AECOM
1555 N RiverCenter Drive, Suite 214
Milwaukee, WI 53212

414.944.6080 tel
414.944.6081 fax

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Mr. Tauren Beggs
Hydrogeologist
Wisconsin Department of Natural Resources
2984 Shawano Avenue
Green Bay WI 54313-6727

Subject: **2015 Groundwater Monitoring Letter Report**
Former Town of Newton Gravel Pit, 3130 Hecker Road, Manitowoc, Wisconsin
WDNR BRRTS No. 02-36-000268
WDNR FID No. 436104020

Dear Mr. Beggs,

AECOM Technical Services, Inc. (AECOM), on the behalf of the City of Manitowoc, is pleased to submit this 2015 Groundwater Monitoring Letter Report for the Former Town of Newton Gravel Pit site. The report briefly summarizes site background information and presents the results of the 2015 annual groundwater monitoring. Supporting tables, figures, field forms, and laboratory reports are included as attachments.

Background Information

The Former Newton Gravel Pit property is owned by the City of Manitowoc, is approximately 58 acres in size, and is located at 3130 Hecker Road in the Town of Newton, Manitowoc County Wisconsin (See Figure 1). Within the 58 acres, approximately one acre along the western property boundary was the location of a disposal pit that received industrial wastes (the Western Source Area) during the 1960's and early 1970's.

The land use in the vicinity of the property is rural. Bordering the property to the west is an active gravel pit, to the north is farmland and forest, to the east is farmland and rural residences, and to the south is farmland and an active gravel pit. A small creek, Silver Creek, flows through the property from the north/northwest to the south/southeast. Site features are shown on Figure 2.

The Western Source Area is located on an elevated area of the property. Former gravel pit operations have lowered the ground surface elevation to the west from 15 to 20 feet and to the east approximately 30 feet.

Site investigation activities have been ongoing since 1991. The activities have delineated soil impacts in the Western Source Area, defined a light non-aqueous phased liquid (LNAPL) free product within the source area, and identified both a shallow groundwater contaminant plume that extends east-southeast to Silver Creek and deeper groundwater impacts continuing to the southeast.

Previous to the current monitoring event, the most recent groundwater monitoring occurred in September 2014[1].

[1] Former Town of Newton Gravel Pit 2015 Groundwater Monitoring Letter Report, BRRTS No. 02-36-000268, AECOM Project No: 60135471(82518), June 12, 2014.

Presented below is the 2015 groundwater monitoring report for the non-potable groundwater monitoring wells associated with the Western Source Area.

Scope of Work

The 2015 approved scope of work included a complete annual site-wide groundwater monitoring event that took place in October 2015.

In addition to the annual site-wide groundwater monitoring activities, AECOM has been conducting site specific feasibility studies in preparation for remedial activities. As part of the feasibility work, in August 2015, AECOM installed an additional groundwater monitoring well downgradient from the Western Source Area. Data from this new well have been included in this groundwater monitoring report because the new well is a Wisconsin Administrative Code (WAC) NR 141 compliant well and monitoring data from the well provides further delineation of the groundwater plume.

Information from the temporary groundwater monitoring wells installed as part of the feasibility study work have not been in included in this monitoring report due to the non-NR 141 compliant construction and possible non-representative nature of the data collected from the wells. The feasibility study information will be provided in its entirety under a separate cover.

AECOM's scope of services included the following activities:

- Project management, including health and safety.
- August 2015 Monitoring Well Installation:
  - Soil boring and installation of monitoring well P-1.
  - Monitoring well development.
  - Survey of well elevation.
  - Measurement of groundwater elevations.
  - Collection of groundwater samples for volatile organic compound (VOC) laboratory analysis.
- October 2015 Groundwater Monitoring:
  - Measurement of groundwater elevations and LNAPL levels.
  - Collection of groundwater samples for VOC laboratory analysis.
  - Preparation of a groundwater monitoring letter report.

Site-specific procedures for field activities are described below.

Well Installation

One (1) additional NR 141 compliant water table well (P-1) was installed by Horizon Construction and Excavation using a Geoprobe® rig with hollow stem auger. The well was installed August 25, 2015, and was located downgradient (east) of the existing monitoring well WT-02A. The location of the well was chosen to facilitate the investigation of a possible groundwater treatment area within the historical flow path of the known groundwater plume. See Figure 2 for well location.

The new water table well was constructed of 2-inch (I.D.), 10-foot long flush-threaded 0.010-inch slot, Schedule 40 PVC screen with Schedule 40 PVC riser.

Borehole drilling and piezometer installation was conducted consistent with standard field methodologies and Wisconsin Administrative Code (WAC) Chapter NR 141 requirements. Soil boring logs (WDNR Form 4400-122) and monitoring well construction forms (WDNR Form 4400-113A) are provided in Attachment A.

Well Development

The new monitoring well (P-1) was developed in accordance with WAC Ch. NR 141 requirements. Well development was conducted on August 25, 2015. A monitoring well development form (Form 4400-113B) is provided in Attachment A.

Survey

The location and top of casing elevation of the new monitoring well (P-1) was surveyed on September 14, 2015. The survey data has been incorporated into the site layout figures, the groundwater elevation data (see Table 1), and the boring log and monitoring well construction form (Appendix A).

Slug Test

A total of four (4) rising head slug tests were performed at the new monitoring well (P-1) on August 26, 2015, to determine the in-situ hydraulic conductivity of the formation in the vicinity of the well screen interval.

Each test was conducted using an In-Situ brand Level Troll 700 pressure transducer with a RuggedReader data logger, a manual slug, and an electronic water-level indicator. The slug was a 4-foot long by 1-1/4-inch diameter stainless steel slug. A static water level was recorded prior to conducting the slug tests. The transducer and slug were then lowered into the characterization well and a stabilized static transducer water level was recorded.

To initiate a rising-head test, the slug was raised out of the water, displacing the water level downward. At specific time intervals, the data logger recorded the rising water levels measured by the transducer until the water level had recovered to at least 90 percent of the initial water-level change. A computer was used to download the data from the data logger and to analyze the data.

Groundwater Monitoring

Groundwater monitoring activities occurred on August 26 and September 15, 2015 for the new monitoring well (P-1) and during the weeks of October 12 and October 19, 2015, for the site wide monitoring event.

Groundwater monitoring utilized existing groundwater monitoring wells and piezometers.

Water levels were measured in-situ using a Heron Instruments electronic water level. LNAPL/free product levels were measured in-situ using a Solinst Oil Water Interface Meter Model 122 electronic NAPL/water level indicator. Groundwater and LNAPL measurements were made to the nearest 0.01 foot from the reference points marked on the top of each well casing.

Groundwater field screening measurements used a handheld YSI 556 MPS field meter to obtain dissolved oxygen, pH, conductivity, temperature, and oxidation/reduction (redox) potential measurements. Water was pumped from the wells to a flow-through cell, in which the water quality meter was inserted to contact the water pumped from the wells. Once readings stabilized, measurements of the above parameters were recorded.

Samples were collected utilizing a low flow submersible Proactive Hurricane Pump or a peristaltic pump with disposable tubing and transferred to the appropriate laboratory supplied sample containers. Samples were labeled and stored on ice prior to shipment, with chain of custody, to the laboratory.

Groundwater samples for laboratory analysis were submitted to a WAC Chapter NR 149 certified laboratory (Synergy Environmental Lab, Inc., Appleton, Wisconsin) for analyses of VOCs (EPA Method SW 8260B).

Well purging and sample collection forms are included in Attachment B.

Surface Water Sampling

At each sample location (e.g. staff gage location), water samples were obtained from an undisturbed mid-stream flowing channel of water. Grab samples were collected from across the entire water column using a clean sample jar and immediately transferred to 40-ml glass vials with Teflon septa. The vials were filled to the top, leaving no headspace or bubbles then quickly capped. Samples were labeled and stored on ice prior to shipment, with chain of custody, to the laboratory.

Samples collected by AECOM were submitted to a WAC Chapter NR 149 certified laboratory (Synergy Environmental Lab, Inc., Appleton, Wisconsin) for analyses of VOCs by EPA Method 8260B.

Monitoring Results

The results for the 2015 groundwater and surface water monitoring events are presented below.

Groundwater Elevation and Flow Direction

All groundwater levels were measured on October 19, 2015, as provided in Table 1. To provide interpreted groundwater flow direction, the wells were grouped according to their screened elevation.

Water elevations measured in the water table wells ranged between approximately 688 and 680 feet MSL. These data indicate a general groundwater flow direction to the east-southeast within the shallow local groundwater flow system (sand and gravel outwash) that is consistent with previous data. The exception to this generalized flow direction is the area with the Silver Creek meander, where an apparent groundwater divide creates a shallow groundwater flow system towards the creek (See Figure 3).

Groundwater measured in the mid-level A-series piezometers (screened approximately 630 feet MSL within sand and gravel outwash) ranged between approximately 685 and 678 feet MSL. These data indicate groundwater flow within the mid-level unconsolidated aquifer to be east-southeast (See Figure 4).

Groundwater measured in the B-series piezometers (screened approximately 600 MSL primarily within clay till immediately above the top of bedrock) ranged between approximately 685 and 677 feet MSL. These data indicate groundwater flow within the deep unconsolidated aquifer to be east-southeast (See Figure 5).

Groundwater measured in the C-series piezometers (screened in bedrock) ranged between approximately 681 and 670 feet MSL. These data indicate bedrock groundwater flow to the east (See Figure 6).

A summary of groundwater elevations is presented in Table 1.

Hydraulic Gradients

Horizontal and vertical hydraulic gradients were calculated based on groundwater elevation data collected October 19, 2015, as provided in Table 1.

The vertical hydraulic gradients as measured at monitoring well/piezometer well nests were variably low downward or upward. Downward vertical gradients range between 0.00255 and 0.0972 feet/foot. Upward vertical gradients range between 0.0246 and 0.00182 feet/foot. Vertical gradient calculations are provided in Attachment C.

Average calculated horizontal gradients for the water table and A-series, B-series, and C-series (bedrock) piezometric surfaces were determined from flow lines shown on Figures 3 through 6. As presented in Attachment C, horizontal hydraulic gradients were calculated at:

- Water Table Wells; horizontal gradient 0.00441 feet/foot
- A-series Piezometers (630 feet MSL); horizontal gradient 0.00297 feet/foot
- B-series Piezometers (600 feet MSL); horizontal gradient 0.00644 feet/foot
- C-series Piezometers (bedrock); horizontal gradient 0.0124 feet/foot

Hydraulic Conductivity

To determine hydraulic conductivity of the sand & gravel aquifer in the vicinity of the new monitoring well (P-1) screen interval the slug test data were analyzed with the use of AQTESOLV for Windows Pro (Version 4.5), an aquifer test analysis software package (HydroSOLVE, Inc., 1996-2007). The hydraulic conductivity was determined by analyzing the displacement/drawdown versus time data utilizing the KGS method (Hyder et al., 1994), Butler (1998), or Springer-Gelhar (1991) included in the software.

For the KGS method, displacement/drawdown is normalized by the largest water-level displacement during the test and the data plotted as normalized drawdown (water-level displacement) versus log time. If the aquifer produced an oscillatory response the Springer-Gelhar, for confined aquifers, or Butler method, for unconfined aquifers, was applied. The data were then fit to a type curve to determine hydraulic conductivity.

The August 2015 slug test data from three (3) individual tests were analyzed to calculate the hydraulic conductivity at water table well P-1. The individual results and the geometric mean of the results are as follows:

- Water Table Well P-1
  - Rising Test #2, 1.8×10^{-2} cm/sec
  - Rising Test #3, 2.7×10^{-2} cm/sec
  - Rising Test #4, 3.1×10^{-2} cm/sec
  - Geometric Mean of all three tests, 2.4×10^{-2} cm/sec

The calculated hydraulic conductivity for the water table monitoring well (P-1) screened within the outwash sandy & gravel aquifer is 2.4×10^{-2} cm/sec. Data from the 2015 AQTESOLV analysis are provided in Appendix C.

