist, 95% medium dense, fine to medium grain sand, 5% nonplastic fines.	
14			12 11	0		Colorado Silica Sand 10/20
15			10 10			
16			10 10	0		
17			12 11	0		
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. EW-2 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18			12			
			13			
19			11	0		
			13			
20			10			
			10	0	Wet.	
21			10			
			20			
22			11	0		
			9		SAA but with wood debris intermixed.	
23			13			
			10	0	Silt stinger.	
24			11			6`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
			15			
25			9	0		
			10			
26			10			
			9	0		
27			13			
			15			
28			11	0	Silt stinger.	Colorado Silica Sand 8/12
			10			
29			10			
			13	0	Silt stinger.	
30			11		POORLY-GRADED SAND with SILT (SP-SM): black (10YR 2/1), wet, 90% medium dense, fine to medium grain sand, 10% nonplastic fines.	
			14			
31			12	0		
			12		POORLY-GRADED SAND (SP): black (10YR 2/1), moist, 95% medium dense, fine to medium grain sand, 5% nonplastic fines.	
32			12			
			12	0		
33			14			
			14			
34			8	0		6`` Schedule 40 PVC Endcap
			12		SAA but with wood debris intermixed.	
35			11			
					Bottom of boring at 35.5 feet.	
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. EW-3

BORING LOCATION:

GROUND SURFACE ELEVATION AND DATUM:

DRILLING CONTRACTOR: Cascade Drilling, Inc.

DATE STARTED: 9/8/15 | DATE FINISHED: 9/18/15

DRILLING METHOD: Hollow-stem auger

TOTAL DEPTH (ft.): 36.5 | SCREEN INTERVAL (ft.): 15.17-34.58

DRILLING EQUIPMENT: CME 75

DEPTH TO WATER: FIRST 8.38 | COMPL. | CASING: 6`` Schedule 40 PVC

SAMPLING METHOD: HSA

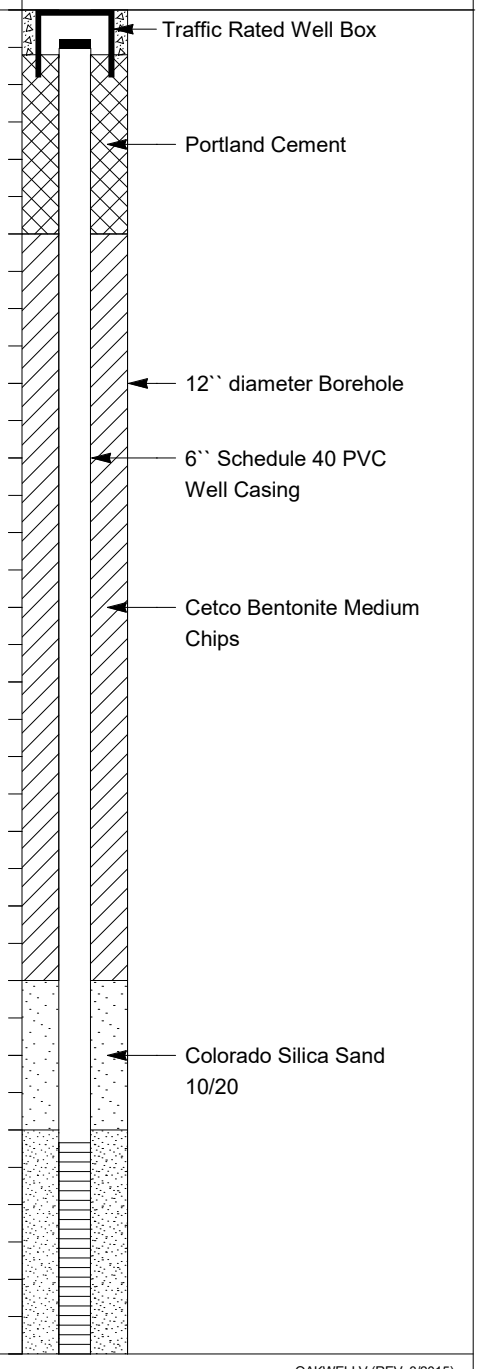
LOGGED BY: S. Welter

HAMMER WEIGHT: 300 | DROP: 30

RESPONSIBLE PROFESSIONAL: JMB | REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:
0					CONCRETE
1					PEA GRAVEL CONCRETE
2			7	2.7	PEA GRAVEL
			7		POORLY-GRADED SAND with SILT (SP-SM): very dark brown (10YR 2/2), moist, 90% loose, fine to medium sand, 10% low plastic fines.
3			6		
			5	2.5	
4			5		
			5		Fine Gravel Lens
5			5	12	
			7		SAA but with strong petroleum hydrocarbon-like odor.
6			7		
			10	116	
7			12		
			13		
8			7	48	
			8		
9			8		POORLY-GRADED SAND (SP): very dark brown (10YR 2/2), wet, 95% loose, fine to medium sand, 5% non plastic fines.
			8	50	
10			9		
			9		
11			11	24	
			10		
12			10		
			9	1.1	
13			9		
			12		
14			10	0.8	
			9		
15			10		
			12	1.4	POORLY-GRADED SAND (SP): very dark brown (10YR 2/2), wet, 95% loose, fine to medium sand, 5% non plastic fines, wood debris intermixed.
16			11		
			9		
17			12	0.2	
			14		
18					

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. EW-3 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18			12			
			9	0.4	Silt Lens.	
19			14		POORLY-GRADED SAND (SP): black (10YR 2/1), wet,	
			16		95% loose, fine to medium sand, 5% non plastic fines.	
20			15	0.1		
			16			
21			12			
			5	0.2		
22			9			
			14			
23			9	0		
			10			
24			12			
			9	0.2	Silt Stringer.	
25			10		Silt Stinger.	6`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
			17			
26			10	0		
			10			
27			15		SILTY SAND (SM): black (10YR 2/1), wet, 85% medium	
			11	0	dense, fine to medium sand, 15% non plastic fines.	
28			10		POORLY-GRADED SAND (SP): black (10YR 2/1), wet,	Colorado Silica Sand 8/12
			11		90% medium dense, fine to medium grain sand, 5%	
29			11	0	nonplastic fines, 5% fine gravel and trace shell	
			13		fragments.	
30			15			
			14	0		
31			11			
			14		POORLY-GRADED SAND intermixed with SILT (SP/ML):	
32			11	0	black (10YR 2/1), wet, 90% medium dense, fine to	
			14		medium grain sand, 5% nonplastic fines, 5% fine gravel	
33			17		and trace shell fragments intermixed with 100% low	
			13	0	plastic fines.	
34			15		POORLY-GRADED SAND (SP): black (10YR 2/1), wet,	
			119		90% medium dense, fine to medium grain sand, 5%	
35			13	0.2	nonplastic fines, 5% fine gravel and trace shell	6`` Schedule 40 PVC Endcap
			17		fragments.	
36			20			
					Bottom of Boring at 36.5 feet.	
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. EW-4**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/9/15 / DATE FINISHED: 9/21/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 35.5 / SCREEN INTERVAL (ft.): 15.12-34.53
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.1 COMPL. / CASING: 6`` Schedule 40 PVC
SAMPLING METHOD: HSA	LOGGED BY: S. Welter
HAMMER WEIGHT: 300 DROP: 30	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

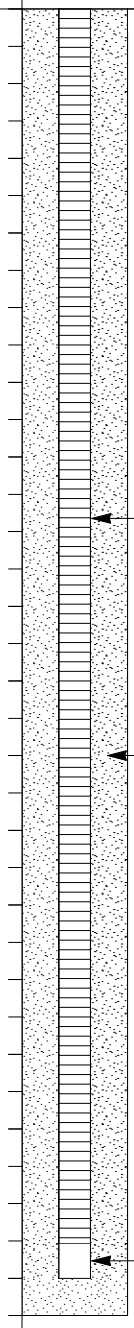
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					CONCRETE	Traffic Rated Well Box
1					PEA GRAVEL	
					CONCRETE	Portland Cement
2					PEA GRAVEL	
					CONCRETE	
3					POORLY-GRADED SAND with SILT (SP-SM): very dark brown (10YR 2/2), moist, 90% loose, fine to medium grain sand, 10% low plastic fines.	
4					Silt Stringer.	
5					POORLY-GRADED SAND (SP): very dark brown (10YR 2/2), moist, 90% loose, fine to medium sand, 5% non plastic fines, 5% fine gravel.	12`` diameter Borehole
6						6`` Schedule 40 PVC Well Casing
7						
8						Cetco Bentonite Medium Chips
9					Wet.	
10						
11						
12						
13					POORLY-GRADED SAND (SP): black (10YR 2/1), wet, 95% medium dense, fine to medium sand, 5% non plastic fines.	
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. EW-4 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18						
19						
20						
21						
22						
23						
24					Silt Stringer.	
25					POORLY-GRADED SAND (SP): black (10YR 2/1), wet, 95% medium dense, fine to medium sand, 5% non plastic fines, with trace wood debris.	6`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
26						
27						
28						Colorado Silica Sand 8/12
29						
30						
31					SILT with SAND (ML): black (10YR 2/1), wet, 90% low plasticity fines, 10% fine to medium sand, with wood debris.	
32					POORLY-GRADED SAND (SP): black (10YR 2/1), wet, 95% medium dense, fine to medium sand, 5% non plastic fines, with trace wood debris.	
33						
34						
35					Silt stringer	6`` Schedule 40 PVC Endcap
36					Bottom of Boring at 35.5 feet.	
37						
38						
39						

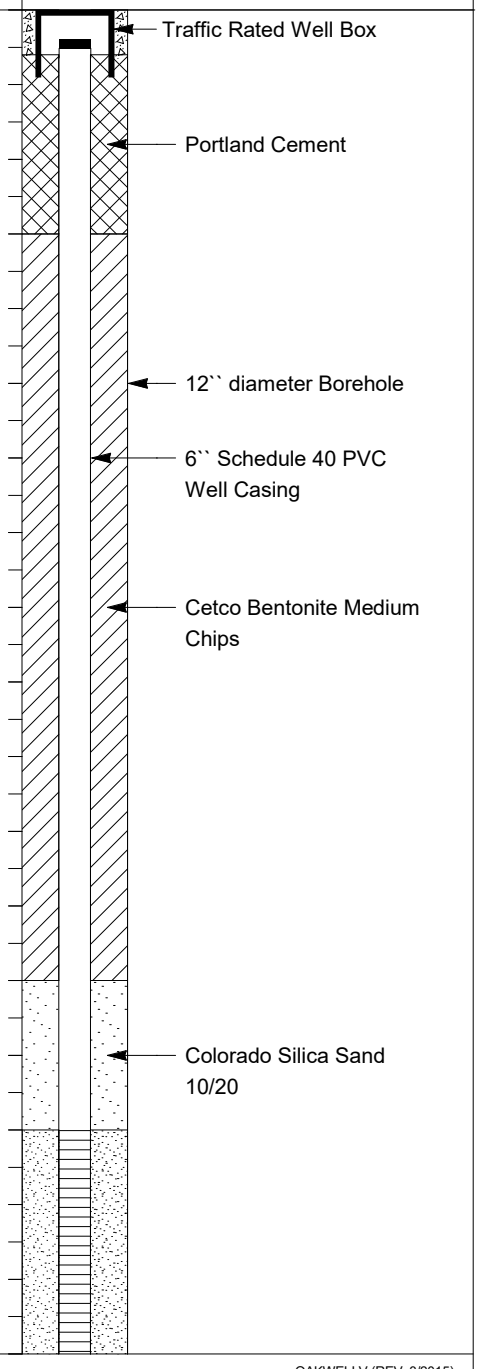


OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. EW-5**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/8/15 / DATE FINISHED: 9/18/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.5 / SCREEN INTERVAL (ft.): 15.00-34.41
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.49 COMPL. / CASING: 6`` Schedule 40 PVC
SAMPLING METHOD: HSA	LOGGED BY: S. Welter
HAMMER WEIGHT: 300 DROP: 30	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:
0					CONCRETE
					PEA GRAVEL
1					CONCRETE
2			9	0.5	POORLY-GRADED SAND (SP): gray (2.5Y 5/1), moist, 95% loose, fine to medium sand, 5% fine gravel.
			9		
3			10		
			6	0.2	
4			15		@ 4 feet plastic liner
			15		POORLY-GRADED SAND with SILT (SP-SM): very dark brown (10YR 2/2), moist, 85% medium dense, fine to coarse sand, 10% non plastic fines, 5% fine gravel.
5			12	8.6	
			15		
6			16		
			6	0.2	SAA but with wood debris.
7			9		
			10		
8			6	0.2	
			7		
9			7		
			4	0.1	Wet.
10			5		
			8		
11			6	0.2	
			10		
12			8		
			10	0.9	POORLY-GRADED SAND (SP): black (10YR 2/1), wet, 95% medium dense, fine to medium sand, 5% fine non plastic fines with trace wood debris.
13			12		
			12		
14			14	0.1	
			10		
15			13		
			10	0.2	
16			12		
			14		
17			6	0.2	
			6		
18					

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. EW-5 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18			5			
			8	0	Silt Stringer.	
19			5			
			4			
20			6	0		
			8			
21			9		Silt Stringer.	
			8	0	Silt Stringer.	
22			8			
			8			
23			10	0		
			14			
24			13			
			10			
25			10			6`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
			10			
26			12	0		
			12			
27			10			
			11	0		
28			14			Colorado Silica Sand 8/12
			9			
29			13	0		
			15			
30			11			
			13	0		
31			14			
			11			
32			7	0		
			12			
33			8		Silt Stringer.	
			9	0		
34			13			
			15			
35			13	0	Silt Stringer.	6`` Schedule 40 PVC Endcap
			15			
36			18			
					Bottom of Boring at 36.5 feet.	
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. EW-6**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/10/15 / DATE FINISHED: 9/21/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.5 / SCREEN INTERVAL (ft.): 14.9-34.32
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 11.76 COMPL. / CASING: 6`` Schedule 40 PVC
SAMPLING METHOD: HSA	LOGGED BY: S. Welter
HAMMER WEIGHT: 300 / DROP: 30	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Concrete Core 18`` diameter	Traffic Rated Well Box
1			9	0.0	Slough and Pea Gravel	
2			10			Portland Cement
			9		POORLY-GRADED SAND (SP): very dark brown (10YR 2/2), Moist, No plasticity, 95% Medium to fine grain sand, loose 5% fines	
3			3	0.0		
			4			
4			5			
			3	1.5		
5			4		POORLY-GRADED SAND with SILT (SP-SM): black (10YR 2/1), lens	12`` diameter Borehole
			6		Silt Stringer	
6			4	18.8	POORLY-GRADED SAND (SP): very dark brown (10YR 2/2), Moist, No plasticity, 95% Medium to fine grain sand, loose 5% fines	6`` Schedule 40 PVC Well Casing
			5			
7			8			
			7	19.7		
8			7			Cetco Bentonite Medium Chips
			8			
9			6	36.5		
			6			
10			7			
			5	158		
11			5		Strong Odor	
			8		Silt Stringer	
12			8	155.8	Silt Stringer	
			6		black (10YR 2/1),	
13			7			
			5	98		
14			7		Becomes wet	Colorado Silica Sand 10/20
			9			
15			6	142		
			7			
16			7			
			7	120		
17			10			
			10			
18						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. EW-6 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18			11	13	SAA with trace gravel	
			10			
19			12			
			9	10.1		
20			11			
			11			
21						
			6	16.8		
22			6			
			8	8.7		
23			5 7			
			7			
24			10	3.4	Silt Stringer	
			11			6`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
25			9			
			8	1.3		
26			10			
			10			
27			10	1.8		
			11			
28			12			Colorado Silica Sand 8/12
			10	1.1	Fine Sand Stringer with Wood Debris	
29			10			
			12			
30			10	1.1		
			10			
31			10			
			8	0.4		
32			12			
			12			
33			8	0.2		
			9			
34			11			
			15	0.1		6`` Schedule 40 PVC Endcap
35			14		Wood Debris	
			11			
36					Bottom of Boring at 36 feet.	
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-01**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/1/15 / DATE FINISHED: 10/2/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.58-25.05
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.07 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core	Traffic Rated Well Box
1					Pea Gravel	
2					2nd Concrete Core See Well Log for EW-1 for Lithologic Description	Portland Cement
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				20.0		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-01 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				11.2		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX063	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