In order to update the calculated hydraulic gradient for the water table wells within the outwash sand and gravel aquifer the August 2015 hydraulic conductivity result for well P-1 was averaged

with the hydraulic conductivity results for existing water table wells as presented in the June 1996 Site Investigation Report[2]: The reported values and the new geometric mean value are as follows:

- 1996 Reported Values, Water Table Well Data:
  - WT-01, 3.7 x 10^{-3} cm/sec
  - WT-02A, 2.5 x 10^{-3} cm/sec
  - WT-03, 1.3 x 10^{-3} cm/sec
  - WT-05, 3.3 x 10^{-3} cm/sec

- 2015 Water Table Well Data:
  - P-1, 2.4 x 10^{-2} cm/sec

The geometric mean of the hydraulic conductivity for all five water table wells in the outwash sand and gravel aquifer is 3.9 x 10^{-3} cm/sec, which compares favorably with generally accepted ranges for these types of deposits.

Groundwater Flow Velocity

The average linear groundwater flow velocities for the sand and gravel outwash, glacial till, and bedrock were calculated using a modification of Darcy's Law:

$$V = \frac{KI_h}{n_e}$$

Where: V = average linear velocity
K = horizontal hydraulic conductivity
I_h = horizontal hydraulic gradient
n_e = effective porosity

Groundwater flow velocity calculations and assumptions for the water table wells and A-series, B-series, and C-series piezometers are presented in Attachment C. Average linear flow velocities were calculated as follows:

- Water Table Wells: An average linear flow velocity of 0.20 ft/day (73 ft/yr) was calculated for the sand and gravel outwash using the mean hydraulic conductivity of water table wells (3.9x10^{-3} cm/sec), an average horizontal gradient (0.00441 feet/foot), and an estimated effective porosity of 0.25.

- A-series Piezometers: An average linear flow velocity of 0.13 ft/day (47 ft/yr) was calculated for the sand and gravel outwash using the mean hydraulic conductivity of 3.9x10^{-3} cm/sec, an average horizontal gradient for the mid-level A-series piezometers (630 feet MSL) of 0.00297 feet/foot, and an estimated effective porosity of 0.25.

- B-series Piezometers: An average linear flow velocity of 0.0005 ft/day (0.17 ft/yr) was calculated for the glacial till using a horizontal hydraulic gradient data for the B-series piezometers (600 feet MSL) of 0.00644 feet/foot, an estimated hydraulic conductivity of 1x10^{-5} cm/sec, and an estimated effective porosity of 0.40.

[2] Site Investigation and Remedial Action Options Report, Former Gravel Pit Town of Newton, Wisconsin, Rust Environmental & Infrastructure, June 1996, Appendix P

- C-series Piezometers: An average linear flow velocity of 0.18 ft/day (6.6 ft/yr) was calculated for the bedrock using a horizontal hydraulic gradient for the C-series piezometers of 0.0124 feet/foot, an estimated hydraulic conductivity of $1x10^{-4}$ cm/sec, and an estimated effective porosity of 0.20. This calculated flow velocity for the bedrock does not account for fracture flow or potential preferential flow along bedding planes.

LNAPL Thickness

During the October 2015 sampling event, LNAPL thickness within the 2-inch diameter wells was measured at approximately 1.50 feet, 1.37 feet, and a sheen in wells WT-02, WT-09, and WT-14 respectively. A summary of LNAPL elevations and thickness are presented in Table 1. Groundwater has not been sampled from these wells because of the measureable amounts of LNAPL free product.

Groundwater Field Screening Results

Field screening measurements for pH, temperature, dissolved oxygen, and oxidation reduction potential indicate that conditions for remediation by natural attenuation of groundwater contaminants continue to be favorable. Field screening data are summarized in Table 2.

Groundwater Laboratory Analytical Results

Groundwater analytical results were compared to applicable enforcement standards (ESs) and preventative action limits (PALs) found in WAC Chapter NR 140 Table 1 for Public Health Standards. The groundwater analytical results are summarized in Table 2 and shown on Figures 7 through 10. Laboratory analytical reports are included as Attachment D.

The discussion of the groundwater analytical results is presented in relationship to the location of the Western Source Area. As such, the groundwater results are discussed as:

- Up-gradient,
- the Western Source Area,
- Down-gradient – west of Silver Creek,
- Down-gradient – the meander of Silver Creek,
- Down-gradient – southeast of Silver Creek, and
- Side-gradient – northeast, near Former Town of Newton Gravel Pit Entrance.

<u>Up-gradient</u>

- Well WT-19 was installed to delineate the up-gradient edge of the groundwater contaminant plume west of the Former Newton Pit property line.

  <u>VOC Discussion</u>: WT-19 had VOC detections, for cis-1,2-dichloroethene (cis-1,2,DCE) and trichloroethylene (TCE). The detection of TCE at 0.78 μg/L, is a PAL exceedance and represents a slight increase in concentration from the 0.50 μg/L from 2014. Cis-1,2,DCE was detected below its PAL.

- Wells WT-01 and PZ-01 were installed to delineate the up-gradient edge of the groundwater contaminant plume north of the Western Source Area. Both of these wells had no VOCs detected. This remains consistent with samples collected in 2014.

Western Source Area

- WT-09 was installed to delineate the southern perimeter of the source area. Groundwater was not sampled from WT-09 because of measurable LNAPL free product.

- Well WT-18 was installed to delineate the southern perimeter of the source area; south of WT-09.

  VOC Discussion: WT-18 had multiple VOC detections. Benzene and vinyl chloride (VC) were detected at concentrations exceeding their respective ESs. Naphthalene and toluene were detected at concentrations exceeding their respective PALs. Trimethylbenzene, cis-1,2,DCE, ethylbenzene, 1,1-dichloroethane, and xylene were detected at levels below their respective PALs.

- Well WT-10 was installed to delineate the southeastern perimeter of the source area.

  VOC Discussion: WT-10 had several VOC detections; toluene, benzene, and the two daughter compounds cis-1,2-DCE and VC. Cis-1,2-DCE, VC, and benzene exceeded their respective ESs. Toluene was detected at a level above its PALs. In general, the concentrations of each of these analytes were comparable to the year prior.

- Well WT-02 and PZ-02 were installed to delineate the eastern perimeter of the source area. Groundwater was not sampled from WT-02 because of measurable LNAPL free product.

  VOC Discussion: PZ-02 remained consistent with previous years and has no VOCs detected.

- Well WT-02A was installed to delineate the eastern perimeter of the source area.

  VOC Discussion: WT-02A had multiple VOC detections. ES exceedances include: TCE, cis-1,2-DCE, VC, and benzene. Toluene and naphthalene exceeded their respective PALs. Ethylbenzene, 1,1-dichlorethane, and xylene were detected at levels below their respective PALs.

- Well WT-03 and PZ-03 were installed to delineate the northeastern perimeter of the source area.

  VOC Discussion: WT-03 had several VOC detections. TCE exceeded its ES standard and cis-1,2-DCE exceeded its PAL standard. Other VOC detections included 1,1,1-trichloroethane at a level below its PAL.

  PZ-03 remained consistent with previous years and has no VOCs detected.

- Well WT-17 was installed to delineate the northern perimeter of the source area.

  VOC Discussion: WT-17 had several detections of chlorinated VOCs consistent with 2014 sampling results. This includes TCE, cis-1,2-DCE, and VC, which exceed their respective ESs. 1,1,1-trichloroethane was below its PAL.

- Well WT-14 was installed to delineate the western perimeter of the source area. It is located on the western property line. Groundwater has not been sampled from the well because it has visible amounts (sheen) of LNAPL free product.

Down-gradient – West of Silver Creek

- Well P-1 was installed in August 2015 as part of a downgradient groundwater feasibility study.

  VOC Discussion: Well P-1 was sampled twice since August 2015 with several detections of chlorinated VOCs consistent between the sample rounds. This includes TCE, cis-1,2-DCE, and VC, which exceed their respective ES. 1,1-dichloroethene and PCE exceeded their respective PALs. Detection of 1,1-dichloroethane, tran-1,2-dichloroethene and 1,1,1-trichloroethane were all below their respective PALs.

- Well WT-13 was installed to replace a damaged well WP-02.

  VOC Discussion: Well WP-02 historically had four consecutive rounds (1999 thru 2000) of sampling with no detectable VOCs. Historical VOC detections in WT-13 were limited to a single detection of chloromethane in 2007 which exceeded its PAL and a single detection of VC in 2012 which exceeded its ES. No VOCs were detected in samples collected from WT-13 in 2015. WT-13 represents the mid/down-gradient southern edge of the groundwater contaminant plume.

- Well WT-05, and piezometers PZ-05A and PZ-05B were installed down-gradient of well WT-13.

  VOC Discussion: Well WT-05 exhibited three detections of VOCs including VC at a concentration that exceeds its ES along with TCE and cis-1,2-DCE detected above their PALs. The detection of these compounds and their respective concentrations are consistent with historical data from samples collected between 1994 and 2014.

  No VOCs were detected in samples from PZ-05A and PZ-05B.

- Wells WT-11 and WT-12 were installed to delineate the southern edge of the shallow down-gradient groundwater contaminant plume adjacent to and west of Silver Creek. Piezometer PZ-12 was added adjacent to monitoring well WT-12 in August 2013 to form a well nest. Piezometer PZ-12 was screened similar to the screened interval of PZ-16. In this way, the WT-12/PZ-12 well nest and the WT-16/PZ-16 well nest quantify potential groundwater impacts and characterize vertical hydraulic gradients within the local groundwater flow system on the west and east side of Silver Creek respectively.

  VOC Discussion: WT-11 had VOC detections of TCE and cis-1,2-DCE that both exceed their respective ESs.

  WT-12 had one VOC detection of cis-1,2-DCE VC at concentrations that exceeded ESs. PZ-12 had VOC detections of benzene, cis-1,2-DCE, and VC at concentrations that exceeded their respective ESs. Both WT-12 and PZ-12 had elevated laboratory detection limits.

- Well nest WT-15 (well WT-15, piezometers PZ-15A, and PZ 15B) was installed to delineate the southern side-gradient groundwater contaminant plume – south of well nest WT-05.

  VOC Discussion: Well WT-15 had a single detect of toluene below its PAL, which is the first detect of VOCs in this well. No VOCs were detected in PZ-15A, and PZ-15B in samples collected in 2015.

- Temporary wells WP-04, WP-06, and WP-07 were installed to delineate the northern edge of the shallow down-gradient groundwater contaminant plume adjacent to and west of Silver Creek.

  VOC Discussion: WP-04 had VOC detections of TCE above its ES and cis-1,2-DCE below its PAL. WP-06 had VOC detections of cis-1,2-DCE and TCE above their respective ESs and 1,1,1-trichloroethane below its PAL. WP-07 did not have any VOCs detected.

Down-gradient – the meander of Silver Creek

- Well WT-16 and piezometer PZ-16 were originally installed as down-gradient "sentinel wells" to monitor the down-gradient edge of the contaminant plume east of Silver Creek. In 2014, PZ-16A, PZ-16B, and PZ16C were added to form a well nest. Piezometer PZ-16A was screened at an elevation of 630 feet above MSL, PZ-16B was screened at 600 feet MSL, and PZ-16C was screened 15 feet into the bedrock. Having nested wells at varying depths, from the water table to the bedrock, allows for a vertical profile of contaminants of concern (COCs) as well as determining where the COCs are reaching the bedrock.

  VOC Discussion: Both WT-16 and PZ-16 had detects of benzene, cis-1,2-DCE and VC, at levels that exceeded their respective ESs. Additionally, trans-1,2-DCE was detected in only PZ-16 at a level below its PAL. Both analytical data sets had elevated laboratory detection limits.

  PZ-16A had TCE detected below its ES. PZ-16B had TCE above its PAL while, cis-1,2-DCE was detected below its PAL. Lastly, PZ-16C did not have any VOCs detected.

  This round of groundwater samples from the WT-16 well nest indicates that:
  - Concentrations and types of COCs appear to decrease with depth.
  - COCs do not appear to have entered bedrock at this location.

- Wells WT-20 thru WT-23.

  VOC Discussion: Well WT-20 had its first detectable concentrations of VOCs with a VC exceedance of its ES and a detection of cis-1,2-Dichloroethene below its PAL.

  No VOCs were detected in wells WT-21, WT-22, and WT-23. The continued lack of COCs in these water table wells may be attributed to the shallow, local groundwater flow direction within the Silver Creek meander (See Figure 3).

- Well WT-24 and piezometers PZ-24A, PZ-24B, and PZ-24C. The nest was installed down-gradient of the source area and at the same depths as the water table well and the piezometers in the WT-16/PZ-16 series. In this way, the WT-16/PZ-16A/B/C well nest and the WT-24/PZ-24A/B/C well nest quantify potential groundwater impacts and characterize vertical and horizontal hydraulic gradients within the local groundwater flow system of the meander of Silver Creek.

  VOC Discussion: WT-24 did not have any VOCs detected. The lack of VOCs in this water table well may be attributed to the influence of the shallow, local groundwater flow direction within the Silver Creek meander (See Figure 3).

  PZ-24A had ES exceedances of both cis-1,2-DCE and VC and a trans-1,2-DCE detected below the PAL.

PZ-24B also had ES exceedances of both cis-1,2-DCE and VC, but at concentrations generally less than PZ-24A.

PZ-24C had PAL exceedances of benzene, similar to the previous year.

This second round of groundwater samples from the WT-24 well nest indicates that:

- Concentrations and types of COCs appear to decrease with depth.
- The appearance of benzene in the PZ-24C bedrock well may be an indicator that COCs are just starting to enter bedrock at this location.

Down-gradient – Southeast of Silver Creek

- Well WT-25 and piezometers PZ-25A, PZ-25B, and PZ-25C. The well nest was installed at the same depths as both the WT-16/PZ-16 series and the WT-24/PZ-24 series to further delineate the vertical and horizontal extent of the plume.

  VOC Discussion: WT-25 had VC at levels above the ES along with cis-1,2,-DCE and benzene above their respective PALs and a detection of trans-1,2-DCE below the PAL.

  Well PZ-25A had a single detect of cis-1,2,-DCE below its PAL. PZ-25B had no detections of VOCs while PZ-25C had a detection of cis-1,2-dce below its PAL.

  This second round of groundwater samples from the WT-25 well nest indicates that:
  - COCs are present in the WT-25 water table well but they appear to decrease in concentration with depth within the unconsolidated aquifer.
  - The presence of cis-1,2-DCE in the PZ-25C bedrock well indicates that COCs are in bedrock at this location.

Side-gradient - Near Former Town of Newton Gravel Pit Entrance

- Well WT-26 and piezometers PZ-26A, PZ-26B, and PZ-26C. The well nest was installed at the same depths as the WT-16/PZ-16 series, the WT-24/PZ-24 series, and the WT-25/PZ-25 series to determine groundwater flow at the different intervals and to determine if the plume continues to flow southeast or directly east.

  VOC Discussion: There were no detected VOCs detected in this well nest.

In summary, conditions associated with the Western Source Area groundwater plume continue to indicate groundwater impacts down-gradient as far east as well nest WT-25/PZ-25A/B/C. The chlorinated compounds appear to be infiltrating the bedrock between well nests WT-24 and WT-25.

Groundwater laboratory analytical results are summarized in Table 2. Complete laboratory analytical results are included in Appendix D.

Surface Water Laboratory Analytical Results

Surface water samples were collected at staff gage locations to monitor VOC impacts to Silver Creek. Surface water analytical results were compared to applicable WAC Chapter NR 105 Table 9 Human Cancer Criteria Standards for a non-public water supply that is a “warm water forage, limited forage and warm water sport fish community”.

- Surface water samples were collected at staff gage locations SG-01, SG-02, and SG-03, which are adjacent to and immediately downstream of the Western Source Area groundwater plume (see Figure 2).

VOC Discussion: SG-01 and SG-02 had detects of VC and cis-1,2,-DCE. At both locations VC was below its respective NR Table 9 human cancer criteria standard. Cis-1,2,-DCE does not have a NR Table 9 regulatory standard. SG-03 did not have any VOCs detected in the surface water sample.

The surface water analytical results are summarized in Table 3 and shown on Figure 7. Laboratory analytical reports are included as Attachment D.

Summary

Groundwater monitoring activities occurred on August 26, 2015, September 15, 2015, and the weeks of October 12 and October 19, 2015. The goal of the event was to continue to monitor the impacts associated with Western Source area. The following is a summary of data obtained during the 2015 groundwater monitoring event.

- Groundwater elevation measurements from water table wells indicate that groundwater flow generally continues to be toward the east-southeast with the exception of the area within the Silver Creek meander, where an apparent groundwater divide influences shallow groundwater flow toward the creek.

- Groundwater elevation measurements for mid-level piezometers (elevation 630 and 600) within the unconsolidated aquifer indicate that groundwater flow is toward the east-southeast.

- Groundwater elevation measurements from bedrock piezometers indicate that groundwater flow direction is toward the east.

- Groundwater velocities range between approximately 47 and 73 ft/yr in the unconsolidated (sand and gravel outwash) aquifer.

- Groundwater velocity is on the order of 6.6 ft/yr within the upper portions of the bedrock aquifer, not taking into account possible bedrock fracture flow velocities.

- Measureable levels of LNAPL, consistent with historical levels, continue to exist in monitoring wells located within the Western Source Area.

- Groundwater field screening parameters indicate that conditions continue to exist that are favorable for remediation by natural attenuation.

- Groundwater analytical results indicate NR 140 ES and PAL exceedances for COCs (petroleum and chlorinated compounds) at concentrations similar to historical levels continue to exist within the groundwater plume associated with the Western Source Area.

- Silver Creek surface water laboratory analytical data indicate that contaminant compounds continue to exist with COCs and concentrations similar to historical levels.

If you have any questions regarding these results, please contact Dave Henderson at 414.944.6190 or dave.henderson@aecom.com.

Yours sincerely,

AECOM Technical Services, Inc.

Jordan Junion
Project Scientist

David S. Henderson, P.E.
Senior Project Manager

Cc: Kathleen M. McDaniel, City Attorney, City of Manitowoc
Dan Koski, Director of Public Infrastructure, City of Manitowoc

Enclosures: Tables
Figures
Attachments

Tables:

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS

TABLE 1
POND GROUNDWATER IMPACT DELINEATION FEASIBILITY STUDY
SUMMARY OF ELEVATIONS
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Well Identification	Ground Surface Elevation	TOC Elevation	Depth to Bottom (ft from TOC)	Depth to Groundwater (ft. BGS)	Depth to Groundwater (ft. from TOC)	Groundwater Elevation	Screened Interval - ft BGS Top	Screened Interval - ft BGS Bottom	Screened Interval - ftMSL Top	Screened Interval - ftMSL Bottom	Free Product depth (ft. from TOC)	Free Product tickness (ft.)	Date
WT-01	712.3	714.21											Installed 4/28/1993
			31.43	20.92	22.83	691.38	19.5	29.5	692.8	682.8			7/1/1993
			---	24.26	26.17	688.04	---	---	---	---			7/26/1994
			---	24.51	26.42	687.79	---	---	---	---			9/7/1994
			31.48	24.17	26.08	688.13	19.6	29.6	692.7	682.7			5/13/1999
			31.48	24.74	26.65	687.56	19.6	29.6	692.7	682.7			9/29/1999
			31.47	25.33	27.24	686.97	19.6	29.6	692.7	682.7			12/7/1999
			31.48	24.72	26.63	687.58	19.6	29.6	692.7	682.7			3/31/2000
			31.30	23.48	25.39	688.82	19.4	29.4	692.9	682.9			4/15/2005
		714.48	31.41	23.27	25.45	689.03	19.2	29.2	693.1	683.1			10/20/2006
			31.30	24.32	26.5	687.98	19.1	29.1	693.2	683.2			9/18/2007
			31.30	24.26	26.44	688.04	19.1	29.1	693.2	683.2			1/9/2008
			31.31	24.37	26.55	687.93	19.1	29.1	693.2	683.2			9/25/2012
			31.30	24.41	26.59	687.89	19.1	29.1	693.2	683.2			10/21/2013
	712.4		31.30	24.11	26.21	688.27	19.1	29.1	693.2	683.2			11/13/2014
			31.30	25.31	27.41	687.07	19.1	29.1	693.2	683.2			10/19/2015
PZ-01	712.7	714.55											Installed 4/28/193
			92.84	23.29	25.14	689.41	86.0	91.0	626.7	621.7			7/1/1993
			92.84	25.35	27.2	687.35	86.0	91.0	626.7	621.7			9/6/1994
			92.78	24.88	26.73	687.82	85.9	90.9	626.8	621.8			5/13/1999
			92.78	25.48	27.33	687.22	85.9	90.9	626.8	621.8			9/29/1999
			92.78	25.84	27.69	686.86	85.9	90.9	626.8	621.8			12/7/1999
			92.79	25.30	27.15	687.40	85.9	90.9	626.8	621.8			3/31/2000
			92.81	24.53	26.38	688.17	86.0	91.0	626.7	621.7			4/15/2005
		714.90	92.90	24.31	26.51	688.39	85.7	90.7	627.0	622.0			10/20/2006
			92.78	25.23	27.43	687.47	85.6	90.6	627.1	622.1			9/18/2007
			92.74	25.27	27.47	687.43	85.5	90.5	627.2	622.2			9/25/2012
			92.78	24.91	27.11	687.79	85.6	90.6	627.1	622.1			10/21/2013
			92.78	24.61	26.81	688.09	85.6	90.6	627.1	622.1			11/13/2014
			92.78	24.62	26.82	688.08	85.6	90.6	627.1	622.1			10/19/2015