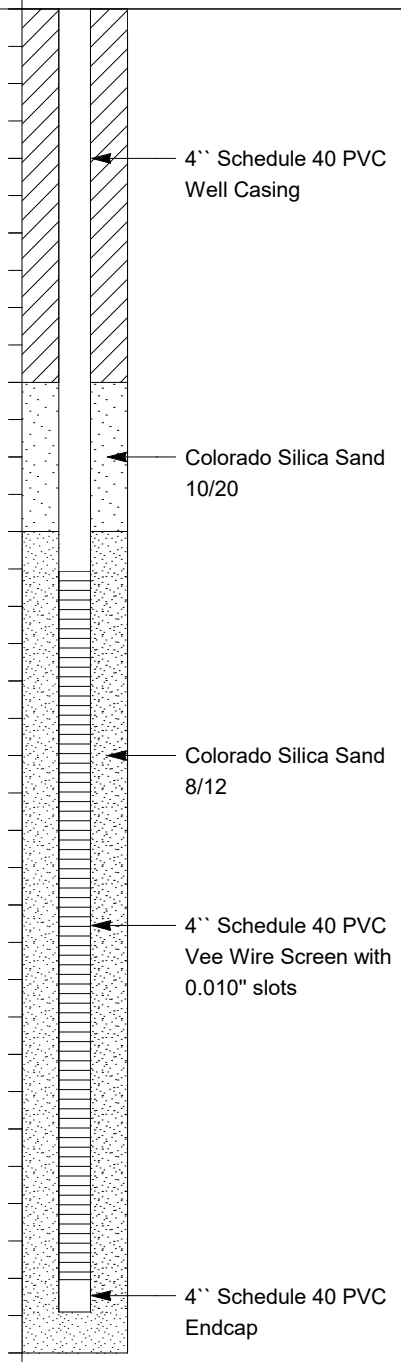
PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-02**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/1/15 / DATE FINISHED: 10/2/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.53-35.02
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.24 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core	Traffic Rated Well Box
1					Pea Gravel	
2					2nd Concrete Core See Well Log for EW-1 for Lithologic Description	Portland Cement
3						
4						
5						10`` diameter Borehole
6						
7						
8				0.2		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-02 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.3		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.1		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX062	
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-03**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/8/15 / DATE FINISHED: 10/8/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.64-25.11
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.57 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Traffic Rated Well Box
1					1st Concrete Core	
					Pea Gravel	Portland Cement
2					2nd Concrete Core	
					See Well Log for EW-1 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				0.0		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-03 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.0		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX077	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-04**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/7/15 / DATE FINISHED: 10/7/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.63-35.11
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.68 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Traffic Rated Well Box
1					Concrete Core	
2					See Well Log for EW-1 for Lithologic Description	Portland Cement
3						
4						
5						10`` diameter Borehole
6						
7						
8				1.4		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

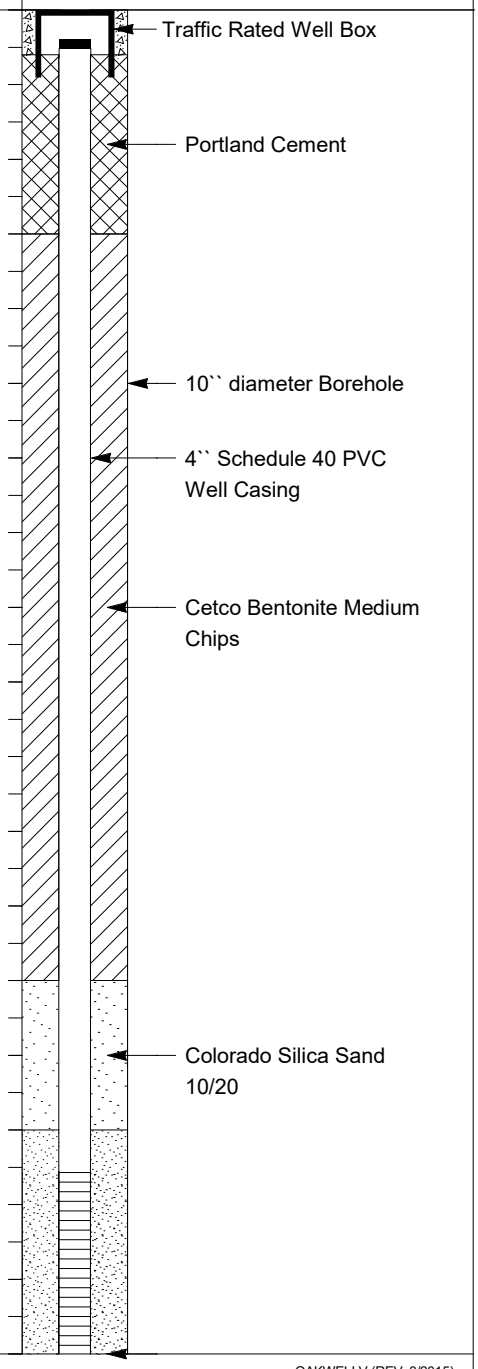
Log of Well No. IW-04 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.3		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.2		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX076	
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-05**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/2/15 / DATE FINISHED: 10/6/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.57-25.05
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.03 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:
0					1st Concrete Core
1					Pea Gravel
					Asphalt
2					2nd Concrete Core
					See Well Log for EW-1 for Lithologic Description
3					
4					
5					
6					
7					
8				2.6	
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					



PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-05 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				3.6		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX064	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

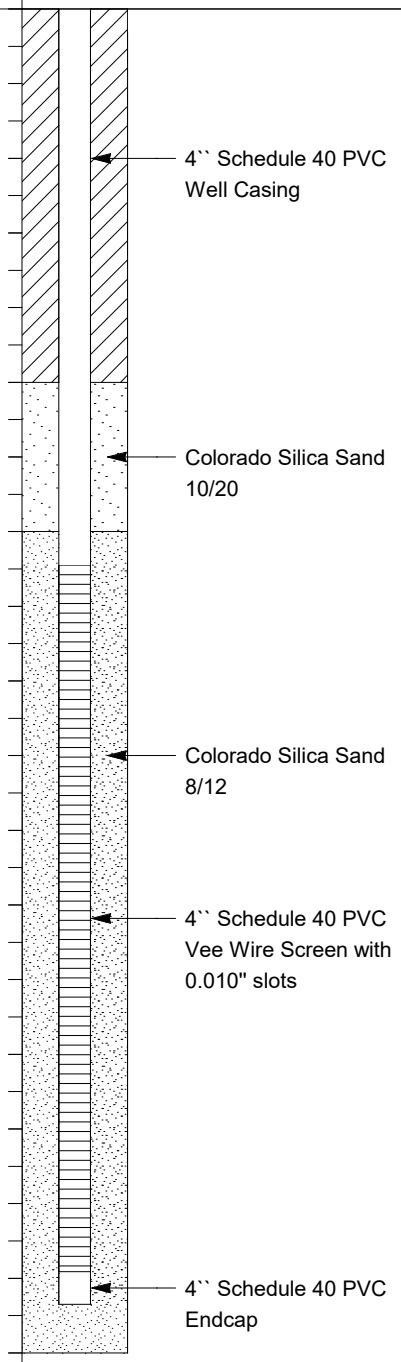
PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-06**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/2/15 / DATE FINISHED: 10/6/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.45-34.91
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.36 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core	Traffic Rated Well Box
1					Pea Gravel	
					Asphalt	Portland Cement
2					2nd Concrete Core	
					See Well Log for EW-1 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						
7						
8				0.7		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-06 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				8.4		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.2		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX065	
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-07**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/7/15 / DATE FINISHED: 10/7/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.51-24.99
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.22 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Surface Elevation:	
0					1st Concrete Core	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core	Portland Cement
2					See Well Log for EW-1 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				0.9		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-07 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.1		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX075	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-08**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/7/15 / DATE FINISHED: 10/7/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.56-35.03
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.11 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Surface Elevation:	
0					Concrete Core	Traffic Rated Well Box
1					See Well Log for EW-1 for Lithologic Description	
2						Portland Cement
3						
4						
5						10`` diameter Borehole
6						
7						
8				3.7		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-08 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.2		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.7		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX074	
37						
38						
39						

OAKWELLV (REV. 3/2015)

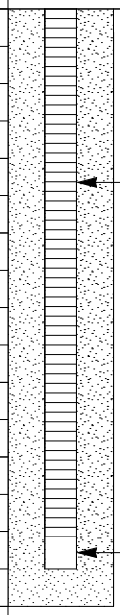
PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-09**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/5/15 / DATE FINISHED: 10/8/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.59-25.06
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.51 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core	Traffic Rated Well Box
1					Pea Gravel	
					Asphalt	Portland Cement
2					2nd Concrete Core	
					See Well Log for EW-2 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				0.0		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-09 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.0		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX067	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-10**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/2/15 / DATE FINISHED: 10/6/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.62-35.11
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.46 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core	Traffic Rated Well Box
1					Pea Gravel	
					Asphalt	Portland Cement
2					2nd Concrete Core	
					See Well Log for EW-2 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						
7						
8				0.3		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

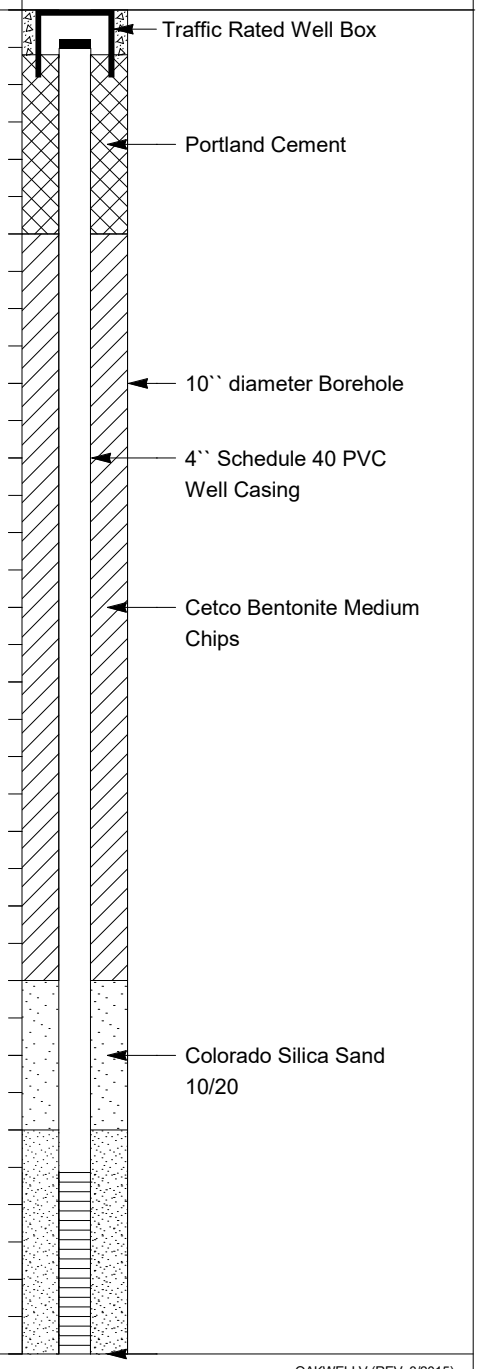
Log of Well No. IW-10 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.8		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				1.2		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX066	
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-11**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/6/15 / DATE FINISHED: 10/6/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.57-25.06
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.37 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:
0					1st Concrete Core
1					Pea Gravel
2					See Well Log for EW-2 for Lithologic Description
3					
4					
5					
6					
7					
8				6.6	
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					



PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-11 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				1.5		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX073	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

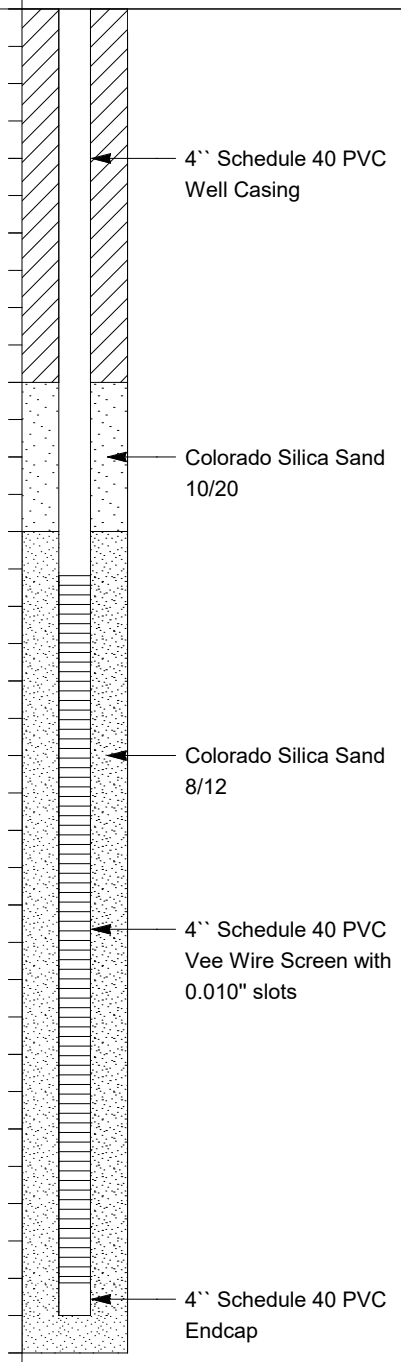
PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-12**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/6/15 / DATE FINISHED: 10/6/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.59-35.16
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.42 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Concrete Core	Traffic Rated Well Box
1					See Well Log for EW-2 for Lithologic Description	Portland Cement
2						
3						
4						
5						10`` diameter Borehole
6						
7						
8				6.0		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-12 (cont'd)

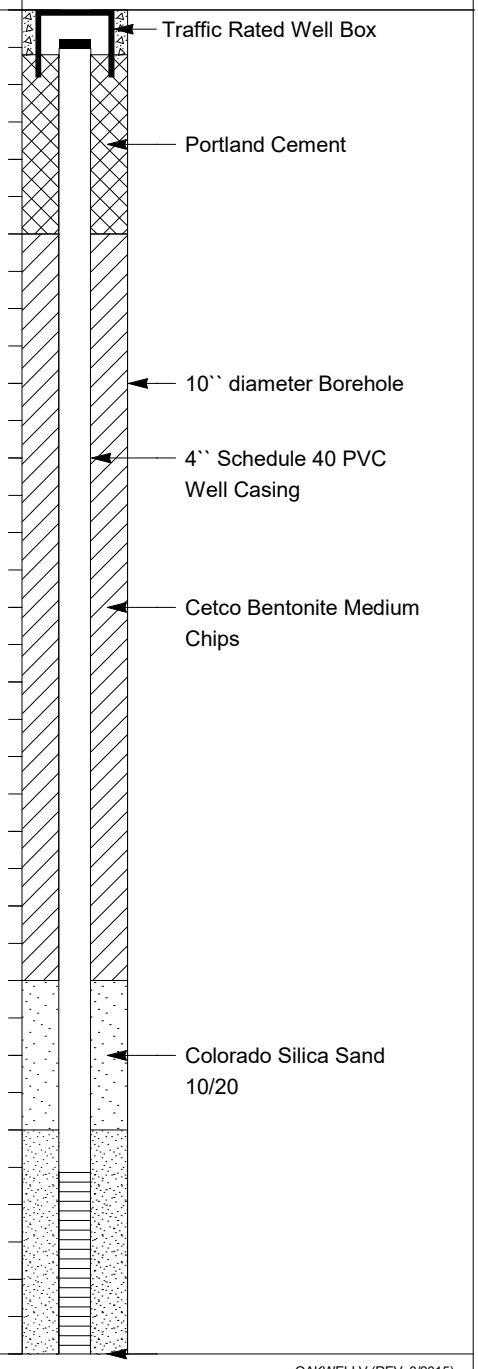
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				2.2		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.1		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX072	
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-13**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/5/15 / DATE FINISHED: 10/8/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.57-25.05
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.19 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

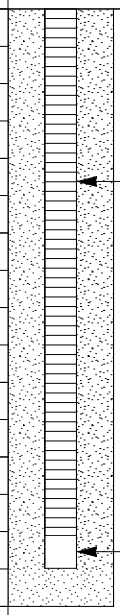
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core	Traffic Rated Well Box
1					Pea Gravel	
					Asphalt	Portland Cement
2					2nd Concrete Core	
					See Well Log for EW-2 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				0.1		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						



PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-13 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.0		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX069	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						



OAKWELLV (REV. 3/2015)

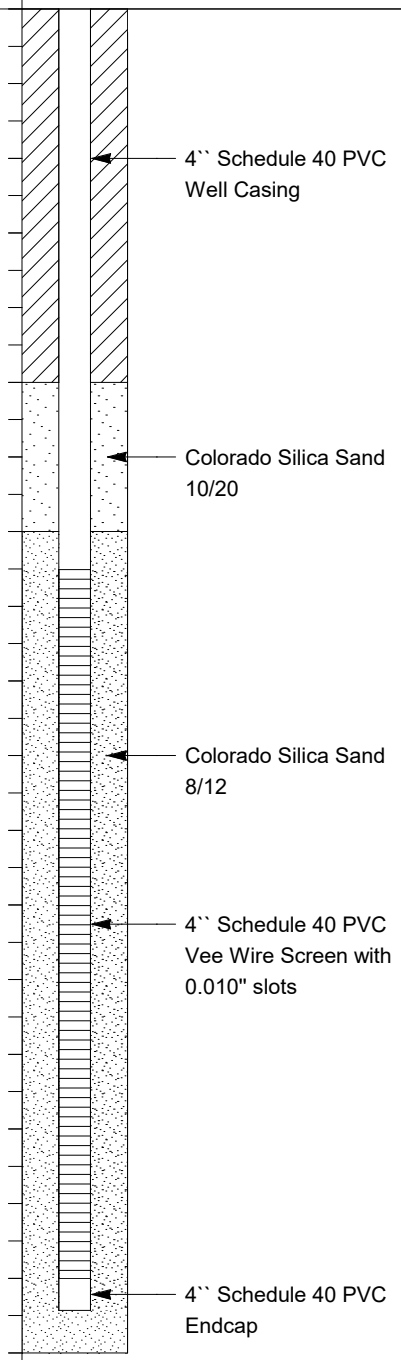
PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-14**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/5/15 / DATE FINISHED: 10/8/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.51-35.00
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.29 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core	Traffic Rated Well Box
1					Pea Gravel	
					Asphalt	Portland Cement
2					2nd Concrete Core	
					See Well Log for EW-2 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						
7						
8				3.4		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-14 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.3		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.2		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX068	
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-15**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/6/15 / DATE FINISHED: 10/8/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.67-25.15
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.03 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Surface Elevation:	
0					Concrete Core	Traffic Rated Well Box
1					See Well Log for EW-2 for Lithologic Description	Portland Cement
2						
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				2.6		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-15 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				1.6		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX071	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