TABLE 1
POND GROUNDWATER IMPACT DELINEATION FEASIBILITY STUDY
SUMMARY OF ELEVATIONS
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Well Identification	Ground Surface Elevation	TOC Elevation	Depth to Bottom (ft from TOC)	Depth to Groundwater (ft. BGS)	Depth to Groundwater (ft. from TOC)	Groundwater Elevation	Screened Interval - ft BGS Top	Screened Interval - ft BGS Bottom	Screened Interval - ftMSL Top	Screened Interval - ftMSL Bottom	Free Product depth (ft. from TOC)	Free Product tickness (ft.)	Date
WT-02	718.5	720.56					28.3	38.3					Installed 4/22/1993
			40.41	29.85	31.91	688.65	28.4	38.4	690.2	680.2	NM	--	7/1/1993
			---	33.94	36	684.56	---	---	---	---	33.49	2.51	7/2/1994
			---	33.19	35.25	685.31	---	---	---	---	34.20	1.05	2/6/1997
			---	35.14	37.2	683.36	---	---	---	---	33.19	4.01	6/5/1997
			---	34.64	36.7	683.86	---	---	---	---	34.50	2.20	10/22/1997
			---	31.56	33.62	686.94	---	---	---	---	32.71	0.91	5/4/1998
			---	33.89	35.95	684.61	---	---	---	---	33.26	2.69	7/2/1998
			40.32	33.77	35.83	684.73	28.3	38.3	690.2	680.2	33.35	2.48	5/19/1999
			40.35	37.14	39.2	681.36	28.3	38.3	690.2	680.2	36.05	3.15	10/5/1999
			40.31	37.10	39.16	681.40	28.3	38.3	690.3	680.3	36.09	3.07	12/9/1999
			40.30	32.69	34.75	685.81	28.2	38.2	690.3	680.3	34.25	0.50	4/5/2000
			40.35	37.54	39.6	680.96	28.3	38.3	690.2	680.2	36.12	3.48	4/14/2005
		720.85	---										10/1/2006
			---	33.31	35.66	685.19	---	---	---	---	34.21	1.45	9/18/2007
			---	32.97	35.32	685.53	---	---	---	---	34.31	1.01	9/19/2007
			---	32.45	34.8	686.05	---	---	---	---	34.38	0.42	9/19/2007
			---	34.41	36.76	684.09	---	---	---	---	34.38	2.38	9/20/2007
			---	33.65	36	684.85	---	---	---	---	34.39	1.61	9/21/2007
			---	31.30	33.65	687.20	---	---	---	---	--	0.00	1/16/2008
			40.08	33.60	35.95	684.90	27.7	37.7	690.8	680.8	34.30	1.65	9/25/2012
			---	33.10	35.45	685.40	---	---	---	---	34.01	1.44	10/21/2013
	718.8		40.35	32.95	35.05	685.80	28.3	38.3	690.5	680.5	33.80	1.25	11/17/2014
			40.35	33.70	35.8	685.05	28.3	38.3	690.5	680.5	34.30	1.50	10/19/2015
													GW not sampled since 4-5-00
PZ-02	718.2	720.29					82.0	87.0					Installed 4/26/1993
			89.00	30.00	32.09	688.20	81.9	86.9	636.3	631.3			7/1/1993
			89.17	31.93	34.02	686.27	82.1	87.1	636.1	631.1			9/7/1994
			89.92	31.83	33.92	686.37	82.8	87.8	635.4	630.4			5/13/1999
			89.02	31.77	33.86	686.43	81.9	86.9	636.3	631.3			10/5/1999
			89.03	32.20	34.29	686.00	81.9	86.9	636.3	631.3			12/9/1999
			89.04	31.85	33.94	686.35	82.0	87.0	636.3	631.3			4/4/2000
			88.94	30.87	32.96	687.33	81.9	86.9	636.4	631.4			4/18/2005
		720.58	89.00	30.62	33	687.58	81.6	86.6	636.6	631.6			10/20/2006
			88.93	31.56	33.94	686.64	81.6	86.6	636.7	631.7			9/18/2007
			88.82	31.64	34.02	686.56	81.4	86.4	636.8	631.8			9/25/2012
			---	31.25	33.63	686.95	---	---	---	---			10/21/2013
	718.7		88.93	31.42	33.32	687.26	82.0	87.0	636.7	631.7			11/18/2014
			88.93	31.96	33.86	686.72	82.0	87.0	636.7	631.7			10/19/2015
WT-02A	734.1	736.58					42.5	57.5					Installed 8/11/1994
			59.48	48.78	51.26	685.32	42.0	57.0	692.1	677.1			9/6/1994
			59.31	49.45	51.93	684.65	41.8	56.8	692.3	677.3			5/11/1999
			59.31	48.91	51.39	685.19	41.8	56.8	692.3	677.3			9/29/1999
			59.32	49.32	51.8	684.78	41.8	56.8	692.3	677.3			12/7/1999
			59.33	48.63	51.11	685.47	41.9	56.9	692.3	677.3			3/30/2000
			59.35	48.06	50.54	686.04	41.9	56.9	692.2	677.2			4/18/2005
		736.76	59.43	48.01	50.67	686.09	41.8	56.8	692.3	677.3			10/20/2006
			59.96	48.94	51.6	685.16	42.3	57.3	691.8	676.8			9/18/2007
			59.96	47.92	50.58	686.18	42.3	57.3	691.8	676.8			1/9/2008
			59.97	48.87	51.53	685.23	42.3	57.3	691.8	676.8			9/25/2012
			---	48.59	51.25	685.51	---	---	---	---			10/21/2013
	734.2		59.96	48.35	50.95	685.81	42.4	57.4	691.8	676.8			11/19/2014
			59.96	48.80	51.4	685.36	42.4	57.4	691.8	676.8			10/19/2015

TABLE 1
POND GROUNDWATER IMPACT DELINEATION FEASIBILITY STUDY
SUMMARY OF ELEVATIONS
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Well Identification	Ground Surface Elevation	TOC Elevation	Depth to Bottom (ft from TOC)	Depth to Groundwater (ft. BGS)	Depth to Groundwater (ft. from TOC)	Groundwater Elevation	Screened Interval - ft BGS Top	Screened Interval - ft BGS Bottom	Screened Interval - ftMSL Top	Screened Interval - ftMSL Bottom	Free Product depth (ft. from TOC)	Free Product tickness (ft.)	Date
WT-03	716.6	718.53					24.0	34.0					Installed 4/27/1993
			36.02	29.03	30.96	687.57	24.1	34.1	692.5	682.5			7/1/1993
				30.70	32.63	685.90							7/26/1994
			35.97	30.87	32.8	685.73	24.0	34.0	692.6	682.6			9/6/1994
			35.80	30.52	32.45	686.08	23.9	33.9	692.7	682.7			5/11/1999
			36.05	31.04	32.97	685.56	24.1	34.1	692.5	682.5			9/29/1999
			36.05	31.13	33.06	685.47	24.1	34.1	692.5	682.5			12/7/1999
			36.05	32.10	34.03	684.50	24.1	34.1	692.5	682.5			3/30/2000
			36.00	29.94	31.87	686.66	24.1	34.1	692.5	682.5			4/15/2005
		718.90	36.06	29.84	32.14	686.76	23.8	33.8	692.8	682.8			10/20/2006
			36.01	28.81	31.11	687.79	23.7	33.7	692.9	682.9			9/18/2007
			36.01	29.95	32.25	686.65	23.7	33.7	692.9	682.9			1/9/2008
			36.01	30.69	32.99	685.91	23.7	33.7	692.9	682.9			9/25/2012
			---	30.51	32.81	686.09	---	---	---	---			10/21/2013
	717.1		36.01	31.70	33.5	685.40	24.2	34.21	692.9	682.9			11/18/2014
			36.01	31.14	32.94	685.96	24.2	34.21	692.9	682.9			10/19/2015
PZ-03	716.6	718.67					92.6	97.6					Installed 4/27/1993
			99.73	28.81	30.88	687.79	92.7	97.7	623.9	618.9			7/1/1993
			99.70	30.68	32.75	685.92	92.6	97.6	624.0	619.0			9/6/1994
			99.62	30.18	32.25	686.42	92.6	97.6	624.1	619.1			5/11/1999
			99.62	30.58	32.65	686.02	92.6	97.6	624.1	619.1			9/29/1999
			99.63	31.01	33.08	685.59	92.6	97.6	624.0	619.0			12/7/1999
			99.64	30.43	32.5	686.17	92.6	97.6	624.0	619.0			3/30/2000
			99.65	29.74	31.81	686.86	92.6	97.6	624.0	619.0			4/15/2005
		718.98	99.70	29.64	32.02	686.96	92.3	97.3	624.3	619.3			10/20/2006
			99.65	30.51	32.89	686.09	92.3	97.3	624.3	619.3			9/18/2007
			99.63	30.50	32.88	686.10	92.3	97.3	624.4	619.4			9/25/2012
			---	30.17	32.55	686.43	---	---	---	---			10/21/2013
	717.1		99.65	30.40	32.3	686.68	92.8	97.8	624.3	619.3			11/18/2014
			99.65	30.91	32.81	686.17	92.8	97.8	624.3	619.3			10/19/2015

TABLE 1
POND GROUNDWATER IMPACT DELINEATION FEASIBILITY STUDY
SUMMARY OF ELEVATIONS
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Well Identification	Ground Surface Elevation	TOC Elevation	Depth to Bottom (ft from TOC)	Depth to Groundwater (ft. BGS)	Depth to Groundwater (ft. from TOC)	Groundwater Elevation	Screened Interval - ft BGS Top	Screened Interval - ft BGS Bottom	Screened Interval - ftMSL Top	Screened Interval - ftMSL Bottom	Free Product depth (ft. from TOC)	Free Product tickness (ft.)	Date
WT-05	685.0	687.68					8.5	18.5					Installed 8/17/1994
			20.58	-0.32	2.36	685.32	7.9	17.9	677.1	667.1			9/7/1994
			20.45	-0.75	1.93	685.75	7.8	17.8	677.2	667.2			5/19/1999
			20.46	-0.12	2.56	685.12	7.8	17.8	677.2	667.2			9/30/1999
			20.46	0.30	2.98	684.70	7.8	17.8	677.2	667.2			12/8/1999
			20.46	-0.29	2.39	685.29	7.8	17.8	677.2	667.2			3/30/2000
			20.45	-0.60	2.08	685.60	7.8	17.8	677.2	667.2			4/18/2005
		687.98	20.51	-0.75	2.23	685.75	7.5	17.5	677.5	667.5			10/18/2006
			20.93	0.21	3.19	684.79	7.9	18.0	677.1	667.1			9/21/2007
			20.93	-1.01	1.97	686.01	7.9	18.0	677.1	667.1			1/9/2008
			20.94	0.22	3.2	684.78	8.0	18.0	677.0	667.0			9/25/2012
			---	-0.17	2.81	685.17	---	---	---	---			10/21/2013
	685.4		20.93	-0.02	2.58	685.40	8.3	18.3	677.1	667.1			11/17/2014
			20.93	0.50	3.1	684.88	8.3	18.3	677.1	667.1			10/19/2015
PZ-05A	685.0	687.70					32.0	37.0					Installed 8/17/1994
			40.37	0.72	3.42	684.28	32.7	37.7	652.3	647.3			9/7/1994
			40.39	-0.07	2.63	685.07	32.7	37.7	652.3	647.3			5/19/1999
			40.39	0.69	3.39	684.31	32.7	37.7	652.3	647.3			9/30/1999
			40.38	0.96	3.66	684.04	32.7	37.7	652.3	647.3			12/8/1999
			40.38	0.51	3.21	684.49	32.7	37.7	652.3	647.3			3/30/2000
			40.28	0.02	2.72	684.98	32.6	37.6	652.4	647.4			4/18/2005
		687.82	40.31	0.09	2.91	684.91	32.5	37.5	652.5	647.5			10/18/2006
			40.40	0.94	3.76	684.06	32.6	37.6	652.4	647.4			9/21/2007
			40.42	0.90	3.72	684.10	32.6	37.6	652.4	647.4			9/25/2012
			---	0.58	3.40	684.42	---	---	---	---			10/21/2013
	685.2		40.40	0.44	3.04	684.78	32.8	37.8	652.4	647.4			11/17/2014
			40.40	0.85	3.45	684.37	32.8	37.8	652.4	647.4			10/19/2015
PZ-05B	685.2	687.81					53.4	58.4					Installed 8/16/1994
			60.95	0.85	3.46	684.35	53.3	58.3	631.9	626.9			9/7/1994
			60.91	0.07	2.68	685.13	53.3	58.3	631.9	626.9			5/19/1999
			60.91	0.64	3.25	684.56	53.3	58.3	631.9	626.9			9/30/1999
			60.90	1.01	3.62	684.19	53.3	58.3	631.9	626.9			12/8/1999
			60.91	0.53	3.14	684.67	53.3	58.3	631.9	626.9			3/30/2000
			60.79	0.17	2.78	685.03	53.2	58.2	632.0	627.0			4/18/2005
		687.97	60.83	0.23	3	684.97	53.1	58.1	632.1	627.1			10/18/2006
			60.91	1.05	3.82	684.15	53.1	58.1	632.1	627.1			9/21/2007
			60.92	1.03	3.8	684.17	53.2	58.2	632.1	627.1			9/25/2012
			---	-0.16	2.61	685.36	---	---	---	---			10/21/2013
	685.4		60.91	0.00	2.6	685.37	53.3	58.3	632.1	627.1			11/17/2014
			60.91	0.50	3.1	684.87	53.3	58.3	632.1	627.1			10/19/2015
WT-09	NM	717.84					24.5	34.5					Installed 9-19-06
			36.59		33.55	684.29	---	---	691.3	681.3	30.69	2.86	10/1/2006
			---		32.85	684.99	---	---	---	---	31.34	1.51	9/18/2007
			---		32.9	684.94	---	---	---	---	31.39	1.51	9/19/2007
			---		32.51	685.33	---	---	---	---	31.44	1.07	9/19/2007
			---		32.66	685.18	---	---	---	---	31.43	1.23	9/20/2007
			---		32.6	685.24	---	---	---	---	31.40	1.20	9/21/2007
			---		33.7	684.14	---	---	---	---	30.70	3.00	1/14/2008
			---		33.2	684.64	---	---	---	---	30.65	2.55	1/15/2008
			---		32.5	685.34	---	---	---	---	30.70	1.80	1/16/2008
			---		32.9	684.94	---	---	---	---	30.65	2.25	1/18/2008
			---		31.7	686.14	---	---	---	---	30.66	1.04	1/22/2008
			---		32.6	685.24	---	---	---	---	30.74	1.86	1/29/2008
			36.31		32.79	685.05	---	---	691.5	681.5	31.41	1.38	9/25/2012
			---		32.31	685.53	---	---	---	---	31.22	1.09	10/21/2013
	715.8		36.59	29.99	31.99	685.85	---	---	691.3	681.3	30.90	1.09	11/17/2014
			36.59	30.75	32.75	685.09	---	---	691.3	681.3	31.38	1.37	10/19/2015
													Product Present - Not Developed

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SUMMARY OF ELEVATIONS
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Well Identification	Ground Surface Elevation	TOC Elevation	Depth to Bottom (ft from TOC)	Depth to Groundwater (ft. BGS)	Depth to Groundwater (ft. from TOC)	Groundwater Elevation	Screened Interval - ft BGS Top	Screened Interval - ft BGS Bottom	Screened Interval - ftMSL Top	Screened Interval - ftMSL Bottom	Free Product depth (ft. from TOC)	Free Product tickness (ft.)	Date
WT-10	NM	727.32					35.0	45.0					Installed 9-20-06
			48.39		41.25	686.07	---	---	688.9	678.9			10/19/2006
			48.33		42.15	685.17	---	---	689.0	679.0			9/19/2007
			48.33		41.38	685.94	---	---	689.0	679.0			1/9/2008
			48.33		41.15	686.17	---	---	689.0	679.0	--	0.00	1/16/2008
			48.20		42.03	685.29	---	---	689.1	679.1			9/25/2012
			---		42.81	684.51	---	---	---	---			10/21/2013
	724.7		48.33	38.85	41.45	685.87	---	---	689.0	679.0			11/18/2014
			49.33	39.38	41.98	685.34	---	---	688.0	678.0			10/19/2015
WT-11	NM	687.55					3.0	13.0					Installed 9-19-06
			15.26		3.81	683.74	---	---	682.3	672.3			10/1/2006
			15.21		4.6	682.95	---	---	682.3	672.3			9/20/2007
			15.21		2.61	684.94	---	---	682.3	672.3			1/9/2008
			15.21		4.59	682.96	---	---	682.3	672.3			9/25/2012
			---		4.22	683.33	---	---	---	---			10/21/2013
	685.2		---	1.61	4.01	683.54	---	---	---	---			11/17/2014
			15.21	1.88	4.28	683.27	---	---	---	---			10/19/2015
WT-12	NM	688.19					3.0	13.0					Installed 9-22-06
			15.30		3.75	684.44	---	---	682.9	672.9			10/18/2006
			15.26		4.6	683.59	---	---	682.9	672.9			9/20/2007
			15.26		3.05	685.14	---	---	682.9	672.9			1/9/2008
			15.26		4.48	683.71	---	---	682.9	672.9			9/25/2012
			---		4.21	683.98	---	---	---	---			10/21/2013
	685.9		---	1.91	4.21	683.98	---	---	---	---			11/17/2014
			15.26	2.30	4.6	683.59	---	---	---	---			10/19/2015
PZ-12							20.0	25.0					Installed 8-26-13
	685.3	687.39	---	1.80	3.91	683.48	---	---	665.3	660.3			10/21/2013
			27.34	1.57	3.68	683.71	---	---	665.3	660.3			11/17/2014
			28.34	1.87	3.98	683.41	---	---	665.3	660.3			10/19/2015
WT-13	NM	696.77					4.0	14.0					Installed 9-20-06
			16.41		11.19	685.58	---	---	690.4	680.4			10/19/2006
			16.38		12.03	684.74	---	---	690.4	680.4			9/19/2007
			16.38		11.17	685.60	---	---	690.4	680.4			1/9/2008
			16.37		12.01	684.76	---	---	690.4	680.4			9/25/2012
			---		11.62	685.15	---	---	---	---			10/21/2013
	694.6		16.38	9.19	11.39	685.38	---	---	---	---			11/18/2014
			16.38	9.61	11.81	684.96	---	---	---	---			10/19/2015
WT-14	NM	722.48					27.5	37.5					Installed 9-19-06
			40.26		34.01	688.47	---	---	692.2	682.2	34.00	0.01	10/1/2006
			---		34.91	687.57	---	---	---	---		Sheen	9/18/2007
			---		34.92	687.56	---	---	---	---		Sheen	9/19/2007
			---		---	---	---	---	---	---		Sheen	9/20/2007
			---		34.32	688.16	---	---	---	---		0.00	1/16/2008
			40.20		35.12	687.36	---	---	692.3	682.3	35.09	0.03	9/25/2012
			---		34.94	687.54	---	---	---	---	34.80	0.14	10/21/2013
	720.3		40.26	34.40	36.6	685.88	---	---	---	---		Sheen	11/17/2014
			40.26	33.07	35.27	687.21						Sheen	10/19/2015
													Product Present - Not Developed

TABLE 1
POND GROUNDWATER IMPACT DELINEATION FEASIBILITY STUDY
SUMMARY OF ELEVATIONS
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Well Identification	Ground Surface Elevation	TOC Elevation	Depth to Bottom	Depth to Groundwater		Groundwater Elevation	Screened Interval - ft BGS		Screened Interval - ftMSL		Free Product		Date
			(ft from TOC)	(ft. BGS)	(ft. from TOC)		Top	Bottom	Top	Bottom	depth (ft. from TOC)	tickness (ft.)	
WT-15	684.9	686.56					2.0	12.0					Installed 9-4-07
			12.23	1.46	3.12	683.44	0.6	10.6	684.3	674.3			9/21/2007
			12.23	-0.08	1.58	684.98	0.6	10.6	684.3	674.3			1/9/2008
			12.25	1.52	3.18	683.38	0.6	10.6	684.3	674.3			9/25/2012
			---	1.22	2.88	683.68	---	---	---	---			10/21/2013
			12.23	1.05	2.71	683.85	0.6	10.6	684.3	674.3			11/17/2014
			12.23	1.42	3.08	683.48	0.6	10.6	684.3	674.3			10/19/2015
PZ-15A	684.0	686.52					20.0	25.0					Installed 9-4-07
			27.40	0.50	3.02	683.50	19.9	24.9	664.1	659.1			9/21/2007
			27.40	0.53	3.05	683.47	19.9	24.9	664.1	659.1			9/25/2012
			---	0.15	2.67	683.85	---	---	---	---			10/21/2013
			27.40	-0.07	2.45	684.07	19.9	24.9	664.1	659.1			11/17/2014
			27.40	0.23	2.75	683.77	19.9	24.9	664.1	659.1			10/19/2015
PZ-15B	684.7	686.60					32.5	34.5					Installed 9-4-07
			37.00	1.18	3.08	683.52	33.1	35.1	651.6	649.6			9/21/2007
			37.00	1.16	3.06	683.54	33.1	35.1	651.6	649.6			9/25/2012
			---	0.76	2.66	683.94	---	---	---	---			10/21/2013
			37.00	0.50	2.4	684.20	33.1	35.1	651.6	649.6			11/17/2014
			37.00	0.91	2.81	683.79	33.1	35.1	651.6	649.6			10/19/2015
WT-16	685.6	687.81					2.0	12.0					Installed 9-5-07
			13.96	3.10	5.31	682.50	1.8	11.8	683.9	673.9			9/20/2007
			14.00	1.20	3.41	684.40	1.8	11.8	683.8	673.8			1/9/2008
			13.96	2.99	5.2	682.61	1.8	11.8	683.9	673.9			9/25/2012
			---	2.59	4.80	683.01	---	---	---	---			10/21/2013
			14.00	2.34	4.55	683.26	1.8	11.8	683.8	673.8			11/12/2014
			14.00	2.70	4.91	682.90	1.8	11.8	683.8	673.8			10/19/2015
PZ-16	685.7	688.01					19.0	24.0					Installed 9-5-07
			26.55	3.15	5.46	682.55	19.2	24.2	666.5	661.5			9/20/2007
			26.50	3.10	5.41	682.60	19.2	24.2	666.5	661.5			9/25/2012
			---	2.70	5.01	683.00	---	---	---	---			10/21/2013
			26.55	2.34	4.65	683.36	19.2	24.2	666.5	661.5			11/12/2014
			26.55	2.71	5.02	682.99	19.2	24.2	666.5	661.5			10/19/2015
PZ-16A	685.0	687.52											Installed 11-01-14
			57.80	1.9	4.41	683.11	50.30	55.3	634.72	629.72			11/12/2014
			57.80	2.3	4.79	682.73	50.30	55.3	634.72	629.72			10/19/2015
PZ-16B	685.1	687.53											Installed 11-01-14
			87.40	2.98	5.42	682.11	79.96	84.96	605.13	600.13			11/12/2014
			87.40	3.68	6.12	681.41	79.96	84.96	605.13	600.13			10/19/2015
PZ-16C	685.2	687.57											Installed 10-31-14
			106.88	3.60	6	681.57	99.48	104.48	585.69	580.69			11/12/2014
			107.88	4.25	6.65	680.92	100.48	105.48	584.69	579.69			10/19/2015
WT-17	718.4	720.17					27.0	37.0					Installed 9-5-07
			38.83	31.39	33.16	687.01	27.1	37.1	691.3	681.3			9/19/2007
			38.83	30.92	32.69	687.48	27.1	37.1	691.3	681.3			1/9/2008
			38.83	30.69	32.46	687.71	27.1	37.1	691.3	681.3	--	0.00	1/16/2008
			38.83	30.47	32.24	687.93	27.1	37.1	691.3	681.3			9/25/2012
			---	31.37	33.14	687.03	---	---	---	---			10/21/2013
			38.83	30.98	32.75	687.42	27.1	37.1	691.3	681.3			11/18/2014
			38.83	31.58	33.35	686.82	27.1	37.1	691.3	681.3			10/19/2015
WT-18	729.2	731.72					39.0	49.0					Installed 9-6-07
			51.78	43.60	46.12	685.60	39.3	49.3	689.9	679.9			9/19/2007
			51.78	43.12	45.64	686.08	39.3	49.3	689.9	679.9			1/9/2008
			51.78	42.73	45.25	686.47	39.3	49.3	689.9	679.9	--	0.00	1/16/2008
			51.73	43.42	45.94	685.78	39.2	49.2	690.0	680.0			9/25/2012
			---	43.19	45.71	686.01	---	---	---	---			10/21/2013
			51.78	42.88	45.4	686.32	39.3	49.3	689.9	679.9			11/18/2014
			---	43.43	45.95	685.77	--	--	--	--			10/19/2015