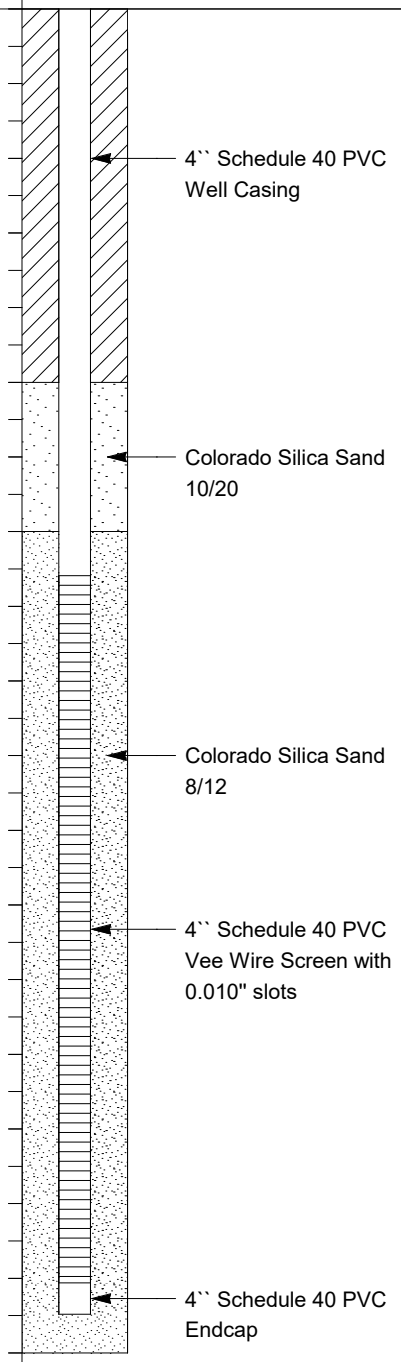
PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-16**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 10/6/15 / DATE FINISHED: 10/8/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.59-35.06
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 13.10 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core	Traffic Rated Well Box
1					Pea Gravel	
					Asphalt	Portland Cement
2					2nd Concrete Core	
					See Well Log for EW-2 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						
7						
8				0.0		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-16 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.0		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.0		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX070	
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-17**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/15/15 / DATE FINISHED: 9/15/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.52-25.00
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 8.60 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					See Well Log for EW-3 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				115		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-17 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				109		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX036	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-18**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/15/15 / DATE FINISHED: 9/15/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.57-35.04
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 8.75 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					See Well Log for EW-3 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						
7						
8				208		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-18 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				69		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				9		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX037	
37						
38						
39						

OAKWELLV (REV. 3/2015)

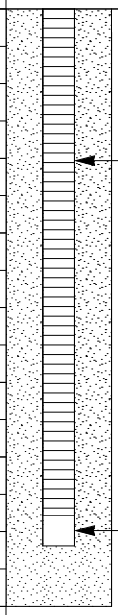
PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-19**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/14/15 / DATE FINISHED: 9/15/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.28-24.78
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 8.21 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					3rd Concrete Core 14`` Diameter	
					See Well Log for EW-3 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				260		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-19 (cont'd)

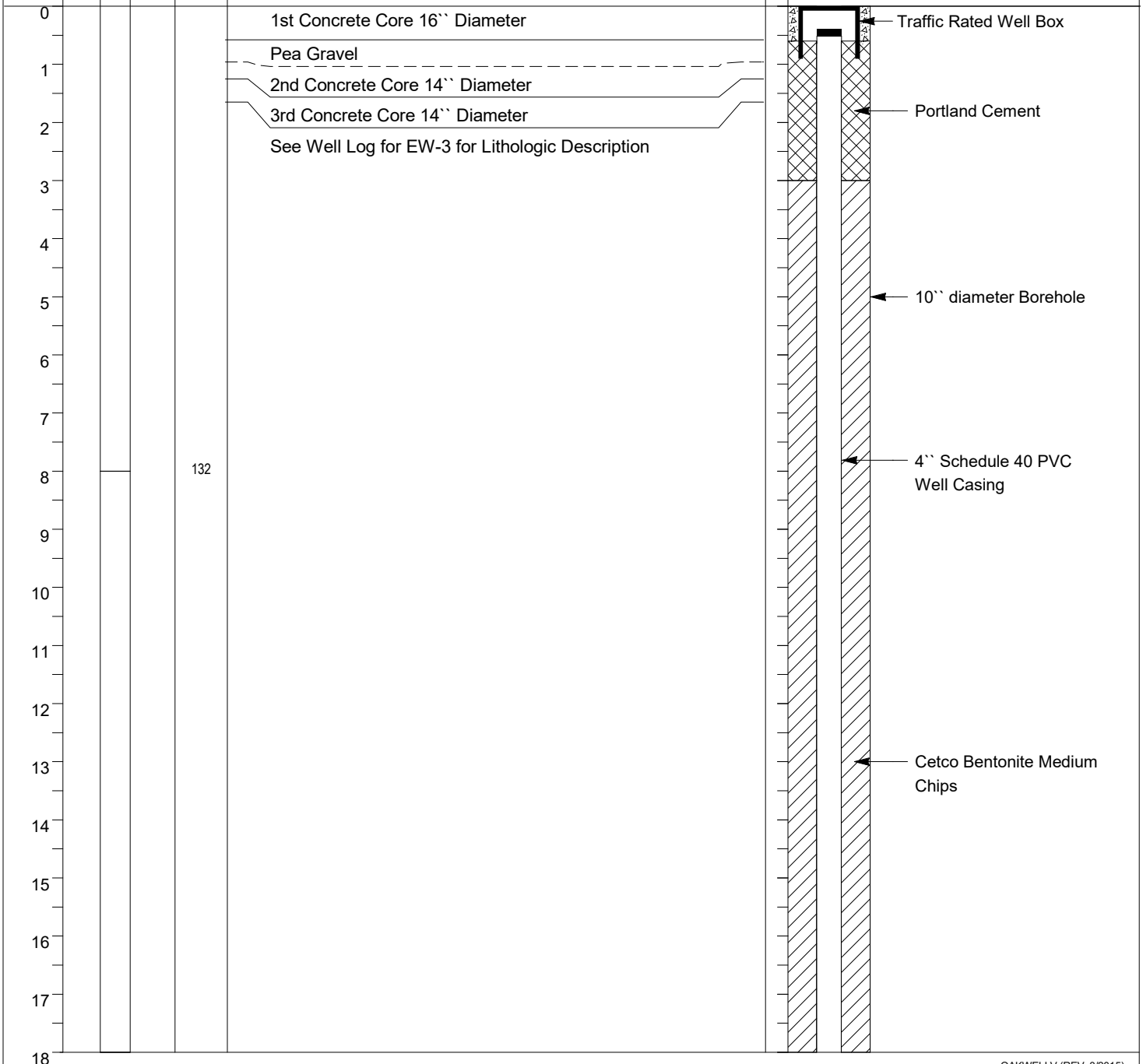
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				76		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX034	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-20**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/14/15 / DATE FINISHED: 9/15/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.50-34.98
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 8.30 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					3rd Concrete Core 14`` Diameter	
					See Well Log for EW-3 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						
7						
8				132		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-20 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				100		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				80		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX035	
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-21**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/30/15 / DATE FINISHED: 10/1/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.51-25.00
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.03 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Traffic Rated Well Box
1					piece of wood See Well Log for EW-6 for Lithologic Description	
2						Portland Cement
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				0.2		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-21 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.4		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX061	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-22**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/30/15 / DATE FINISHED: 10/1/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.57-35.05
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.00 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Traffic Rated Well Box
1					See Well Log for EW-6 for Lithologic Description	Portland Cement
2						
3						
4						
5						10`` diameter Borehole
6						
7						
8				0.0		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-22 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.0		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.0		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX053	
37						
38						
39						

OAKWELLV (REV. 3/2015)

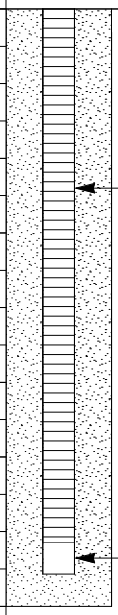
PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-23**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/16/15 / DATE FINISHED: 9/16/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.66-25.14
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 8.96 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Surface Elevation:	
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					See Well Log for EW-3 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				3033		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-23 (cont'd)

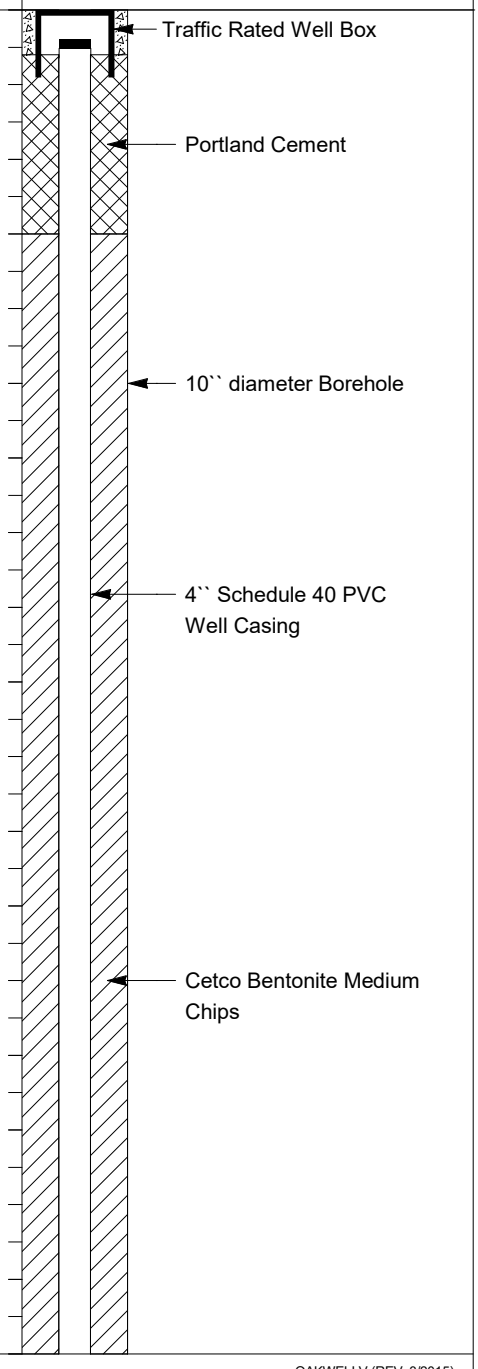
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				501.3		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX038	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-24**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/16/15 / DATE FINISHED: 9/16/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.54-35.01
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.07 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					See Well Log for EW-3 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						
7						
8				2735		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						



PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-24 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				1272		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				900		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX039	
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-25**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/22/15 / DATE FINISHED: 9/22/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.61-25.08
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 8.55 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					Pea Gravel See Well Log for EW-3 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				82.1		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-25 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				32.3		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX044	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-26**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/22/15 / DATE FINISHED: 9/22/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.65-35.13
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 8.63 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					Pea Gravel	
					3rd Concrete Core 14`` Diameter	
3					See Well Log for EW-3 for Lithologic Description	
4						
5						10`` diameter Borehole
6						
7						
8				82.5		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-26 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				12.3		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				7.5		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX045	
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-27**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/29/15 / DATE FINISHED: 10/1/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.56-25.06
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.30 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Traffic Rated Well Box
1					See Well Log for EW-4 for Lithologic Description	Portland Cement
2						
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				0.1		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-27 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.1		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX058	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

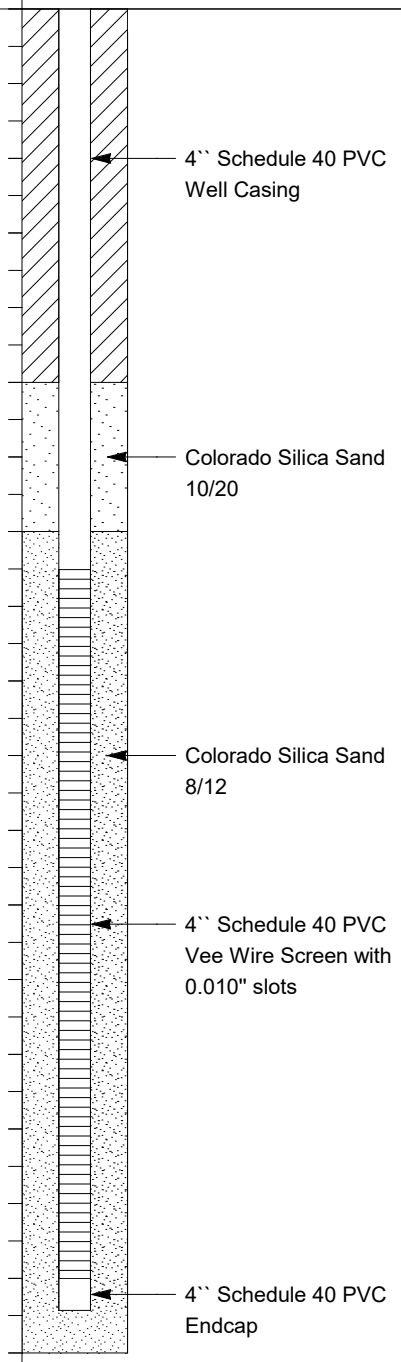
PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-28**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/29/15 / DATE FINISHED: 9/30/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.51-35.00
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.30 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Traffic Rated Well Box
1					Piece of wood See Well Log for EW-4 for Lithologic Description	
2						Portland Cement
3						
4						
5						10`` diameter Borehole
6						
7						
8				0.4		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-28 (cont'd)

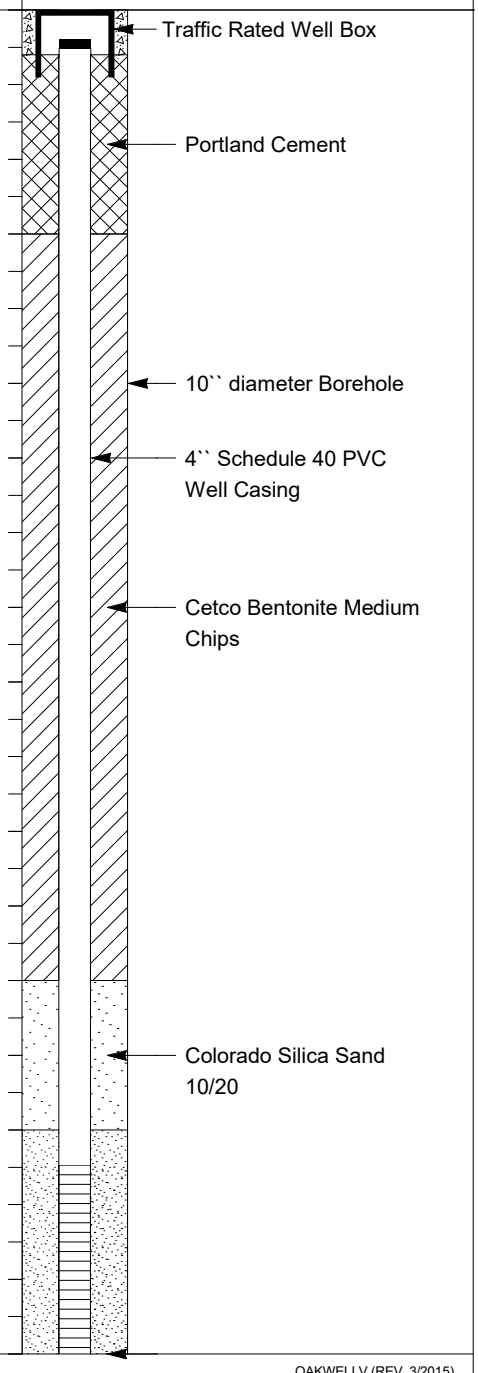
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.3		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.2		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX059	
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-29**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/24/15 / DATE FINISHED: 9/25/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.47-24.94
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.60 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					See Well Log for EW-5 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				325		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-29 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				505.8		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX050	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-30**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/24/15 / DATE FINISHED: 9/25/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.57-35.04
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.72 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					2nd Concrete Core- Drilled with Bulldog Bit	
2					See Well Log for EW-5 for Lithologic Description	Portland Cement
3						
4						
5						10`` diameter Borehole
6						
7						
8				517		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

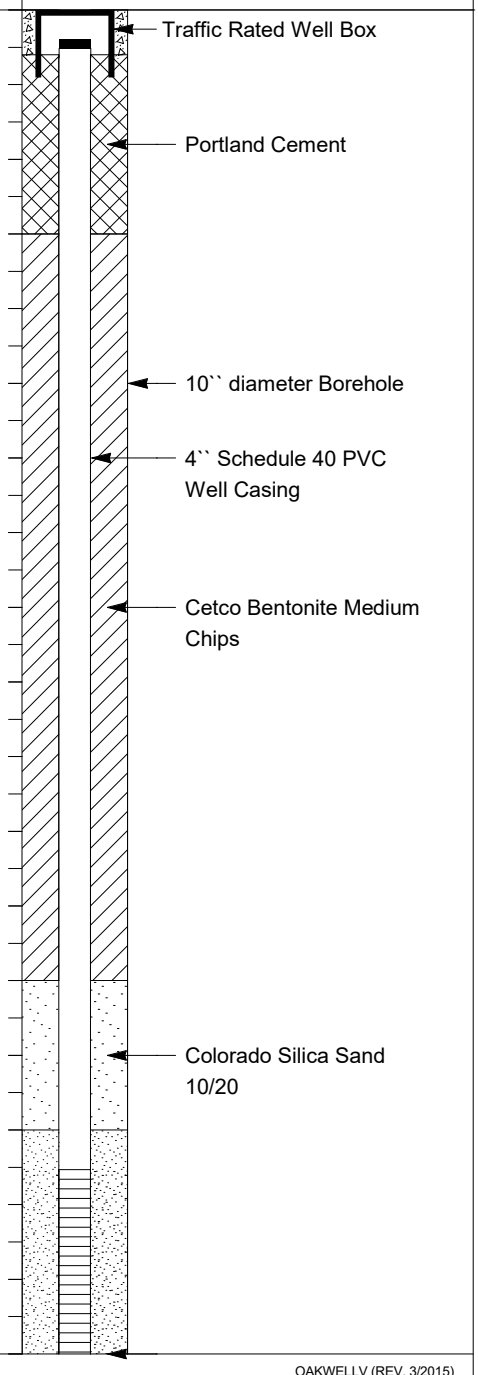
Log of Well No. IW-30 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				217		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				143		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX051	
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-31**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/22/15 / DATE FINISHED: 9/24/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.53-25.01
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.30 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					Pea Gravel	
					3rd Concrete Core 14`` Diameter	
3					See Well Log for EW-5 for Lithologic Description	
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				10.1		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						



PROJECT: Stericycle ISB Implementation
Georgetown Facility

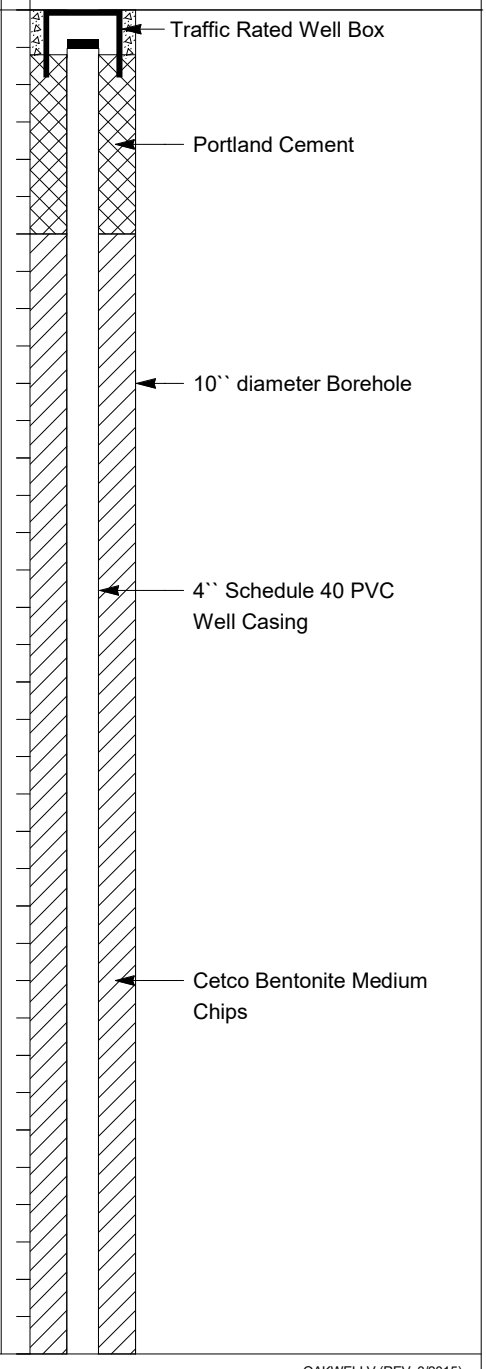
Log of Well No. IW-31 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.4		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX046	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-32**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/23/15 / DATE FINISHED: 9/24/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.52-35.00
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.35 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

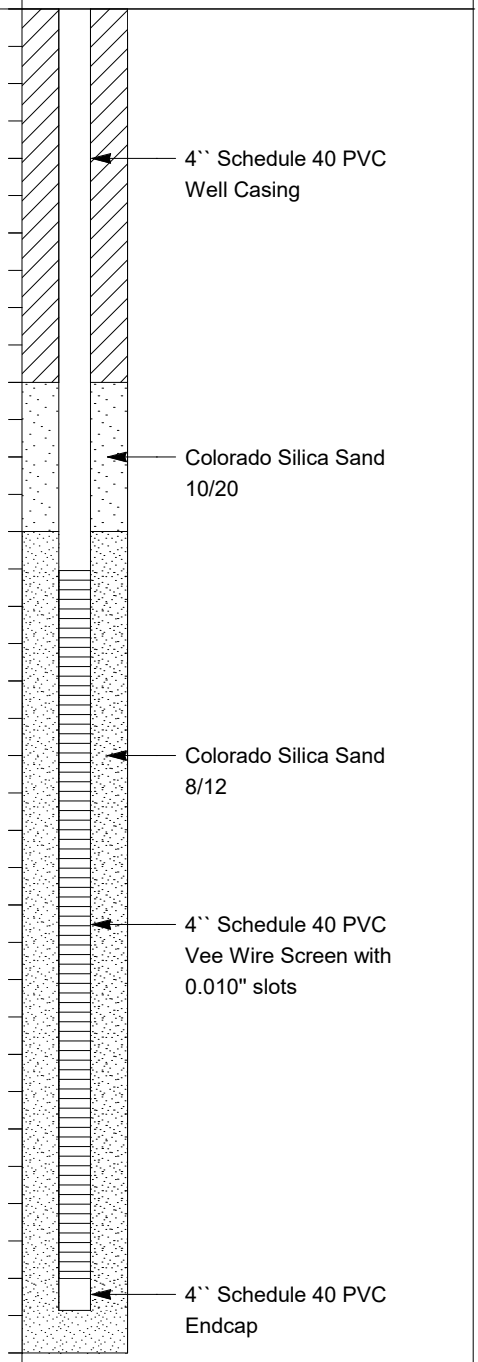
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					Pea Gravel	
					3rd Concrete Core 14`` Diameter	
3					See Well Log for EW-5 for Lithologic Description	
4						
5						10`` diameter Borehole
6						
7						
8				0.9		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						



PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-32 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				1.1		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.3		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX047	
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-33**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/28/15 / DATE FINISHED: 9/30/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 15.6-25.08
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.21 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Traffic Rated Well Box
1					See Well Log for EW-4 for Lithologic Description	Portland Cement
2						
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				0.0		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-33 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.0		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 26 ft Ecology Well ID= BIX056	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-34**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/29/15 / DATE FINISHED: 9/30/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.57-35.07
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.23 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Traffic Rated Well Box
1					See Well Log for EW-4 for Lithologic Description	
2						Portland Cement
3						
4						
5						10`` diameter Borehole
6						
7						
8				0.1		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-34 (cont'd)

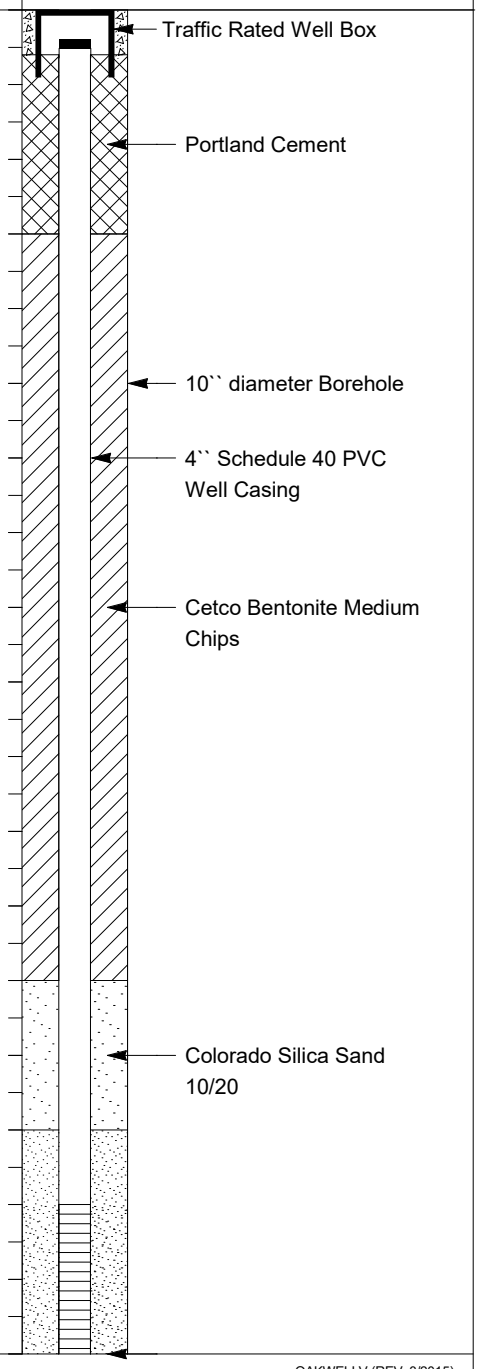
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.2		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.3		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX057	
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-35**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/25/15 / DATE FINISHED: 9/28/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 26.0 / SCREEN INTERVAL (ft.): 16.0-25.5
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.18 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:
0					Single Concrete Core
1					See Well Log for EW-5 for Lithologic Description
2					
3					
4					
5					
6					
7					
8				0.0	
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-35 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.1		Colorado Silica Sand 8/12
19						
20						
21						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
22						
23						
24						
25						
26					End of boring at 26 ft Ecology Well ID= BIX052	4`` Schedule 40 PVC Endcap
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-36**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/25/15 / DATE FINISHED: 9/28/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 36.0 / SCREEN INTERVAL (ft.): 25.3-34.99
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.28 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Concrete, Brick, & Debris	Traffic Rated Well Box
1					See Well Log for EW-5 for Lithologic Description	Portland Cement
2						
3						
4						
5						10`` diameter Borehole
6						
7						
8				0.2		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-36 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.2		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.2		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 36 ft Ecology Well ID= BIX053	
37						
38						
39						

OAKWELLV (REV. 3/2015)

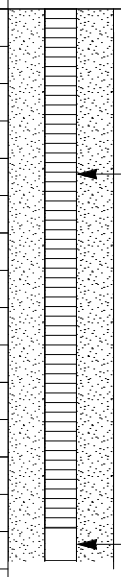
PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-37**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/23/15 / DATE FINISHED: 9/23/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 25.5 / SCREEN INTERVAL (ft.): 15.47-24.95
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.73 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Surface Elevation:	
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
2					2nd Concrete Core 14`` Diameter	Portland Cement
3					See Well Log for EW-5 for Lithologic Description	
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				1.0		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-37 (cont'd)

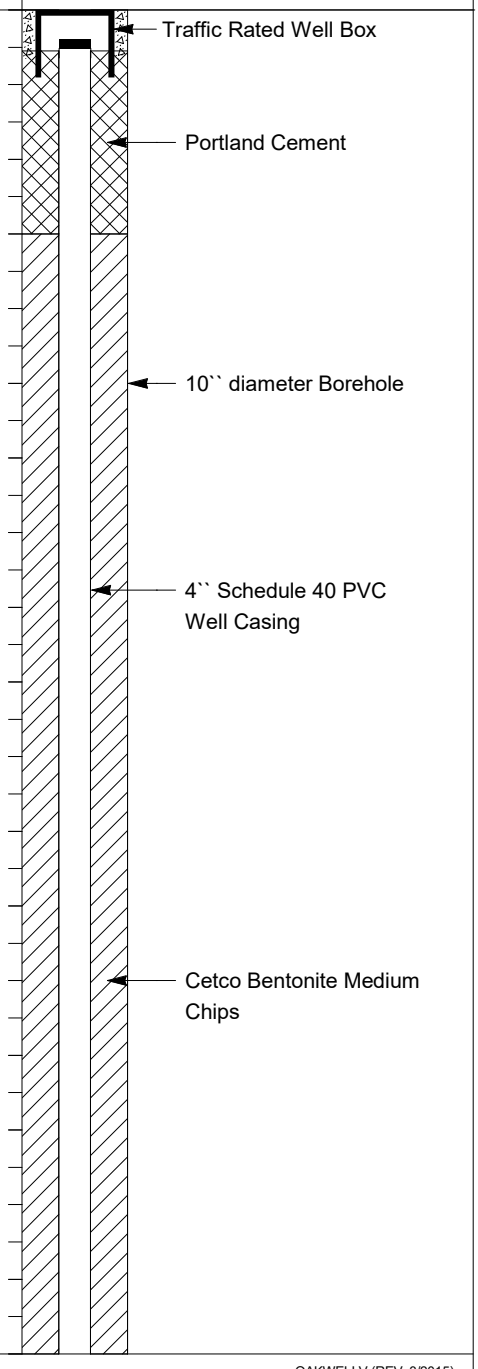
DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				1.1		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 25.5 ft Ecology Well ID= BIX048	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-38**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/23/15 / DATE FINISHED: 9/23/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 35.5 / SCREEN INTERVAL (ft.): 25.62-35.09
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.83 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					1st Concrete Core 16`` Diameter	Traffic Rated Well Box
1					Pea Gravel	
					2nd Concrete Core 14`` Diameter	Portland Cement
2					See Well Log for EW-5 for Lithologic Description	
3						
4						
5						10`` diameter Borehole
6						
7						
8				0.3		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						



PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-38 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				1.8		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.1		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 35.5 ft Ecology Well ID= BIX049	
37						
38						
39						

OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-39**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/28/15 / DATE FINISHED: 9/30/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 25.5 / SCREEN INTERVAL (ft.): 15.54-25.02
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.53 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Traffic Rated Well Box
1					See Well Log for EW-4 for Lithologic Description	Portland Cement
2						
3						
4						
5						10`` diameter Borehole
6						4`` Schedule 40 PVC Well Casing
7						
8				0.1		Cetco Bentonite Medium Chips
9						
10						
11						
12						
13						
14						Colorado Silica Sand 10/20
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-39 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.1		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 25.5 ft Ecology Well ID= BIX032	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

OAKWELLV (REV. 3/2015)

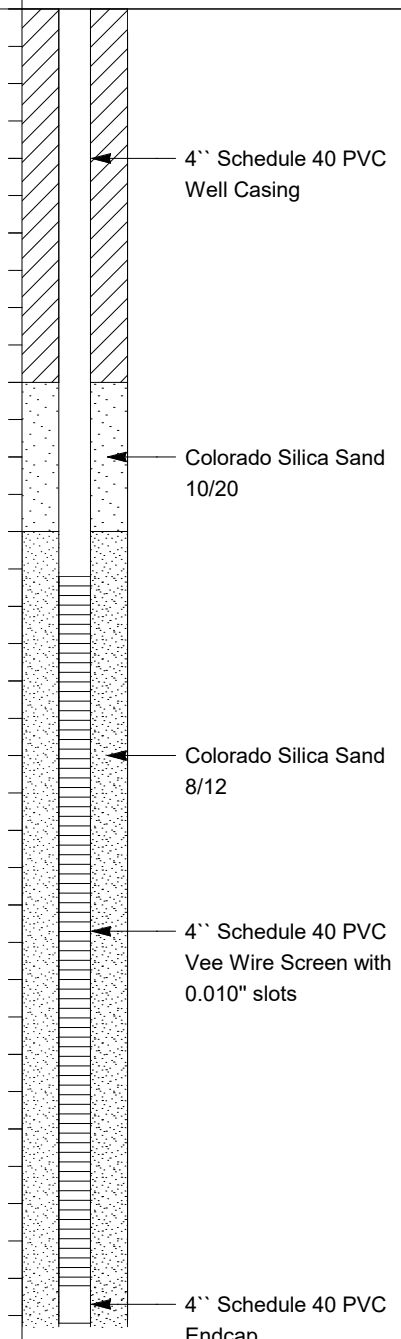
PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-40**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/28/15 / DATE FINISHED: 9/30/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 35.6 / SCREEN INTERVAL (ft.): 25.64-35.11
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 9.56 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Behrouzi
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Traffic Rated Well Box
1					See Well Log for EW-4 for Lithologic Description	Portland Cement
2						
3						
4						
5						10`` diameter Borehole
6						
7						
8				0.1		4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15						
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-40 (cont'd)

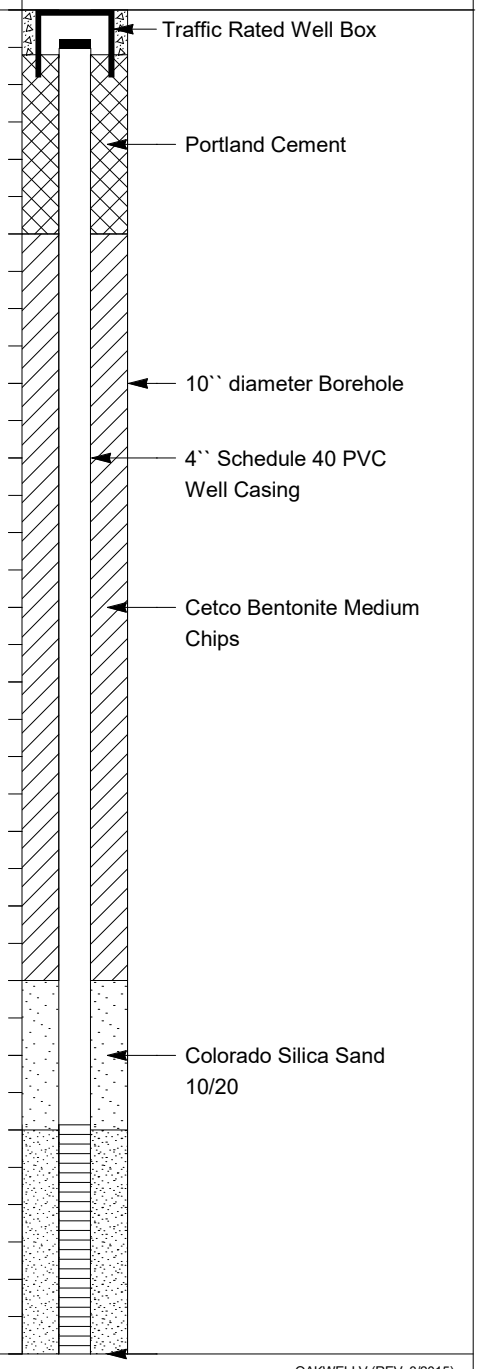
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				0.2		
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25						
26						
27						
28				0.3		Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 35.5 ft Ecology Well ID= BIX054	
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility	**Log of Well No. IW-41**
BORING LOCATION:	GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.	DATE STARTED: 9/11/15 / DATE FINISHED: 9/11/15
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 25.5 / SCREEN INTERVAL (ft.): 15.36-24.81
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER: FIRST 11.58 / COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A	LOGGED BY: S. Welter
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