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SUMMARY OF ELEVATIONS
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Well Identification	Ground Surface Elevation	TOC Elevation	Depth to Bottom	Depth to Groundwater		Groundwater Elevation	Screened Interval - ft BGS		Screened Interval - ftMSL		Free Product		Date
			(ft from TOC)	(ft. BGS)	(ft. from TOC)		Top	Bottom	Top	Bottom	depth (ft. from TOC)	tickness (ft.)	
WT-19	702.4	704.77					9.0	19.0					Installed 9-6-07
			21.34	13.30	15.67	689.10	9.0	19.0	693.4	683.4			9/19/2007
			21.34	10.69	13.06	691.71	9.0	19.0	693.4	683.4			1/9/2008
			21.26	13.63	16	688.77	8.9	18.9	693.5	683.5			9/25/2012
			---	13.48	15.85	688.92	---	---	---	---			10/21/2013
			21.34	13.16	15.53	689.24	9.0	19.0	693.4	683.4			11/19/2014
			21.34	13.91	16.28	688.49	9.0	19.0	693.4	683.4			10/19/2015
WT-20	685.0	687.21					2.0	12.0					Installed 12-7-07
			14.42	0.89	3.1	684.11	2.2	12.2	682.8	672.8			1/9/2008
			14.33	2.54	4.75	682.46	2.1	12.1	682.9	672.9			9/25/2012
			---	2.00	4.21	683.00	---	---	---	---			10/21/2013
			14.42	1.88	4.09	683.12	2.2	12.2	682.8	672.8			11/12/2014
			14.42	2.21	4.42	682.79	2.2	12.2	682.8	672.8			10/19/2015
WT-21	686.3	688.38					2.0	12.0					Installed 12-7-07
			14.30	2.23	4.31	684.07	2.2	12.2	684.1	674.1			1/9/2008
			14.22	4.09	6.17	682.21	2.1	12.1	684.2	674.2			9/25/2012
			---	3.41	5.49	682.89	---	---	---	---			10/21/2013
			14.30	3.22	5.3	683.08	2.2	12.2	684.1	674.1			11/12/2014
			14.30	3.67	5.75	682.63	2.2	12.2	684.1	674.1			10/19/2015
WT-22	685.9	687.94					2.0	12.0					Installed 12-7-07
			14.09	2.05	4.09	683.85	2.0	12.0	683.9	673.9			1/9/2008
			14.04	3.89	5.93	682.01	2.0	12.0	683.9	673.9			9/25/2012
			---	3.38	5.42	682.52	---	---	---	---			10/21/2013
			14.09	3.11	5.15	682.79	2.0	12.0	683.9	673.9			11/12/2014
			14.09	3.49	5.53	682.41	2.0	12.0	683.9	673.9			10/19/2015
WT-23	686.6	688.26					2.0	12.0					Installed 12-7-07
			14.23	2.48	4.14	684.12	2.6	12.6	684.0	674.0			1/9/2008
			14.18	3.93	5.59	682.67	2.5	12.5	684.1	674.1			9/25/2012
			---	3.48	5.14	683.12	---	---	---	---			10/21/2013
			14.23	3.15	4.81	683.45	2.6	12.6	684.0	674.0			11/12/2014
			14.23	3.51	5.17	683.09	2.6	12.6	684.0	674.0			10/19/2015
WT-24	686.1	688.53											Installed 10-29-14
			16.59	3.41	5.89	682.64	4.11	14.11	681.94	671.94			11/13/2014
			16.59	4.77	7.25	681.28	4.11	14.11	681.94	671.94			10/19/2015
PZ-24A	686.53	688.53											Installed 10-29-14
			56.70	4.85	6.85	681.68	49.7	54.7	636.8	631.8			11/14/2014
			56.70	5.15	7.15	681.38	49.7	54.7	636.8	631.8			10/19/2015
PZ-24B	685.94	688.60											Installed 10-28-14
			87.40	4.06	6.72	681.88	79.7	84.7	606.2	601.2			11/14/2014
			87.40	4.38	7.04	681.56	79.7	84.7	606.2	601.2			10/19/2015
PZ-24C	685.99	688.52											Installed 10-28-14
			123.60	4.46	6.99	681.53	116.1	121.1	569.9	564.9			11/14/2014
			123.60	5.00	7.53	680.99	116.1	121.1	569.9	564.9			10/19/2015
WT-25	686.3	688.86											Installed 10-31-14
			21.99	5.60	8.2	680.66	9.39	19.39	676.87	666.87			11/14/2014
			21.99	6.15	8.75	680.11	9.39	19.39	676.87	666.87			10/19/2015
PZ-25A	686.2	688.74											Installed 10-30-14
			67.50	7.65	10.19	678.55	60.0	65.0	626.2	621.2			11/14/2014
			67.50	7.74	10.28	678.46	60.0	65.0	626.2	621.2			10/19/2015
PZ-25B	686.39	688.68											Installed 10-30-14
			97.32	8.71	11	677.68	90.0	95.0	596.4	591.4			11/14/2014
			97.32	9.02	11.31	677.37	90.0	95.0	596.4	591.4			10/19/2015
PZ-25C	686	688.66											Installed 10-29-14
			117.77	14.56	17.22	671.44	110.1	115.1	575.9	570.9			11/14/2014
			117.77	15.37	18.03	670.63	110.1	115.1	575.9	570.9			10/19/2015

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Well Identification	Ground Surface Elevation	TOC Elevation	Depth to Bottom	Depth to Groundwater		Groundwater Elevation	Screened Interval - ft BGS		Screened Interval - ftMSL		Free Product		Date
			(ft from TOC)	(ft. BGS)	(ft. from TOC)		Top	Bottom	Top	Bottom	depth (ft. from TOC)	tickness (ft.)	
WT-26	704.5	706.61											Installed 11-04-14
			36.21	22.00	24.14	682.47	24.07	34.07	680.40	670.40			11/13/2014
			36.21	22.34	24.48	682.13	24.07	34.07	680.40	670.40			10/19/2015
PZ-26A	704.49	707.09											Installed 11-04-14
			77.90	22.51	25.11	681.98	70.3	75.3	634.2	629.2			11/13/2014
			77.90	22.90	25.5	681.59	70.3	75.3	634.2	629.2			10/19/2015
PZ-26B	704.73	707.20											Installed 11-03-14
			108.11	22.83	25.3	681.90	100.6	105.6	604.1	599.1			11/13/2014
			108.11	23.18	25.65	681.55	100.6	105.6	604.1	599.1			10/19/2015
PZ-26C	704.81	706.60											Installed 11-01-14
			147.10	33.03	34.82	671.78	140.3	145.3	564.5	559.5			11/13/2014
			147.10	34.36	36.15	670.45	140.3	145.3	564.5	559.5			10/19/2015
WP-01	691.1	693.68					0.5	3.5					Installed 7/7/1994
			6.94	1.72	4.3	689.38	1.4	4.4	689.7	686.7			7/12/1994
			7.02	1.81	4.39	689.29	1.4	4.4	689.7	686.7			5/11/1999
			7.02	1.98	4.56	689.12	1.4	4.4	689.7	686.7			9/30/1999
			7.03	3.04	5.62	688.06	1.5	4.5	689.7	686.7			12/8/1999
			7.04	2.47	5.05	688.63	1.5	4.5	689.6	686.6			3/31/2000
			6.97	1.37	3.95	689.73	1.4	4.4	689.7	686.7			4/18/2005
	DAMAGED - ABANDONED												10/1/2006
													not sampled since 4-18-05
WP-02	698.3	700.31					8.5	11.5					Installed 7/6/1994
			13.65	9.69	11.7	688.61	8.6	11.6	689.7	686.7			7/11/1994
			13.75	9.32	11.33	688.98	8.7	11.7	689.6	686.6			5/10/1999
			13.76	10.06	12.07	688.24	8.8	11.8	689.6	686.6			9/23/1999
			13.77	10.07	12.08	688.23	8.8	11.8	689.5	686.5			12/6/1999
			13.76	9.38	11.39	688.92	8.8	11.8	689.6	686.6			3/29/2000
	DAMAGED - ABANDONED												4/14/2005
													not sampled since 3-29-00
WP-04	687.1	689.61					1.5	4.5					Installed 7/6/1994
			6.72	2.38	4.89	684.72	1.2	4.2	685.9	682.9			7/11/1994
			6.82	2.04	4.55	685.06	1.3	4.3	685.8	682.8			5/10/1999
			6.95	2.74	5.25	684.36	1.4	4.4	685.7	682.7			9/23/1999
			6.95	2.68	5.19	684.42	1.4	4.4	685.7	682.7			12/6/1999
			6.96	2.16	4.67	684.94	1.5	4.5	685.7	682.7			3/29/2000
			6.88	1.67	4.18	685.43	1.4	4.4	685.7	682.7			4/14/2005
		689.75	6.93	1.73	4.38	685.37	1.4	4.4	685.8	682.8			10/19/2006
			6.88	2.55	5.2	684.55	1.4	4.4	685.9	682.9			9/19/2007
			6.88	1.11	3.76	685.99	1.4	4.4	685.9	682.9			1/9/2008
			6.88	2.50	5.15	684.60	1.4	4.4	685.9	682.9			9/25/2012
			---	2.18	4.83	684.92	---	---	---	---			10/21/2013
	687.1		6.88	1.95	4.65	685.10	1.3	4.3	685.9	682.9			11/13/2014
			6.88	2.25	4.95	684.80	1.3	4.3	685.9	682.9			10/19/2015
WP-05	694.7	695.68					9.5	12.5					Installed 7/6/1994
			13.51	9.52	10.5	685.18	9.5	12.5	685.2	682.2			7/12/1994
			13.66	8.98	9.96	685.72	9.7	12.7	685.0	682.0			5/10/1999
			13.63	9.54	10.52	685.16	9.7	12.7	685.1	682.1			10/5/1999
			13.66	9.80	10.78	684.90	9.7	12.7	685.0	682.0			12/8/1999
			13.67	9.13	10.11	685.57	9.7	12.7	685.0	682.0			3/31/2000
			13.68	8.48	9.46	686.22	9.7	12.7	685.0	682.0			4/14/2005
	DAMAGED - ABANDONED												10/1/2006
													not sampled since 4-14-05
													ABANDONNED 9-6-07

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SUMMARY OF ELEVATIONS
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TOWN OF NEWTON, WISCONSIN

Well Identification	Ground Surface Elevation	TOC Elevation	Depth to Bottom	Depth to Groundwater		Groundwater Elevation	Screened Interval - ft BGS		Screened Interval - ftMSL		Free Product		Date
			(ft from TOC)	(ft. BGS)	(ft. from TOC)		Top	Bottom	Top	Bottom	depth (ft. from TOC)	tickness (ft.)	
WP-06	698.1	700.19					13.8	16.8					Installed 7/6/1994
			18.50	14.32	16.41	683.78	13.4	16.4	684.7	681.7			7/11/1994
			18.56	13.99	16.08	684.11	13.5	16.5	684.6	681.6			5/10/1999
			18.56	14.55	16.64	683.55	13.5	16.5	684.6	681.6			9/23/1999
			18.57	14.44	16.53	683.66	13.5	16.5	684.6	681.6			12/6/1999
			18.56	13.93	16.02	684.17	13.5	16.5	684.6	681.6			3/29/2000
			18.60	13.67	15.76	684.43	13.5	16.5	684.6	681.6			4/14/2005
		700.11	18.64	13.90	15.91	684.20	13.6	16.6	684.5	681.5			10/19/2006
			18.60	14.44	16.45	683.66	13.6	16.6	684.5	681.5			9/19/2007
			18.60	13.25	15.26	684.85	13.6	16.6	684.5	681.5			1/9/2008
			18.59	14.43	16.44	683.67	13.6	16.6	684.5	681.5			9/25/2012
			---	14.27	16.28	683.83	---	---	---	---			10/21/2013
	697.9		18.60	13.90	16.1	684.01	13.4	16.4	684.5	681.5			11/17/2014
			18.60	14.08	16.28	683.83	13.4	16.4	684.5	681.5			10/19/2015
WP-07	693.8	696.70					7.0	10.0					Installed 7/5/1994
			13.35	8.40	11.3	685.40	7.4	10.4	686.4	683.4			7/11/1994
			13.29	8.42	11.32	685.38	7.4	10.4	686.4	683.4			5/10/1999
			13.63	9.18	12.08	684.62	7.7	10.7	686.1	683.1			9/23/1999
			13.63	9.15	12.05	684.65	7.7	10.7	686.1	683.1			12/6/1999
			13.63	8.42	11.32	685.38	7.7	10.7	686.1	683.1			3/29/2000
			13.52	7.92	10.82	685.88	7.6	10.6	686.2	683.2			4/14/2005
		696.74	13.57	8.07	11.01	685.73	7.6	10.6	686.2	683.2			10/19/2006
			12.52	8.98	11.92	684.82	6.6	9.6	687.2	684.2			9/19/2007
			12.52	7.43	10.37	686.37	6.6	9.6	687.2	684.2			1/9/2008
			13.53	8.87	11.81	684.93	7.6	10.6	686.2	683.2			9/25/2012
			---	8.56	11.5	685.24	---	---	---	---			10/21/2013
	693.6		12.52	8.21	11.31	685.43	6.4	9.4	687.2	684.2			11/13/2014
			12.52	8.50	11.6	685.14	6.4	9.4	687.2	684.2			10/19/2015
WP-08	706.10	708.38					20.5						Installed 7/6/1994
			25.97	21.40	23.68	684.70	20.7	23.7	685.4	682.4			7/11/1994
			26.03	20.63	22.91	685.47	20.8	23.8	685.4	682.4			5/13/1999
			26.08	21.70	23.98	684.40	20.8	23.8	685.3	682.3			10/5/1999
			26.08	22.14	24.42	683.96	20.8	23.8	685.3	682.3			12/9/1999
			26.08	20.87	23.15	685.23	20.8	23.8	685.3	682.3			3/31/2000
			26.09	20.30	22.58	685.80	20.8	23.8	685.3	682.3			4/14/2005
		708.41	26.13	20.61	22.89	685.49	20.9	23.9	685.3	682.3			10/19/2006
													ABANDONNED 9-6-07
P-1	687.87	689.96											Installed 8/25/2015
			15.43	2.95	5.04	684.92	3.3	13.3	684.5	674.5			8/26/2015
			15.43	2.89	4.98	684.98	3.3	13.3	684.5	674.5			9/15/2015
			15.43	2.89	4.98	684.98	3.3	13.3	684.5	674.5			9/24/2015
			15.43	2.86	4.95	685.01	3.3	13.3	684.5	674.5			10/19/2015