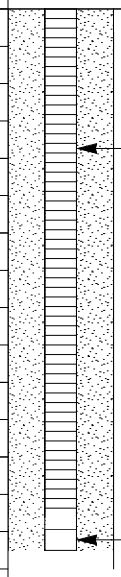
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:
0					Single Concrete Core (18`` Diameter)
1					See Well Log for EW-6 for Lithologic Description
2					
3					
4					
5				0.0	
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					



PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-41 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18				1.1		Colorado Silica Sand 8/12
19						
20						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
21						
22						
23						
24						
25						4`` Schedule 40 PVC Endcap
26					End of boring at 25.5 ft Ecology Well ID= BIX032	
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						



OAKWELLV (REV. 3/2015)

PROJECT: Stericycle ISB Implementation Georgetown Facility				**Log of Well No. IW-42**
BORING LOCATION:				GROUND SURFACE ELEVATION AND DATUM: GS
DRILLING CONTRACTOR: Cascade Drilling, Inc.				DATE STARTED: 9/14/15 / DATE FINISHED: 9/14/15
DRILLING METHOD: Hollow-stem auger				TOTAL DEPTH (ft.): 35.5 / SCREEN INTERVAL (ft.): 25.50-34.97
DRILLING EQUIPMENT: CME 75				DEPTH TO WATER: FIRST 11.48 COMPL. / CASING: 4" Schedule 40 PVC
SAMPLING METHOD: N/A				LOGGED BY: S. Welter
HAMMER WEIGHT: N/A	DROP: N/A			RESPONSIBLE PROFESSIONAL: JMB / REG. NO. 3003

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Single Concrete Core (18`` Diameter)	Traffic Rated Well Box
1					See Well Log for EW-6 for Lithologic Description	
2						Portland Cement
3						
4						
5				0.9		10`` diameter Borehole
6						
7						
8						4`` Schedule 40 PVC Well Casing
9						
10						
11						
12						
13						Cetco Bentonite Medium Chips
14						
15				0.3		
16						
17						
18						

PROJECT: Stericycle ISB Implementation
Georgetown Facility

Log of Well No. IW-42 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
18						
19						
20						4`` Schedule 40 PVC Well Casing
21						
22						
23						
24						Colorado Silica Sand 10/20
25				0.7		
26						
27						
28						Colorado Silica Sand 8/12
29						
30						4`` Schedule 40 PVC Vee Wire Screen with 0.010" slots
31						
32						
33						
34						
35						4`` Schedule 40 PVC Endcap
36					End of boring at 35.5 ft Ecology Well ID= BIX033	
37						
38						
39						

OAKWELLV (REV. 3/2015)

Appendix C
Draft Restrictive Covenant for UPRR Property

Ecology comments on, and modifications to, Sep 2015 redline sent by UPRR/Stericycle [companies' Sep 2015 Δs to Ecology's 6/9/14 version]

After Recording Return
Original Signed Covenant to:
Ed Jones
Hazardous Waste and Toxics Reduction Program
Department of Ecology, NWRO
3190 160th Ave. SE
Bellevue, WA 98008

Environmental Covenant

Grantor: Union Pacific Railroad Company
Grantee: State of Washington, Department of Ecology
Brief Legal Description: NW ¼, SE ¼ & SW ¼, NE ¼ Section 20, Township 24 N, Range 4 E, W.M.
Tax Parcel Nos.: Portions of 5084400085, 5084400086, 1722800214, 3868400016, and 3868400050

RECITALS

a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act ("MTCA"), chapter 70.105D RCW and Uniform Environmental Covenants Act ("UECA"), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part of a site commonly known as the PSC-Georgetown site, WAD 00081 2909. The Property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter "Property"). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail.

c. The Property is the subject of remedial action under MTCA. This Covenant is required because residual contamination remains in soil above applicable cleanup levels on the Property after completion of remedial actions. Groundwater contamination exceeding certain cleanup levels may also remain on the Property after completion of remedial actions.
Specifically, the following principal contaminants remain on the Property:

Medium	Principal Contaminants Present
Soil	poly-chlorinated biphenyls (PCBs), volatile organic compounds (such as chlorinated ethenes and ethanes, and petroleum-related compounds), semi-volatile organic compounds (such as

	naphthalene and other PAHs), and inorganics (such as cyanide and cadmium)
Groundwater	poly-chlorinated biphenyls (PCBs), volatile organic compounds (such as chlorinated ethenes, and petroleum-related compounds), semi-volatile organic compounds (such as methyl naphthalene and pentachlorophenol), and inorganics (such as cyanide and arsenic)

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and maintain the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted include the Revised Long-Term Groundwater Monitoring Plan (Appendix D of the September 2011 Revised Engineering Design Report), and the Final Argo Yard Area Cleanup Implementation Report, dated July 2013. These and other pertinent documents are on file and available through the Washington State Department of Ecology.

e. This Covenant grants the Washington State Department of Ecology, as holder of this Covenant, certain rights specified in this Covenant. The right of the Washington State Department of Ecology as a holder is not an ownership interest under the UECA, MTCA, Chapter 70.105D RCW or the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. Chapter 103.

COVENANT

Union Pacific Railroad Company, as Grantor and owner of the Property hereby grants to the Washington State Department of Ecology, and its successors and assigns, (hereafter "Ecology") the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall run with the land and be binding on all current and future owners of any portion of, or interest in, the Property unless and until removed in accordance with Section 5.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

a. Interference with Remedial Action. The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology except in the event of an emergency. Specifically, but only to the extent that they may impact or interfere with the remedial action, such activities include: i) compromising the integrity of Ecology-approved monitoring wells; ii) altering subsurface components of the cleanup action's stormwater management system; and iii) removing, or degrading the effectiveness of, surface cover in areas subject to the cleanup action.

b. Protection of Human Health and the Environment. The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the

remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. Continued Compliance Required. Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. Leases. Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.

e. Approval Procedure for Proposed Activity. Grantor must notify and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner inconsistent with this Covenant.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

a. Industrial Land Use: The remedial action for the Property is based on a cleanup designed for industrial property. As such, and so long as the Covenant is in effect, the Property described in Exhibit A shall be used for industrial uses, as that term is defined in the rules promulgated under Chapter 70.105D RCW and which includes railroad uses as of the date of this Covenant. Prohibited, non-industrial uses on the Property include but are not limited to residential uses, childcare facilities, K-12 public or private schools, parks, grazing of animals, growing of food crops, and non-industrial commercial uses. Furthermore, residual contamination on the Property includes poly-chlorinated biphenyls, or PCBs. In these areas of contamination the land has been used for PCB remediation waste disposal and is restricted to use as a low occupancy area as defined in 40 CFR §761.3.

The cover or cap described in sub section "b" below serves to protect workers at ground surface. Unless otherwise allowed under "b" below, in these capped or covered areas the cover or cap and the soils below shall not be excavated or otherwise removed without prior written approval by Ecology. For workers carrying out activities below ground surface in portions of the OSRA-1A, OSRA-1B, OSRA-1C, and OSRA-1D cleanup areas as described in the Final Argo Yard Area Cleanup Implementation Report dated July 2013, applicable personal protective equipment is required when engaged in these activities. In addition, workers performing activities at depths as deep as the water table require equipment protecting them from directly contacting groundwater contamination. The Grantor shall maintain a Health and Safety Plan for the Property that describes these requirements, and specifies how the Grantor will ensure compliance with the Plan.

b. Containment of Soil/Waste Materials: Exhibit B depicts OSRA-1A, -1B, -1C, and -1D, which are all covered with an asphalt cap, the design of which was reviewed approved by Ecology. The existing cap is a component of the remedial action for the Property and must be maintained to contain residual soil contamination, and protect workers at ground surface from potentially contacting contaminated soils below ground surface and/or inhaling contaminated airborne particulates. In some locations it prevents surface runoff from contacting contaminated

soil, minimizes infiltration, and thereby reduces the potential for soil contaminants to leach and migrate to underlying groundwater.

As shown in Exhibit B, and documented in the Final Argo Yard Area Cleanup Implementation Report, contaminated soils were excavated from areas OSRA-1A, OSRA-1B, and OSRA-1C as part of the PSC-Georgetown site cleanup action. Clean soils replaced the soils that were removed.

In OSRA-1A the depths of the cleanup excavation varied from three to 6.5 feet below ground surface. After clean soils replaced the soils that were removed, the area was re-paved with a six inch asphalt cap as described above. Some contamination remains below excavated depths; higher levels of contamination remain in some shallower locations immediately east and west of the excavation footprint.

In OSRA-1B the depths of the cleanup excavation varied from three to 7.5 feet below ground surface. Following the placement of clean soils in the excavated area, the area was paved with a six inch asphalt cap as described above. Similarly to OSRA-1A, residual contamination remains in soils below excavated depths at OSRA-1B. Higher levels of contamination remain in some shallower locations immediately to the east, and especially to the immediate west, of the excavation footprint.

During the cleanup action, contaminated soils within OSRA-1C were excavated to a depth of eight feet below ground surface. Following replacement with clean soils in the excavated area, the area was paved with a six inch asphalt cap as described above. Post-excavation sampling was not conducted in the OSRA-1C area, either at depth or within the excavation's sidewalls. However, groundwater has been encountered at eight feet below ground surface in this area; any residual contamination below the depth of excavation is therefore expected to be within the saturated zone.

Contaminated soils within OSRA-1D were not excavated as part of the cleanup action. These soils are currently covered with pavement, except at points approximately 10 feet from the property line separating Argo Yard and the PSC-Georgetown facility. Although the OSRA-1D area was subjected to Soil Vapor Extraction remediation, residual contamination remains in soils.

These four areas are currently, and must continue to be capped due to the residual contamination described above.

Within the Property described in Exhibit A, any grading, installation of underground utilities, digging, or other excavation activity that removes the surface cover or capping or degrades its function, is generally prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap that could compromise its integrity or function and comply with other reporting and response procedures set forth in the Ecology-approved Operation and Maintenance Plan (Appendix I to the September 2011 Revised Engineering Design Report). Unless an alternative proposal has been approved by Ecology in writing, the Grantor shall promptly ensure that restoration of the capping to the cleanup action's remediation specifications has been effected and a report submitted, documenting this work to Ecology within thirty (30) days of completing the repairs.

The Grantor covenants and agrees that it shall annually, or at another time as approved in writing by Ecology, inspect the cover or cap. The purpose of the inspection is to determine if any

changes have occurred that may impair the cover or cap's performance. Thirty (30) days following the inspection, the Grantor shall submit a report of the inspection's findings to Ecology.

c. Stormwater facilities: To minimize the potential for mobilization of contaminants remaining in soils and groundwater on the Property, no new stormwater infiltration facilities or ponds shall be constructed within contaminated portions of the Property depicted in Exhibit B without prior written approval by Ecology. All existing stormwater catch basins located within the Property depicted in Exhibit B shall be maintained in a manner consistent with the implemented remedial action.

d. Vapor controls: The residual contamination on the Property includes volatile chemicals that may generate harmful vapors. As such, the following restrictions shall apply within enclosed structures on the Property described in Exhibit B to minimize the potential for exposure to these vapors:

(i) in the event the Grantor constructs any new enclosed structures within this area (including enclosure of existing open structures) after the recordation of this Covenant, the Grantor shall select and perform one of the following two actions:

(1) install a sub-slab barrier preventing vapor intrusion into the newly constructed enclosed structures. Any such barrier – whether physical or relying on depressurization of the sub-slab zone – shall be sufficient to prevent vapor intrusion into the enclosed structures that may pose a potentially unacceptable health risk. Before construction of any new enclosed structure on the Property, the Grantor shall submit to Ecology for review and approval the specifications for the vapor intrusion barrier included in the proposed construction design. Or,

(2) perform an assessment in accordance with any applicable Ecology regulations and guidance to evaluate the potential risk of vapor intrusion of contaminants of concern into the new structure. The Grantor shall submit a report of this assessment to Ecology. If Ecology determines that vapor intrusion poses a potentially unacceptable health risk, mitigation will be performed in accordance with any applicable Ecology regulations and guidance. In this event, a Mitigation Plan shall be submitted to Ecology for concurrence. The Plan shall describe the mitigation system and include requirements for operating, inspecting, maintaining, and monitoring the performance of the system.

(ii) As described in the specific restrictions and requirements included under sub-section "a" of this section, the Grantor shall maintain a Health and Safety Plan for the Property that describes the respiratory protection requirements on the Property and ensure compliance with the Plan.

e. Groundwater Use:

The groundwater beneath the Property described in Exhibit A will remain contaminated until applicable cleanup levels have been attained. This groundwater shall not be extracted for any purpose other than investigation, monitoring, or remediation. Drilling of a well for any water

supply purpose is strictly prohibited. Groundwater extracted within this area for any purpose shall be considered potentially contaminated and any discharge of this water shall be done in accordance with applicable state and federal law.

f. Monitoring: Several groundwater monitoring wells are located on the Property to monitor the performance of the remedial action. The Grantor shall maintain reasonable access to these devices and protect them from damage. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to any monitoring device. Unless Ecology approves of an alternative plan in writing, the Grantor shall promptly ensure that the damage has been repaired and a report submitted, documenting this work to Ecology within thirty (30) days of completing the repairs.

g. Railroad Yard Use: For the purposes of this Section 2, removal and replacement of rails, ties, and ballast associated with routine rail and railroad tie maintenance shall not be considered subject to the restrictions and requirements under this Section. In general, except as restricted by Section 1, and by Section 2, "a" through "g" above, railroad operations, construction, or maintenance activities may occur without Ecology notification so long as appropriate health and safety procedures are implemented and all media are managed in compliance with applicable Ecology regulations.

Section 3. Access.

a. The Grantor shall maintain reasonable access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action. This shall include access for: (i) evaluating (testing) and ensuring long-term remedy performance, and (ii) remedy closure.

b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, to inspect remedial actions conducted at the property, to determine compliance with this Covenant, and to inspect records that are related to the remedial action.

Before entering the Property, all Ecology representatives who will be performing work on the Property (or visiting the work site and rail yard) are required to complete the two online safety training courses described below to raise awareness of potential health and safety issues at an active railroad facility. All Ecology representatives must be able to provide proof of completion of these two courses before entering the Property. The "Union Pacific Railroad Company Contractor Orientation Training" can be completed at www.contractororientation.com. The "On-track Safety Training" can be completed at www.railroadeducation.com. Additionally, Grantor has a Controlled Access Policy, a security program intended to provide a safe workplace and maintain the integrity and security of railroad facilities. Before entering the Property, Ecology and its representatives must register with the "E-RailSafe" program at www.e-railsafe.com and be in full compliance. Ecology and its representatives must wear E-RailSafe badges while on the Property.

Grantor has a Controlled Access Policy, a security program intended to provide a safe workplace and maintain the integrity and security of railroad facilities. Ecology agrees to notify

the Grantor at least ten (10) days in advance of Ecology commencing its work, unless an emergency prevents such notice. In addition, except in emergencies, Ecology will notify the Grantor at least ten (10) days in advance of any site visit in which any Ecology representative or Ecology equipment will be within 25 feet of any track, or will be near enough to any track that any equipment extension (such as, but not limited to, a crane boom) will reach to within 25 feet of any track. Upon receipt of such notice, the Grantor will determine and inform Ecology whether a flagman or Union Pacific Railroad Company official need be present and whether Ecology need implement any special protective or safety measures.

Before commencing work, Ecology shall participate in a job briefing conducted by the Grantor, unless an emergency prevents such participation. The briefing will specify the type of Union Pacific Railroad Company On-Track Safety for the type of work being performed and provide any special instructions relating to the work zone around machines and minimum distances. *Ecology will note the limits of track authority, which tracks may or may not be fouled, and clearing the track.*

The following safety rules shall be followed by Ecology's authorized representatives at the site:

(i) Ecology representatives shall maintain a distance of at least 25 feet to any track unless the determination discussed in the paragraph above has identified the conditions under which a closer distance is allowed, or Ecology has entered the site in response to an emergency.

(ii) Ecology shall take reasonable measures to keep its job site free from safety and health hazards and ensure that its on-site representatives are competent and adequately trained in all safety and health aspects of the job. Ecology shall promptly notify the Grantor of any U.S. Occupational Safety and Health Administration reportable injuries that occur to any Ecology representative during the work performed on the job site.

(ii) No Ecology representative accessing the site shall at that time use, be under the influence of, or have in their possession any alcoholic beverage or illegally obtained drug, narcotic or other substance that may inhibit the safe performance of work.

(iii) Ecology representatives shall be suitably dressed to perform their duties safely and in a manner that will not unduly interfere with their vision, hearing, or free use of their hands or feet. Ecology representatives shall wear the following appropriate personal protective equipment as specified by Union Pacific Railroad Company:

(1) an orange, reflectorized vest, or similar orange, reflectorized workwear approved by the Grantor;

(2) only waist length shirts with sleeves and trousers that cover the entire leg. If flare-legged trousers are worn, the trouser bottoms must be tied to prevent catching;

(3) sturdy and protective footwear;

(4) protective head gear that meets American National Standard-Z89.1-latest revision. It is suggested that all hardhats be affixed with Ecology's logo or name;

(5) eye protection that meets American National Standard for occupational and educational eye and face protection, Z87.1-latest revision; and,

(6) hearing protection which affords enough attenuation to give protection from noise levels that will be occurring on the job site.