Notes:
BGS = Below Ground Surface
TOC = Top of Casing
--- or NM = Not Measured

Table 2
SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-01												
			5/20/93	9/7/94	5/13/99	9/29/99	12/7/99	3/31/00	4/15/05	10/20/06	9/18/07	9/24/12	10/21/13	11/13/14	10/12/15
Volatile Organic Compounds (VOCs) (µg/L):															
Benzene	5	0.5	<0.30	<1.0	<0.44	<0.44	**1.7**	<0.44	<0.41	<0.41	<0.47	<0.5	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS	<0.56	<1.0	<0.50	<0.50	<0.50	<0.50	<0.97	<0.97	<0.34	<0.71	<0.36	<0.36	<1.1
Chloromethane	3	0.3									<1	<1.9	<0.81	<0.81	<1.9
2-Chlorotoluene	NS	NS	<0.37	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85	<0.85	<0.49	<0.7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<0.38	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36	<0.36	<0.45	<0.5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<0.34	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75	<0.75	<0.56	<0.98	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<0.78	<1.0	<0.47	<0.47	<0.47	<0.47	<0.57	<0.57	<0.64	<0.6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	<0.39	<1.0	**27**	<0.46	**120**	<0.46	6.1	0.94 Q	<0.68	<0.74	<0.38	<0.38	<0.45
trans-1,2-Dichloroethene	100	20	<0.35	<1.0	<0.64	<0.64	<0.64	<0.64	<0.89	<0.89	<0.95	<0.79	<0.35	<0.35	<0.54
Ethylbenzene	700	140	<0.44	<1.0	<0.50	<0.50	2.3	<0.50	<0.54	<0.54	<0.38	<0.78	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	<0.51	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59	<0.59	<0.48	<0.92	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	<0.45	**5.8 B**	<0.38	<0.38	<0.38	<0.38	<0.43	<0.43	<0.69	<1.1	<0.5	<0.5	<1.3
Naphthalene	100	10	<0.34	<1.0	<0.59	<0.59	2.1	<0.59	<0.74	<0.74	<1.8	<2.1	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	<0.54	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81	<0.81	<0.38	<0.59	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	<0.52	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45	<0.45	<0.52	<0.44	<0.33	<0.33	<0.49
Toluene	1,000	200	<0.29	<1.0	1.6	<0.40	15	<0.40	<0.67	<0.67	<0.46	<0.53	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<0.30	<1.0	<0.53	<0.53	0.80 Q	<0.53	<0.90	<0.90	<0.5	<0.85	<0.33	<0.33	<0.84
Trichloroethene	5	0.5	<0.34	<1.0	**1.6**	<0.49	**8.9**	**0.80 Q**	**6.9**	<0.48	<0.44	<0.47	<0.33	<0.33	<0.47
1,2,4-Trimethylbenzene	--	--	<0.47	<1.0	<0.47	<0.47	0.79 Q	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<0.47	<1.0	<0.45	<0.45	0.64 Q	<0.45	<0.83	<0.83	<0.37	<0.74	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	<0.47	<1.0	<0.47	<0.47	1.43	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	<0.32	<1.0	<0.17	<0.17	<0.17	<0.17	<0.18	<0.18	<0.2	<0.18	<0.18	<0.18	<0.17
Xylenes, m + p	--	--	<0.81	<2.0	<0.77	<0.77	6.5	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Xylene, o	--	--	<0.41	<1.0	<0.54	<0.54	3.7	<0.54	<0.83	<0.83	<0.32	<0.8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	<0.81	<2.0	<0.77	<0.77	10.2	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Styrene	100	10	<0.30	<1.0	<0.37	<0.37	0.60 Q	<0.37	<0.86 &	<0.86	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	NA	<1.8	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	NA	<2.3	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Methane	NS	NS	NA	NA	14	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):															
1-Methylnaphthalene	NS	NS	NA	NA	<0.044	<0.044	0.12 Q	<0.044	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	<3	<11	<0.049	<0.049	0.15 Q	<0.049	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	<4	<11	<0.20	<0.20	<0.20	<0.20	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	<5	<11	<0.18	<0.18	<0.18	<0.18	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	<5	<11	<0.0090	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	<5	<11	<0.0088	<0.0087	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	<4	<11	<0.012	<0.012	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	<4	<11	<0.016	<0.016	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	<5	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	<4	<11	<0.0080	<0.0079	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	<5	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	120	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	<5	<11	<0.0090	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	<4	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	<5	<11	<0.019	<0.019	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	<4	<11	<0.020	<0.020	<0.020	<0.020	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	<4	<11	<0.0084	<0.0083	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	<5	<11	0.16 Q	<0.12	2.2	<0.12	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	<4	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	<3	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	<3	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	<4	<11	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	<4	<11	<0.13	<0.13	<0.13	<0.13	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-01												
			5/20/93	9/7/94	5/13/99	9/29/99	12/7/99	3/31/00	4/15/05	10/20/06	9/18/07	9/24/12	10/21/13	11/13/14	10/12/15
RCRA Metals (mg/L)															
Antimony	0.006	0.0012	NA	NA	(-0.0032)	0.00025 Q	<0.00020	<0.00020	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	<0.002	<0.0024	**(-0.00047)**	0.00050 Q	(0.00034)	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	0.062	0.026	0.025	0.026	0.025	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	NA	<0.00043	<0.000070	<0.000070	<0.000070	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	<0.0030	<0.00017	(0.00013)	<0.000060	0.000080 Q	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	**0.012**	0.0025	(0.00020)	(0.00048)	(0.00017)	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	NA	<0.00094	0.0011	0.0011	(-0.0003)	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	NA	<0.027	(0.0097)	0.0053 Q	(-0.024)	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	<0.025	<0.0028	<0.00015	<0.00015	<0.00015	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	NA	0.00032 Q	0.0003	0.00011 Q	0.00099	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	**0.0034**	<0.000042	<0.000042	0.000044 Q	<0.000042	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	NA	<0.0022	0.00097	0.0013	0.00086	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	<0.001	<0.0023	0.00079 Q	0.0018 Q	(0.00083)	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	<0.010	<0.00046	0.00041	<0.000095	(0.00047)	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	NA	1.8	1.7	1.8	1.9	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	NA	<0.0013	<0.000093	<0.000093	<0.000093	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	NA	0.0094	0.0074	0.0052 Q	0.0037 Q	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):															
Aroclor-1016	NS	NS	NA	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)															
Alkalinity	increase of 100		NA	370	400	470	410	390	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	4.8	2.9	2.3	3.3 Q	2.7	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	26	19	18	14	10	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	410	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	NA	400	470 H (1)	410	390	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	NA	<2.5	<1.9	<1.9	<1.9	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	NA	<0.043	<0.043	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	NA	0.34	0.39	0.18 Q	0.12 Q	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	0.12	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	NA	0.99	1.2	<0.50	1.8 A(0.67)	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements															
pH		IU	7.7	7.3	6.92	7.27	7	6.89	6.91	7.26	6.79	6.68	6.18	7.02	7.31
Conductivity		uS	758	460	708	722	689	660	750	789.9	809	992	696	899	0.744
Temperature		°C	[8.1]	13	10	10.3	9.6	10.5	10.5	9.7	10.1	10.3	10.67	9.64	10.72
Dissolved Oxygen		ppm	NA	NA	7.81	6.08	5.59	101	5.19	6.95	--	3.33	5.63	5.92	0.78
Redox Potential		mV	NA	NA	52	81	51	5.28	136	82	60	190.1	98.3	140.6	-44.6

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-01												
			5/20/93	9-6-94	5/13/99	9/29/99	12/7/99	3/31/00	4/15/05	10/20/06	9/18/07	9/24/12	10/21/13	11/13/14	10/12/15
Volatile Organic Compounds (VOCs) (µg/L):															
Benzene	5	0.5	<0.30	<1.0	<0.44	<0.44	<0.44	<0.44	<0.41	<0.41	<0.47	<0.5	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS	<0.56	<1.0	<0.50	<0.50	<0.50	<0.50	<0.97	<0.97	<0.34	<0.71	<0.36	<0.36	<1.1
Chloromethane	3	0.3									<1	<1.9	<0.81	<0.81	<1.9
2-Chlorotoluene	NS	NS	<0.37	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85	<0.85	<0.49	<0.7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<0.38	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36	<0.36	<0.45	<0.5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<0.34	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75	<0.75	<0.56	<0.98	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<0.78	<1.0	<0.47	<0.47	<0.47	<0.47	<0.57	<0.57	<0.64	<0.6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	<0.39	6.3	**13**	<0.46	**21**	<0.46	<0.83	<0.83	<0.68	<0.74	<0.38	<0.38	<0.45
trans-1,2-Dichloroethene	100	20	<0.35	<1.0	<0.64	<0.64	<0.64	<0.64	<0.89	<0.89	<0.95	<0.79	<0.35	<0.35	<0.54
Ethylbenzene	700	140	<0.44	<1.0	<0.50	<0.50	0.69 Q	<0.50	<0.54	<0.54	<0.38	<0.78	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	<0.51	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59	<0.59	<0.48	<0.92	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	<0.45	**6.1 B**	<0.38	<0.38	<0.38	<0.38	<0.43	<0.43	<0.69	<1.1	<0.5	<0.5	<1.3
Naphthalene	100	10	<0.34	<1.0	<0.59	<0.59	1.0 Q	<0.59	<0.74	<0.74	<1.8	<2.1	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	<0.54	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81	<0.81	<0.38	<0.59	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	<0.52	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45	<0.45	<0.52	<0.44	<0.33	<0.33	<0.49
Toluene	1,000	200	<0.29	<1.0	0.87 Q	<0.40	3.1	<0.40	<0.67	<0.67	<0.46	<0.53	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<0.30	<1.0	<0.53	<0.53	<0.53	<0.53	<0.90	<0.90	<0.5	<0.85	<0.33	<0.33	<0.84
Trichloroethene	5	0.5	<2.6	**2.1**	**0.89 Q**	<0.49	**2.3**	<0.49	**1.2 Q**	<0.48	<0.44	<0.47	<0.33	<0.33	<0.47
1,2,4-Trimethylbenzene	--	--	<0.47	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<0.47	<1.0	<0.45	<0.45	<0.45	<0.45	<0.83	<0.83	<0.37	<0.74	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	<0.47	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	<0.32	<1.0	<0.17	<0.17	<0.17	<0.17	<0.18	<0.18	<0.2	<0.18	<0.18	<0.18	<0.17
Xylenes, m + p	--	--	<0.81	<2.0	<0.77	<0.77	1.9 Q	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Xylene, o	--	--	<0.41	<1.0	<0.54	<0.54	0.96 Q	<0.54	<0.83	<0.83	<0.32	<0.8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	<0.81	<2.0	<0.77	<0.77	2.86	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Styrene	100	10	<0.30	<1.0	<0.37	<0.37	<0.37	<0.37	<0.86 &	<0.86	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	NA	<1.8	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	NA	<2.3	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Methane	NS	NS	NA	NA	3.2	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):															
1-Methylnaphthalene	NS	NS	NA	NA	<0.044	<0.044	0.059 Q	<0.044	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	<3	<11	<0.049	<0.049	0.077 Q	<0.049	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	<4	<11	<0.20	<0.20	<0.20	<0.20	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	<5	<11	<0.18	<0.18	<0.18	<0.18	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	<5	<11	<0.0090	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	<5	<11	<0.0088	0.049	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	<4	<11	<0.012	**0.044**	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	<4	<11	<0.016	**0.1**	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	<5	<11	<0.018	0.081	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	<4	<11	<0.0080	0.024 Q	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	<5	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	<7	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	<5	<11	<0.0090	0.012 Q	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	<4	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	<5	<11	<0.019	0.036 Q	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	<4	<11	<0.020	<0.020	<0.020	<0.020	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	<4	<11	<0.0084	0.096	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	<5	<11	0.16 Q	<0.12	0.84	<0.12	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	<4	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	<3	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	<3	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	<4	<11	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	<4	<11	<0.13	0.062	<0.13	<0.13	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-01												
			5/20/93	9-6-94	5/13/99	9/29/99	12/7/99	3/31/00	4/15/05	10/20/06	9/18/07	9/24/12	10/21/13	11/13/14	10/12/15
RCRA Metals (mg/L)															
Antimony	0.006	0.0012	NA	NA	(-0.0032)	**0.0016**	<0.00020	<0.00020	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	**0.003**	<0.0024	**(-0.00047)**	**0.0018**	**(0.00034)**	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	0.15	0.17	0.18	0.018	0.18	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	NA	<0.00043	0.00018 Q	<0.000070	<0.000070	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	<0.0030	<0.00017	(0.00013)	<0.000060	0.00043	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	**0.14**	<0.00053	(0.00020)	(0.00048)	(0.00017)	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	NA	<0.00094	0.00088	0.00087	(-0.0003)	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	NA	**0.97**	**0.9**	**0.93**	**0.78**	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	<0.025	<0.0028	0.00027 Q	<0.00015	<0.00015	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	NA	0.021	0.021	0.021	0.02	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	**0.0034**	<0.000042	<0.00042	<0.000042	<00000042	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	NA	<0.0022	0.0011	0.0012	0.00094	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	<0.001	<0.0023	<0.00064	0.00095 Q	(0.00083)	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	<0.010	<0.00046	0.0014	<0.000095	(0.00047)	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	NA	9.3	8.9	9.4	9.4	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	NA	<0.0013	0.00010 Q	<0.000093	<0.000093	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	NA	<0.00089	0.0063 Q	0.0047 Q	0.0095	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):															
Aroclor-1016	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	<2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	<2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)															
Alkalinity	increase of 100		NA	305	320	390 H(1)	330	330	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	7.7	7.8	6.5	9.1	8.6	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	26	30	29	31	32	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	350	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	470	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	NA	3230	390 H(1)	330	330	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	NA	<2.5	<1.9 H(1)	<1.9	<3.8	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	NA	<0.043	<0.043	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	NA	<0.090	<0.090	<0.080	<0.080	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	<0.037	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	NA	<0.33	0.83 Q	<0.50	1.3 QA(0.67)	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements															
pH		IU	7.8	7.85	7.13	7.76	7.36	7.21	7.31	7.44	7.18	7.77	7.35	7.48	6.93
Conductivity		uS	512	575	589	602	612	608	619	620	617.2	601	447	626	1.047
Temperature		°C	9.7	12.8	11.7	10.1	9.2	10.6	10	9.4	10.3	10.55	10.51	9.57	10.09
Dissolved Oxygen		ppm	NA	NA	1.9	3.58	3.49	3.52	2.1	1.18	1.14	0.11	0.62	0.29	4.03
Redox Potential		mV	NA	NA	-101	-85	-110	-89	-103	-99	-94	-190	16.1	-94.8	14.8