(iv) In the event Grantor implements railroad safety requirements and directives that are not in effect at the time this Covenant becomes effective, Grantor and Grantee agree to discuss Grantee's compliance with such requirements before access is granted to Grantee. Subject to the provisions related to emergency under this Section 3.b, Grantee agrees to comply with all such new railroad safety requirements and directives so long as they are reasonable.

c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. Conveyance of Any Interest. The Grantor, when conveying any interest within the Property described in Exhibit **A**, including but not limited to title, easement, leases, and security or other interests, must:

i. Notify Ecology at least thirty (30) days in advance of the conveyance.

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [DATE] AND RECORDED WITH THE KING COUNTY AUDITOR UNDER RECORDING NUMBER [RECORDING NUMBER]. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. Reporting Violations. Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation to Ecology.

c. Emergencies. For any emergency or significant change in site conditions due to Acts of Nature (for example, flood, fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. Any required written notice, approval, or communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant.

Grantor contact and phone number: Senior Regional Environmental Counsel Attn: Robert Bylsma Union Pacific Railroad Company 10031 Foothills Blvd., Suite 200 Roseville, CA 95747 With a copy to: Damon Larkin Union Pacific Railroad Company – Operations Superintendent 402 S. Dawson Street Seattle, WA 98108 Ph: (206) 764-1443 M: (206) 391-0523	Ecology contact and phone number: Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504 – 7600 (360) 407-6000

As an alternative to providing written notice and change in contact information by mail, these documents may be provided electronically in an agreed upon format at the time of submittal.

Section 5. Modification or Termination.

a. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in Chapter 64.70 RCW and Chapter 70.105D RCW and any rules promulgated under these chapters.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

b. Grantor shall provide Ecology with an original signed Covenant and proof of recording within ten (10) days of execution of this Covenant.

c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including Chapter 70.105D RCW and Chapter 64.70 RCW. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. The Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.

e. This Covenant shall be liberally construed to meet the intent of the Model Toxics Control Act, chapter 70.105D RCW and Uniform Environmental Covenants Act, chapter 64.70 RCW.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

The undersigned Grantor warrants he/she holds the title to the Property and has authority to execute this Covenant.

EXECUTED this _____ day of _____, 2016.

UNION PACIFIC RAILROAD COMPANY

_____

_____
[Name of Signatory]
[Title]

Dated: _____

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

_____

_____
Raman Iyer
NWRO HWTR Section Manager

Dated: _____

GRANTOR INDIVIDUAL ACKNOWLEDGMENT

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, and acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

_____
Notary Public in and for the State of
Washington, residing at _____.
My appointment expires_____.

GRANTOR CORPORATE ACKNOWLEDGMENT

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the _____ of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said corporation.

_____
Notary Public in and for the State of
Washington, residing at _____.
My appointment expires_____.

Exhibit A

LEGAL DESCRIPTION

We will attach the 2 Goldsmith survey pages here (figure and accompanying Parcel 1, 2, and 3 text)

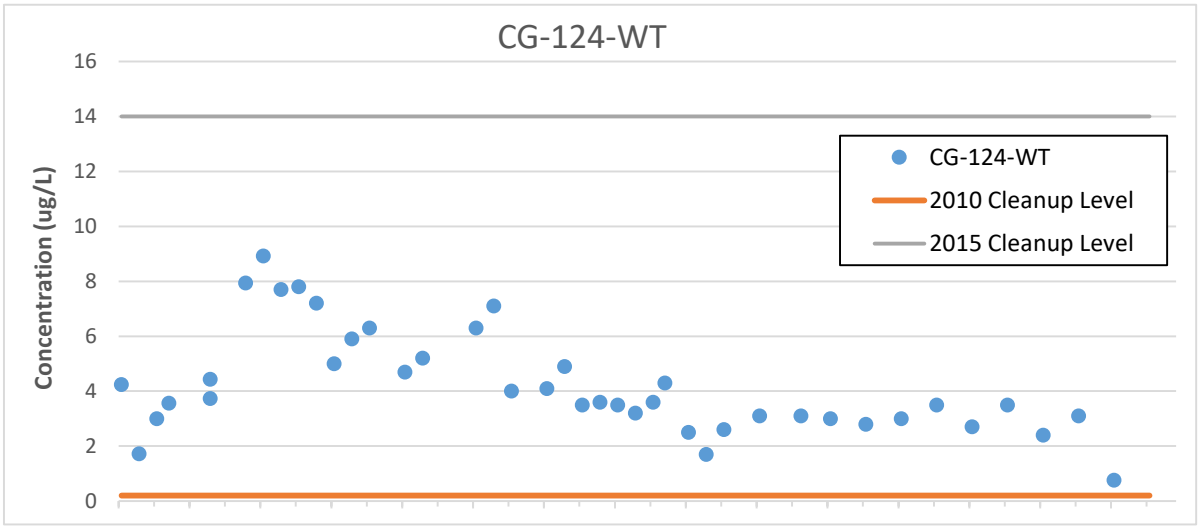
Exhibit B

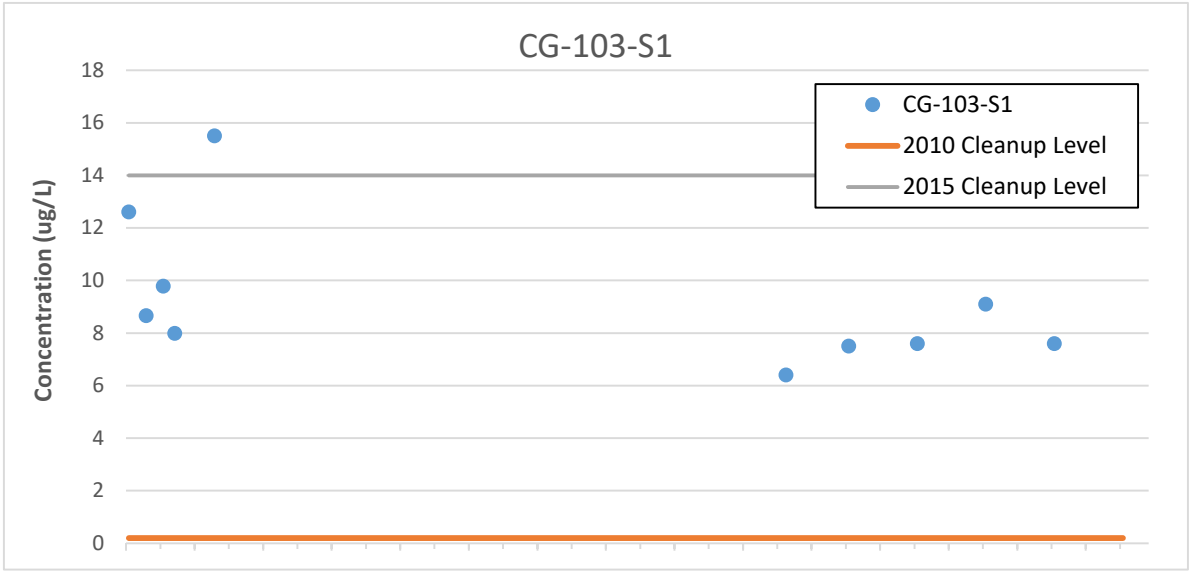
PROPERTY MAP

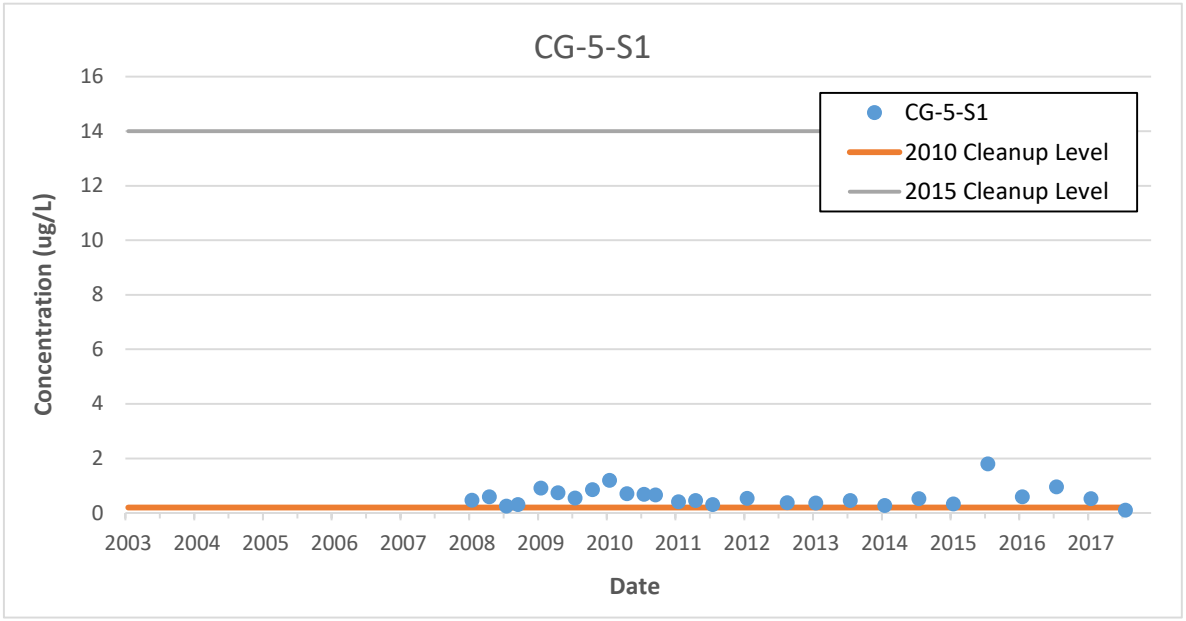
Exhibit B will be a figure showing the Argo Yard OSRAs, their boundaries, and depicting a) excavation actions taken per OSRA (such as depths and areas excavated) and b) restoration actions taken per OSRA (such as fill and cover/cap information). Such a figure may already exist, but it's more likely that we will need to modify one of the Cleanup Implementation Report figures.

The need for any attached subordination agreements will be determined following the results of an Argo Yard title search.

Appendix D
Selected Groundwater Concentration Trend Charts







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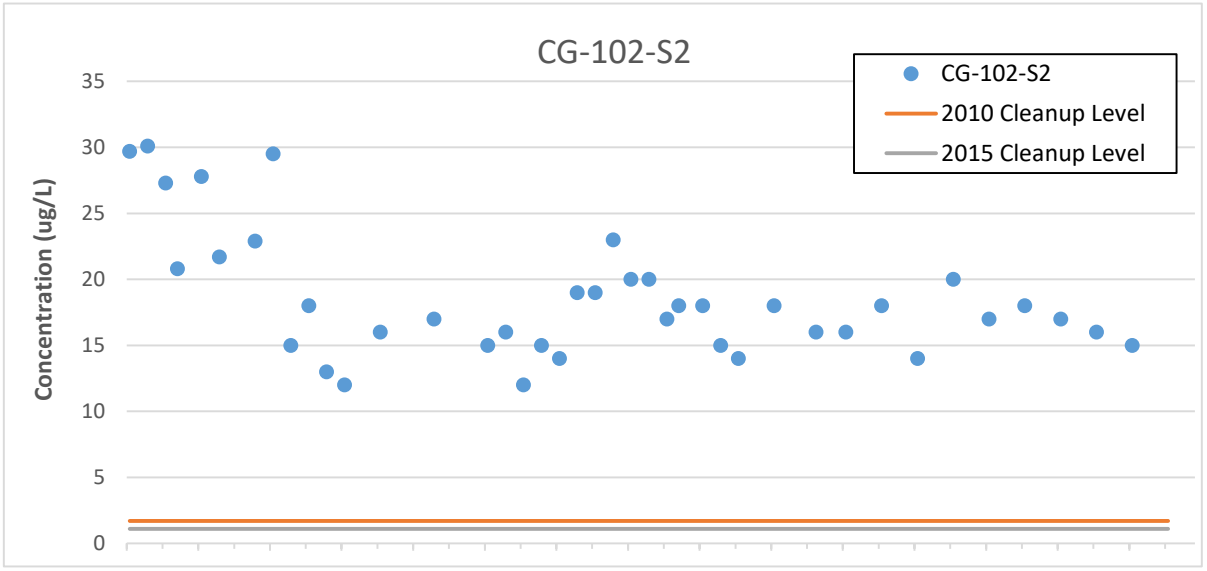
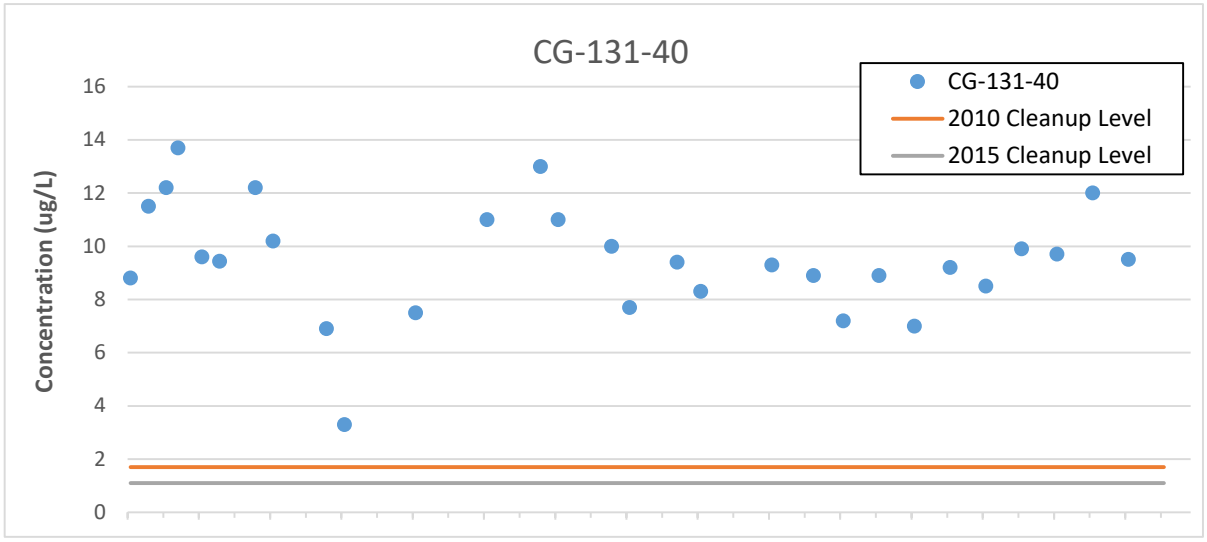
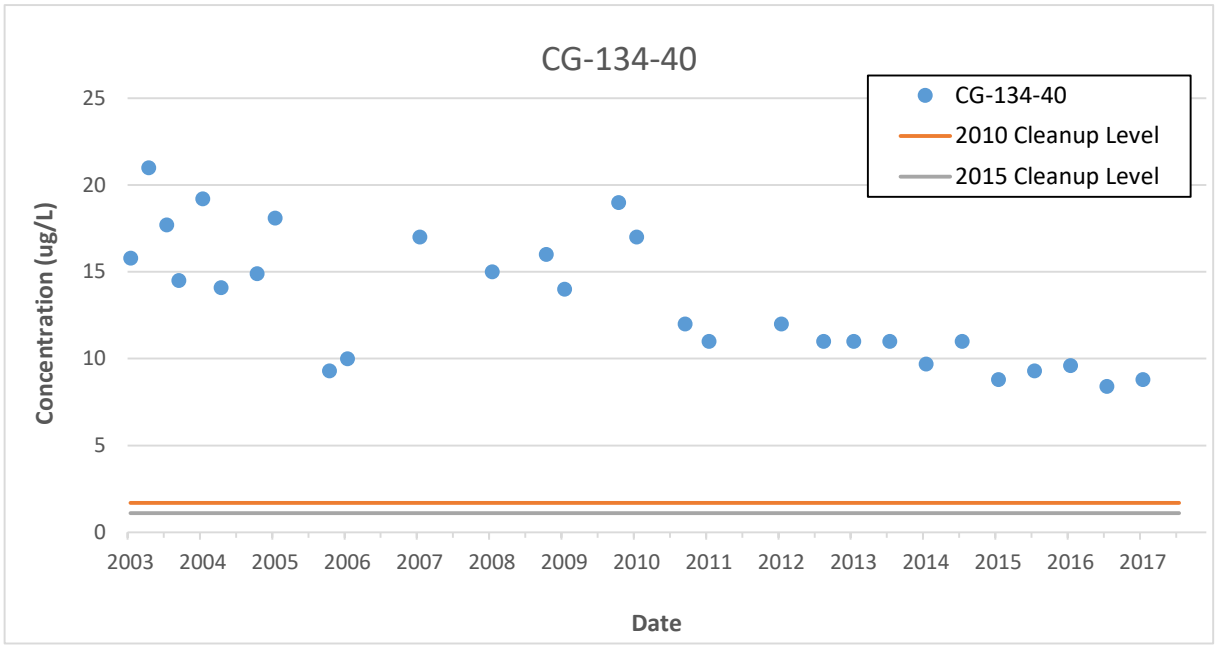
PCE Groundwater Concentrations
Stericycle Georgetown Facility

Figure 1







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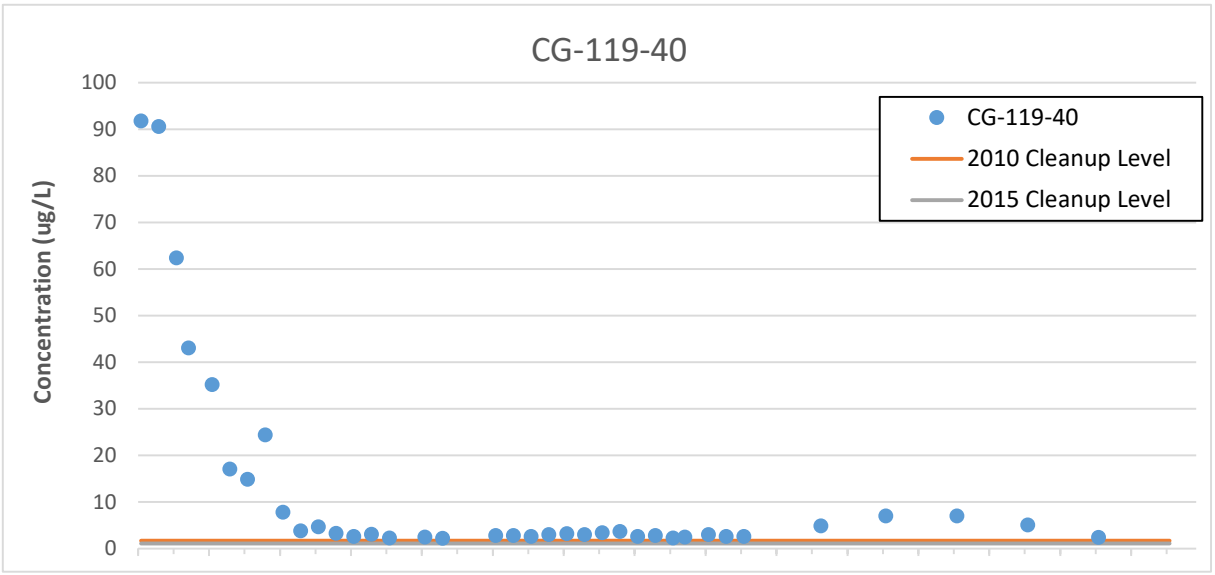
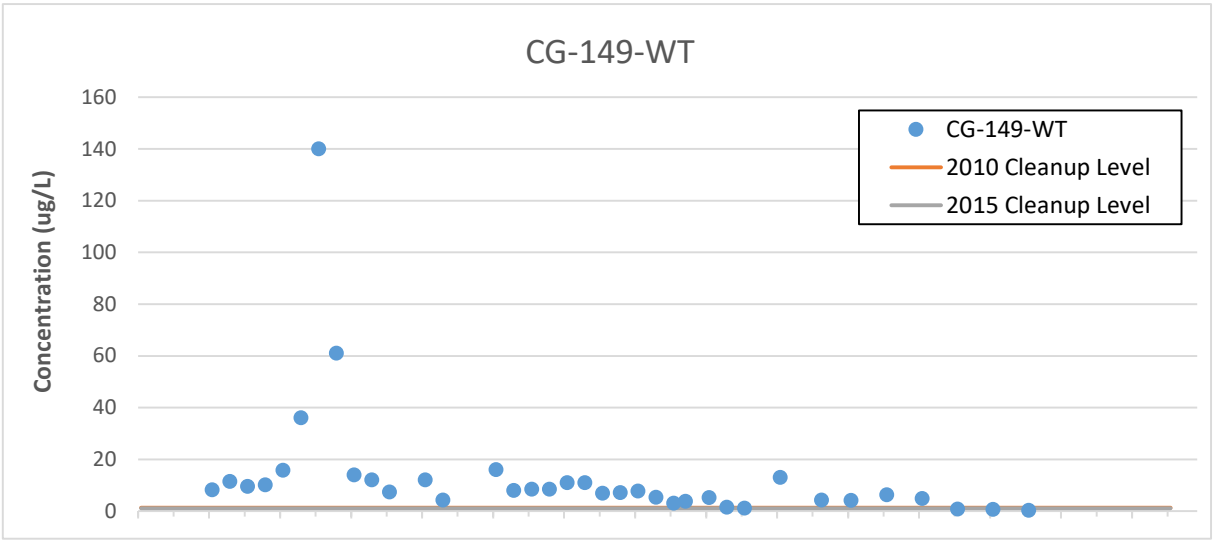
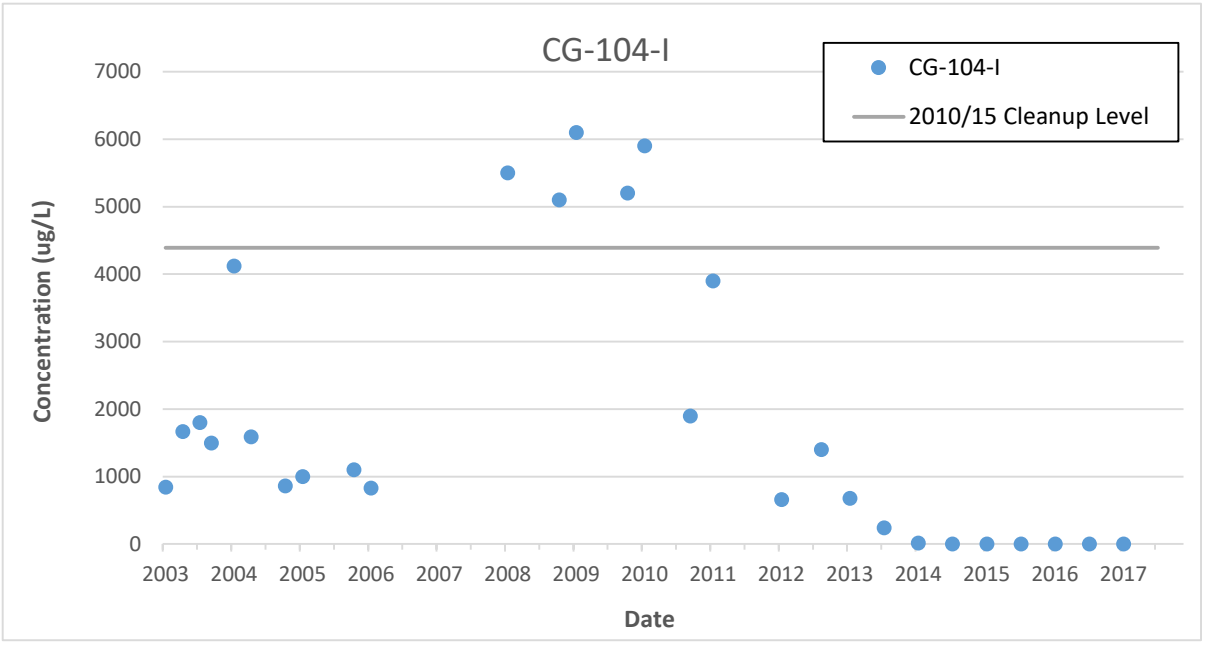
Vinyl Chloride Groundwater Concentrations
Stericycle Georgetown Facility

Figure 2

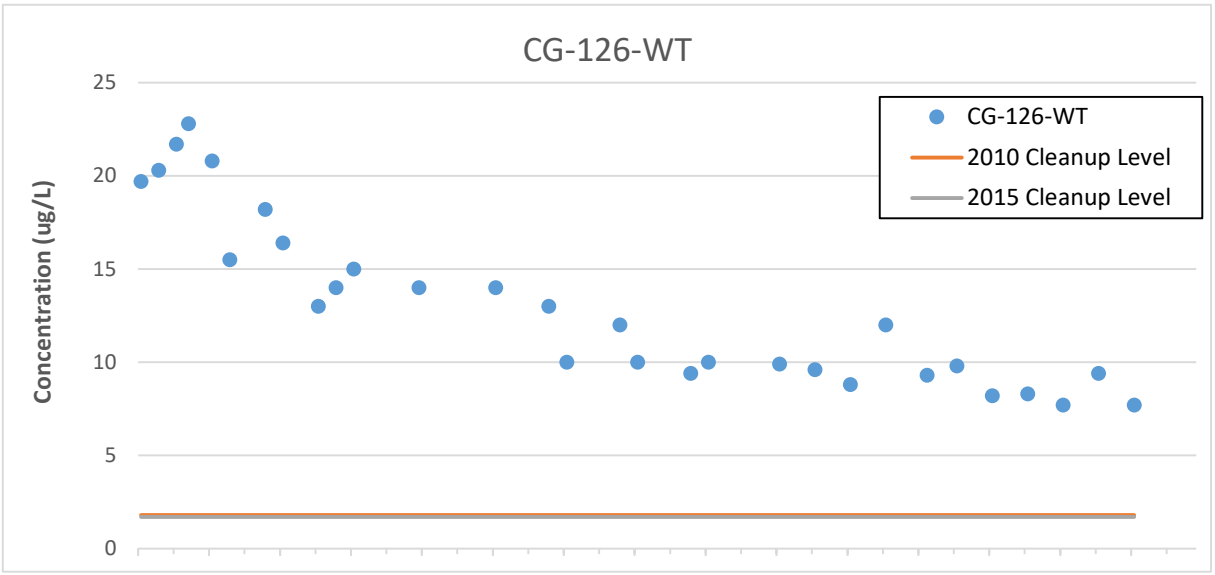


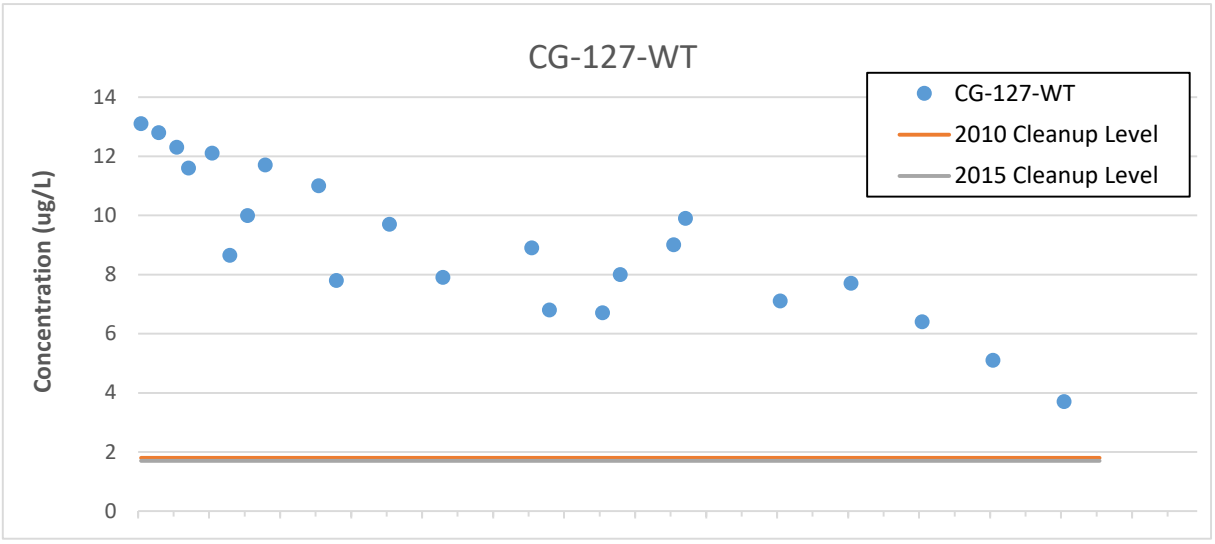


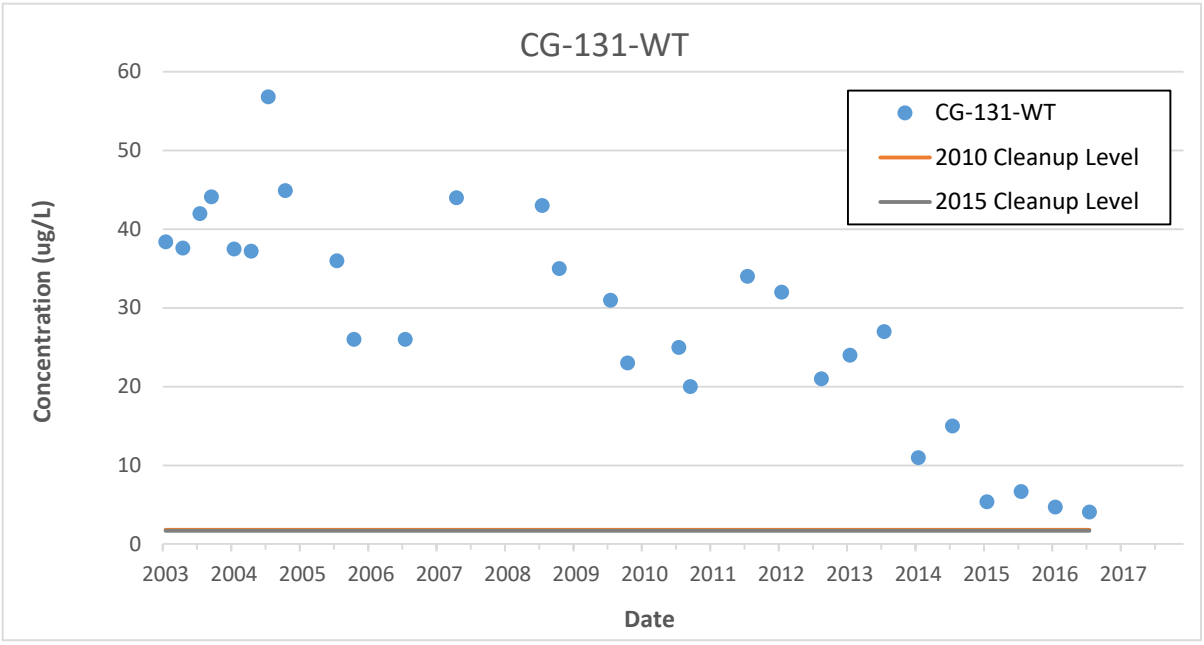


Vinyl Chloride Groundwater Concentrations
Stericycle Georgetown Facility

Figure 3



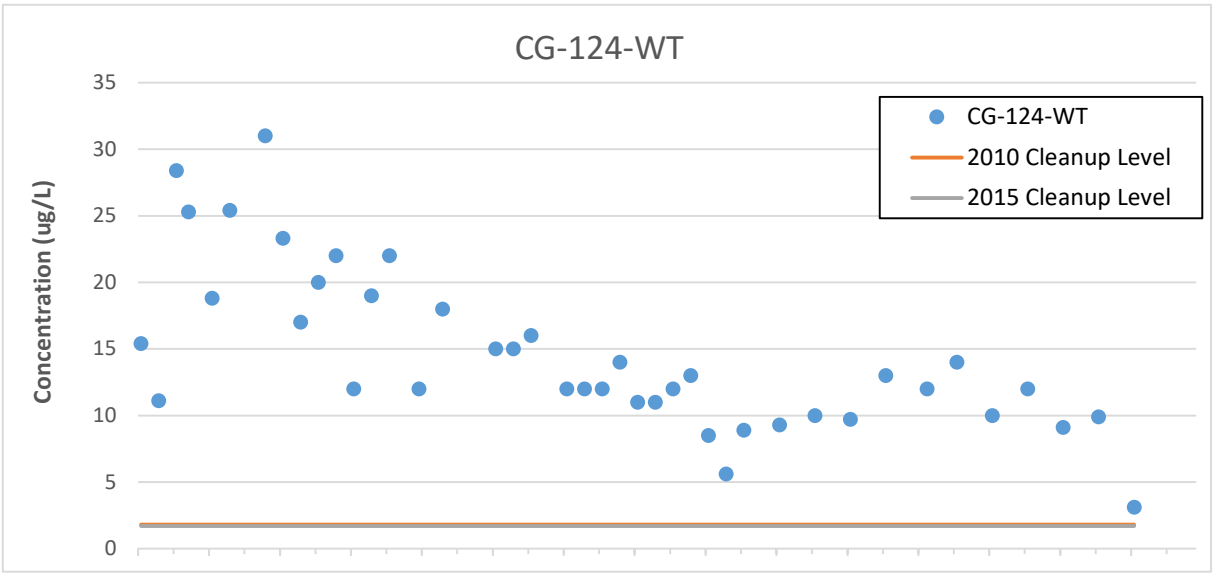


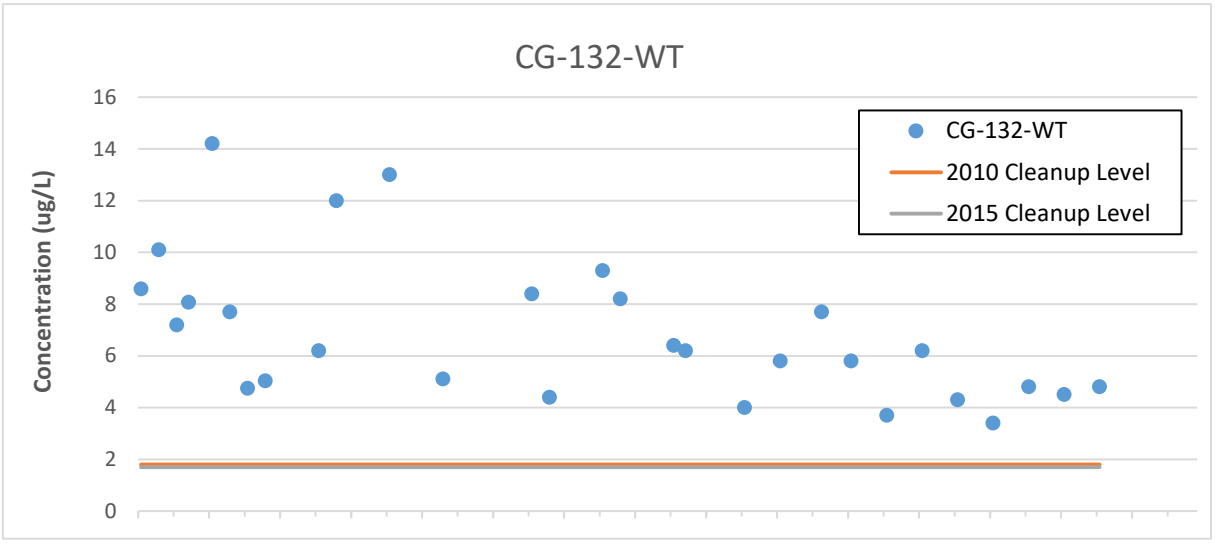


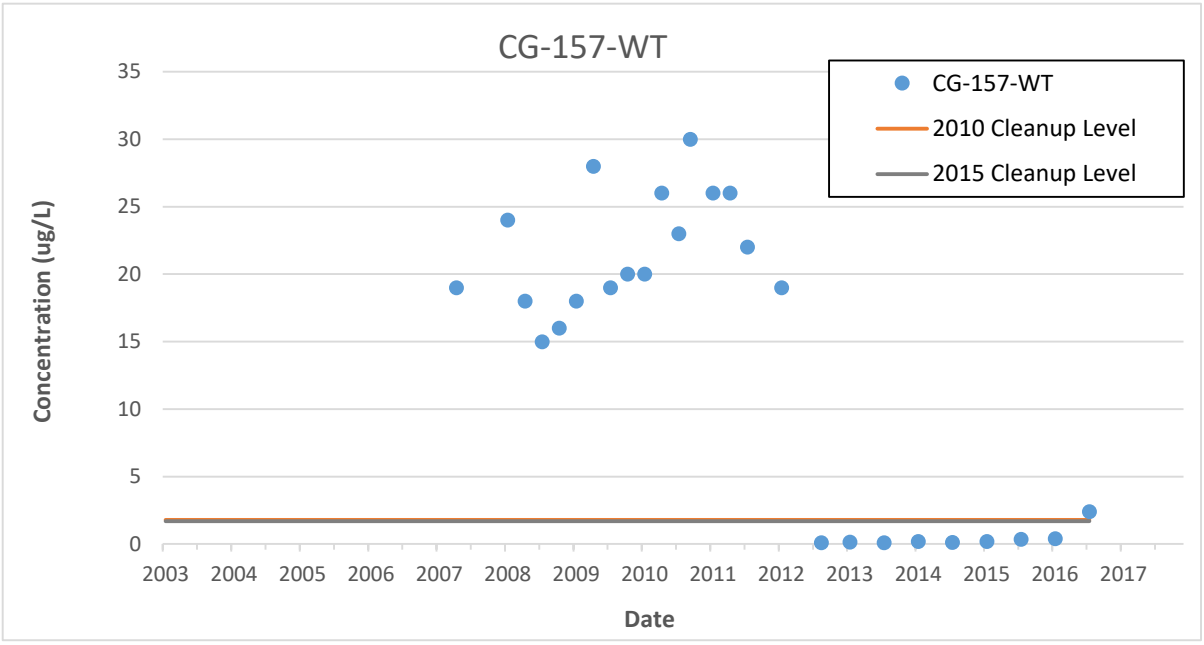
DOF

TCE Groundwater Concentrations
Stericycle Georgetown Facility

Figure 4







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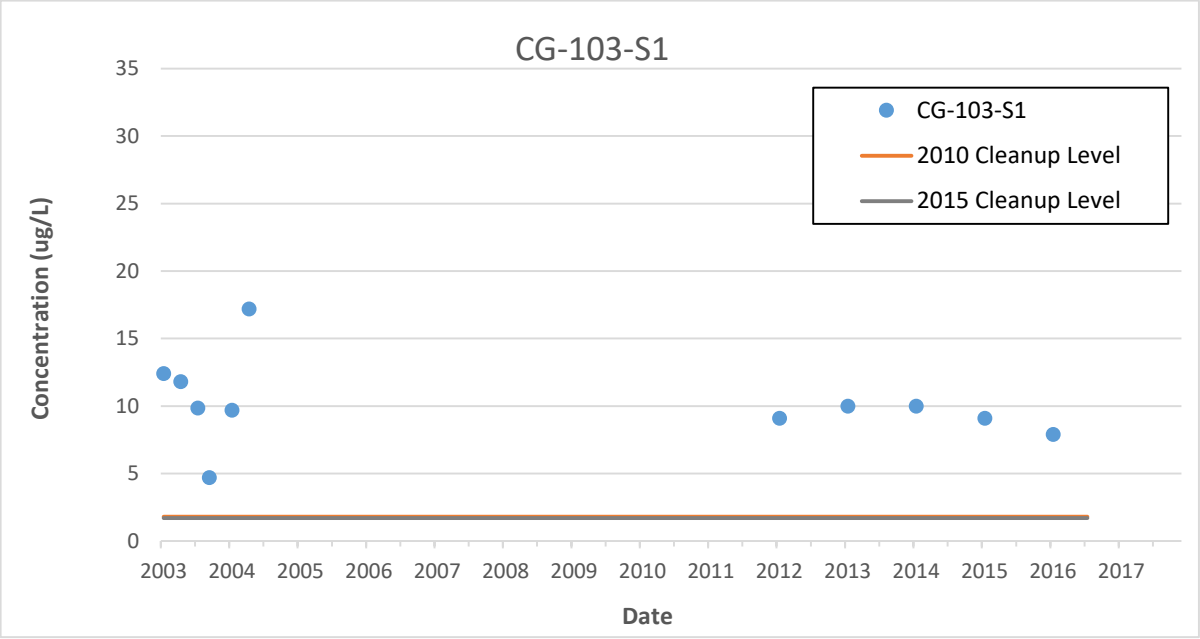
TCE Groundwater Concentrations

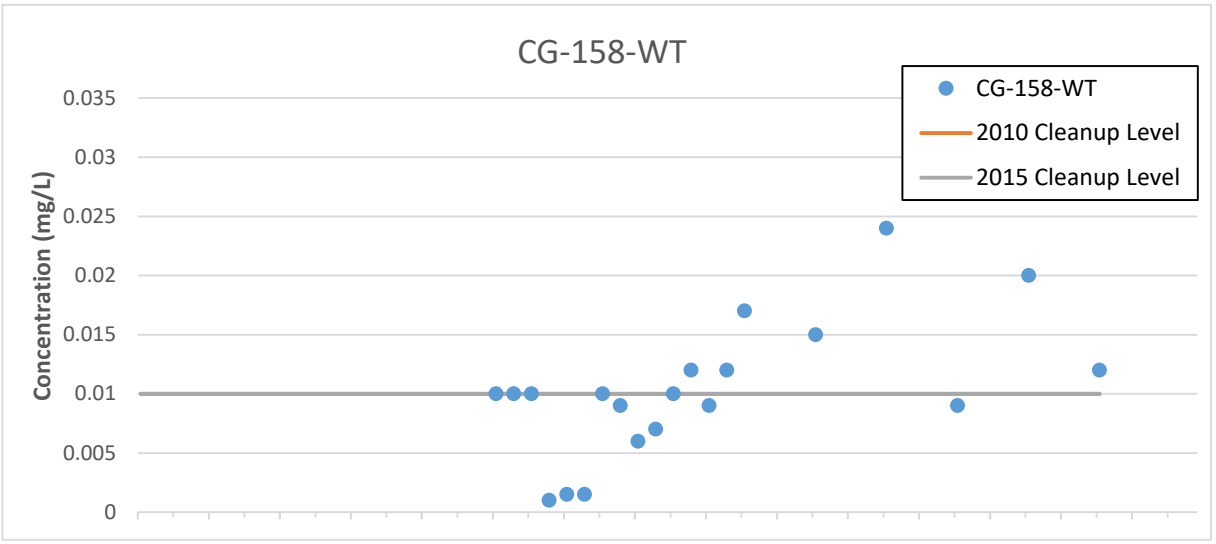
Stericycle Georgetown Facility

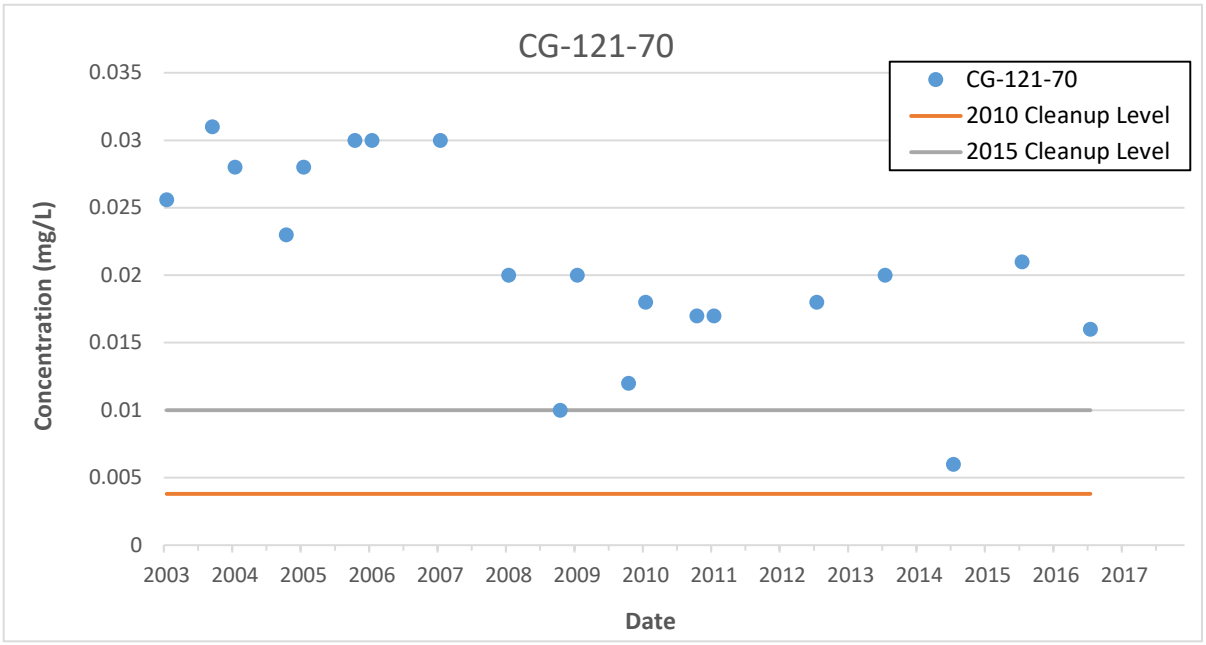
Figure 5



TCE Groundwater Concentrations
Stericycle Georgetown Facility

Figure 6





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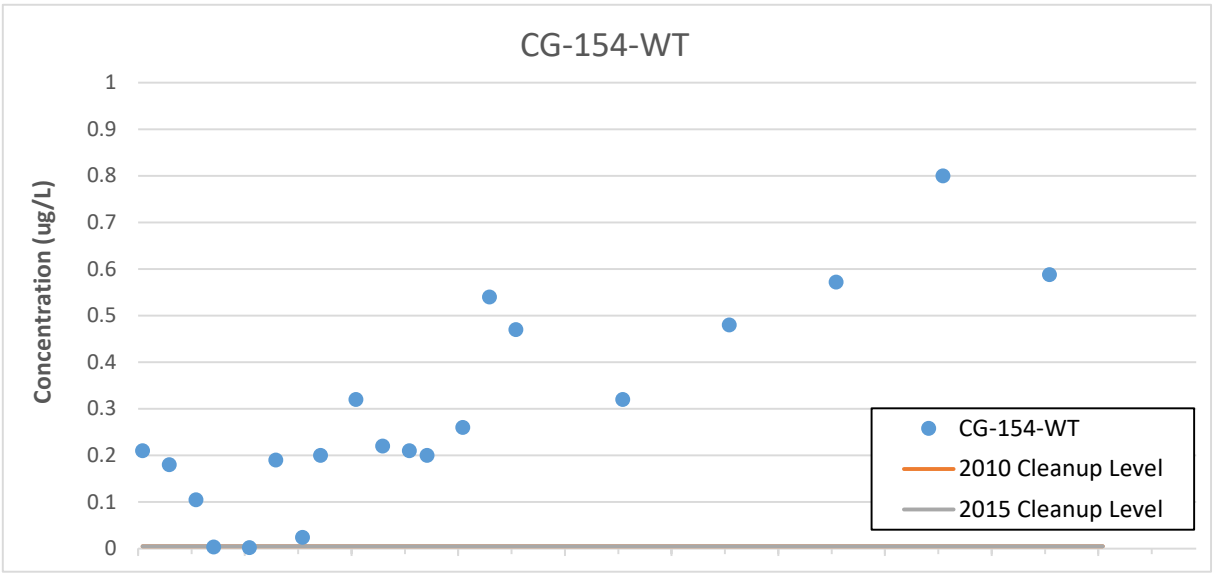
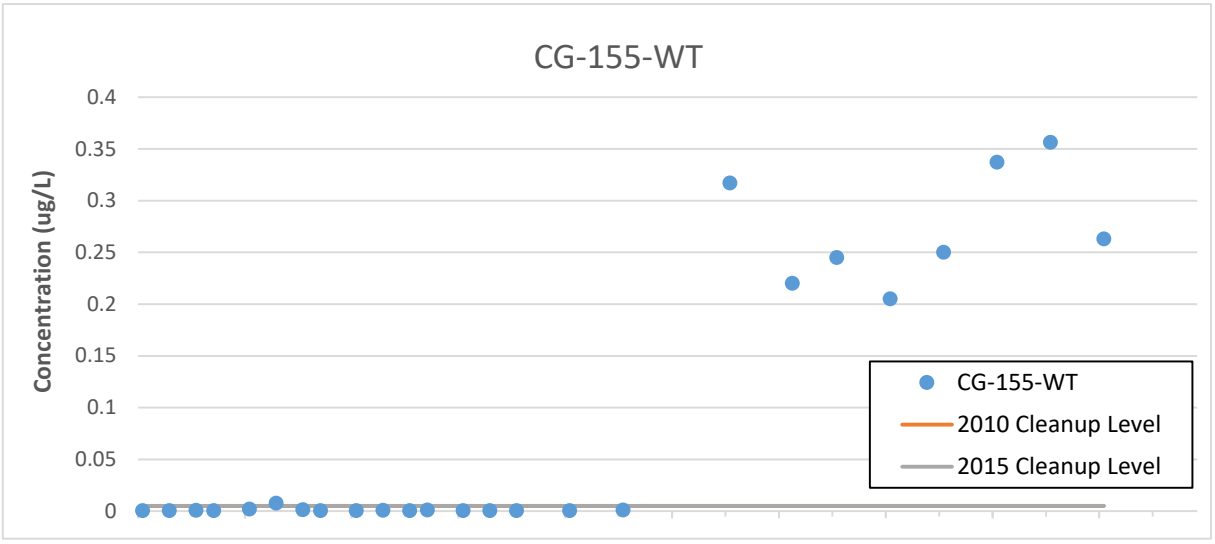
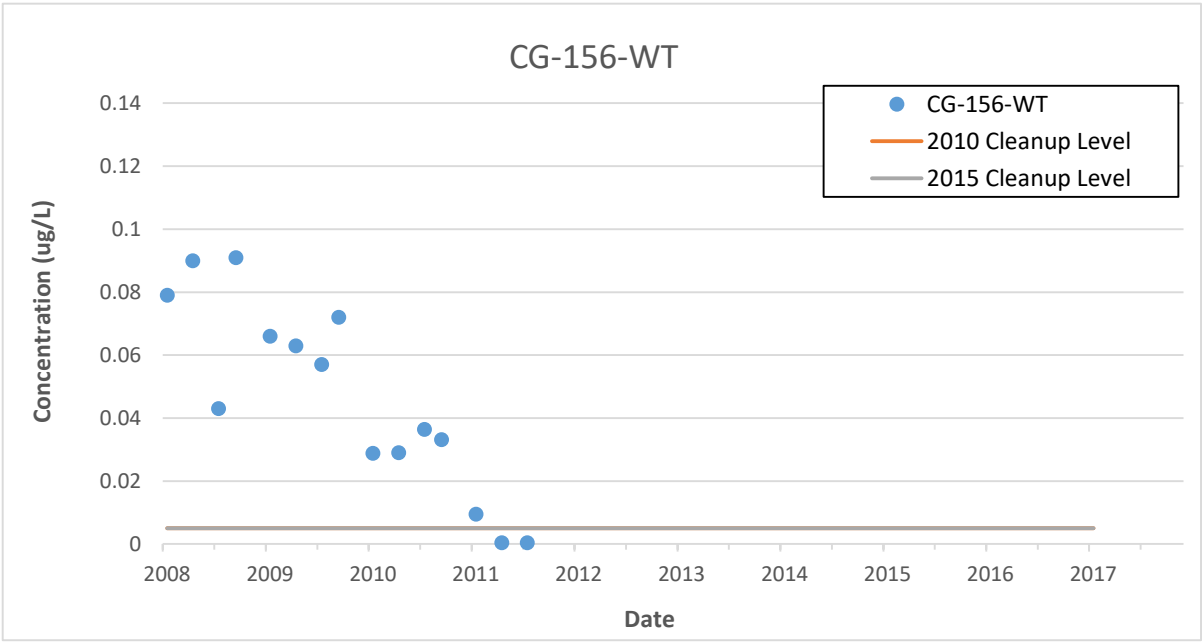
Cyanide Groundwater Concentrations
Stericycle Georgetown Facility

Figure 7







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Total PCBs Groundwater Concentrations
Stericycle Georgetown Facility

Figure 8