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-02						PZ-02													
			5/20/93	5/19/99	10/5/99	12/9/99	4/5/00	note	5/20/93	9/7/94	5/13/99	10/5/99	12/9/99	4/4/00	4/18/05	10/20/06	9/18/07	9/24/12	10/21/13	11/18/14	11/18/14 DUP	10/20/15
Volatile Organic Compounds (VOCs) (µg/L):																						
Benzene	5	0.5	<0.30	**850**	**650 Q**	**570 Q**	**840**		<0.30	<1.0	<0.44	<0.44	<0.44	<0.44	<0.41	<0.41	<0.47	<0.5	<0.24	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS	<0.56	<100	<250	<250	<50		<0.56	<1.0	<0.50	<0.50	<0.50	<0.50	<0.97	<0.97	<0.34	<0.71	<0.36	<0.36	<0.36	<1.1
Chloromethane	3	0.3															<1	<1.9	<0.81	<0.81	<0.81	<1.9
2-Chlorotoluene	NS	NS	<0.37	<130	<330	<330	<65		<0.37	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85	<0.85	<0.49	<0.7	<0.21	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<0.38	<72	<270	<270	<54		<0.38	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36	<0.36	<0.45	<0.5	<0.41	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<0.34	**190 Q**	<310	<310	**240**		<0.34	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75	<0.75	<0.56	<0.98	<0.3	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<0.78	**130 Q**	<230	<230	**91 Q**		<0.78	<1.0	<0.47	<0.47	<0.47	<0.47	<0.57	<0.57	<0.64	<0.6	<0.4	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	**62**	**170,000 D**	**160,000 D**	**150,000 D**	**85,000 D**		**7.3**	<1.0	**16**	<0.46	1.7	<0.46	<0.83	<0.83	<0.68	<0.74	<0.38	<0.38	<0.38	<0.45
trans-1,2-Dichloroethene	100	20	<0.35	<130	<320	<320	**640**		<0.35	<1.0	<0.64	<0.64	<0.64	<0.64	<0.89	<0.89	<0.95	<0.79	<0.35	<0.35	<0.35	<0.54
Ethylbenzene	700	140	2.9	**170 Q**	**860**	**450 Q**	**150 Q**		1.2	<1.0	<0.50	<0.50	<0.50	<0.50	<0.54	<0.54	<0.38	<0.78	<0.55	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	0.64	<78	<200	<200	<39		<0.51	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59	<0.59	<0.48	<0.92	<0.3	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	<0.45	200 Q	<190	<190	<38		<0.45	**5.4 B**	<0.38	<0.38	<0.38	<0.38	<0.43	<0.43	<0.69	<1.1	<0.5	<0.5	<0.5	<1.3
Naphthalene	100	10	6.9	**140 Q**	**1,300**	**860 Q**	**200**		<0.34	<1.0	<0.59	<0.59	<0.59	<0.59	<0.74	<0.74	<1.8	<2.1	<1.7	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	1.4	<110	340 Q	<270	<54		0.70	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81	<0.81	<0.38	<0.59	<0.25	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	1.0	<82	<200	<200	<41		<0.52	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45	<0.45	<0.52	<0.44	<0.33	<0.33	<0.33	<0.49
Toluene	1,000	200	7.3	**2,100**	**4,400**	**2,500**	**1,700**		<0.29	<1.0	1.0 Q	<0.40	<0.40	<0.40	<0.67	<0.67	<0.46	<0.53	<0.69	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<0.30	**1,100**	**1,600**	**1,200**	**340**		<0.30	<1.0	<0.53	<0.53	<0.53	<0.53	<0.90	<0.90	<0.5	<0.85	<0.33	<0.33	<0.33	<0.84
Trichloroethene	5	0.5	**3.6**	**250 Q**	<250	<250	**720**		**12**	<1.0	**0.98 Q**	<0.49	<0.49	<0.49	<0.48	<0.48	<0.44	<0.47	<0.33	<0.33	<0.33	<0.47
1,2,4-Trimethylbenzene	--	--	12	140 Q	2300	1500	220		3.7	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	3.8	<90	730	450 Q	63 Q		1.5	<1.0	<0.45	<0.45	<0.45	<0.45	<0.83	<0.83	<0.37	<0.74	<1.4	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	15.8	**140**	**3030**	**1950**	**283**		5.2	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	<0.32	<100	<85	<85	<17		<0.32	<1.0	<0.17	<0.17	<0.17	<0.17	<0.18	<0.18	<0.2	<0.18	<0.18	<0.18	<0.18	<0.17
Xylenes, m + p	--	--	14	580	3,900	2,000	630		4.5	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<0.69	<2.2
Xylene, o	--	--	6.7	320 Q	1,800	1,000	310		2.3	<1.0	<0.54	<0.54	<0.54	<0.54	<0.83	<0.83	<0.32	<0.8	<0.63	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	20.7	900	**5,700**	**3,000**	940		6.8	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<0.69	<2.2
Styrene	100	10	<0.30	<74	<190	<190	<37		<0.30	<1.0	<0.37	<0.37	<0.37	<0.37	<0.86 &	<0.86	NA	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	<10	<2000	<100	<10		NA	NA	<1.8	<10	<13	<10	NA	<10	NA	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	<10	<2000	<100	<10		NA	NA	<2.3	<10	<13	<10	NA	<10	NA	NA	NA	NA	NA	NA
Methane	NS	NS	NA	<10	<2000	38	170		NA	NA	26	24	22	35	NA	14	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):																						
1-Methylnaphthalene	NS	NS	NA	9300	1600	6500	50		NA	NA	<0.044	<0.044	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	670	15000	2600	11000	79		<3	<11	<0.049	<0.049	<0.049	<0.049	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	<83	<2000	<99	<990	<20		<4	<11	<0.20	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	180	9900	1500	6100	<18		<5	<11	<0.18	<0.13	<0.13	<0.13	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	120	**1400**	<4.5	<44	3.5		<5	<11	<0.0090	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	<100	750	<4.3	<43	0.98		<5	21	<0.0088	<0.0087	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	<83	**460**	<6.0	**450**	<1.2		<4	<11	<0.012	<0.012	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	<83	<160	<8.0	<80	<1.6		<4	<11	<0.016	<0.016	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	<100	<180	29	<90	<1.8		<5	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	<83	<80	<4.0	<40	<0.79		<4	<11	<0.0080	<0.0079	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	<100	NA	NA	NA	NA		<5	66	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	<150	NA	NA	NA	NA		<7	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	<100	**580**	<4.5	<44	**2.6**		<5	**22**	<0.0090	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	<83	<180	<9.0	<90	<1.8		<4	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	**130**	<190	<9.5	<95	<1.9		<5	<11	<0.019	<0.019	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	<83	**4,500**	**580**	**2,500**	<2.0		<4	<11	<0.020	<0.020	<0.020	<0.020	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	<83	<84	<4.2	<42	<0.83		<4	<11	<0.0084	<0.0083	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	**1,200**	**13,000**	**3,000**	**11,000**	**210**		<5	<11	0.16 Q	<0.12	0.16 Q	<0.12	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	<100	NA	NA	NA	NA		<5	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	170	NA	NA	NA	NA		<3	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	170	NA	NA	NA	NA		<3	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	380	6800	1000	4900	19		<4	<11	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	**180**	<130	**310**	<65	6		<4	<11	<0.13	<0.13	<0.13	<0.13	NA	NA	NA	NA	NA	NA	NA	NA

Note: Free Product Present In Well

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-02						PZ-02													
			5/20/93	5/19/99	10/5/99	12/9/99	4/5/00	note	5/20/93	9/7/94	5/13/99	10/5/99	12/9/99	4/4/00	4/18/05	10/20/06	9/18/07	9/24/12	10/21/13	11/18/14	11/18/14	10/20/15
RCRA Metals (mg/L)																						
Antimony	0.006	0.0012	NA	**0.0040 Q**	**0.0022**	**0.0043**	**0.0059**		NA	NA	B(-0.0032)	0.00016 Q	<0.00020	<.00020	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	**0.011**	**0.017 Q**	**(0.0018)**	**0.019**	**0.021**		<0.001	<0.002	<0.0024	**(-0.00047)**	**(0.00038)**	**(0.00034)**	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	0.09	0.0061	0.1	0.011	0.004		0.114	0.17	0.15	0.15	0.16	0.17	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	<0.00063	0.00026	<0.000070	<.00007		NA	NA	<0.00043	<0.000070	<0.000070	<0.000070	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	0.0002	<0.00020	(-0.00068)	0.000070 Q	0.00017 Q		<0.0002	<0.0030	<0.00017	(0.00013)	<0.000060	<0.000060	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	0.009	B(0.0011)	**0.088**	0.0059	(0.00017)		<0.002	<0.0044	0.001 Q	(0.00020)	(0.00012)	(0.00017)	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	0.0035 Q	0.03	0.0055	(-0.0003)		NA	NA	<0.00094	0.00046 Q	<0.00025	(-0.0003)	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	**2.7**	**11**	**(0.022)**	**0.51**		NA	NA	**0.75**	**0.55**	**0.66**	**0.62**	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	**0.072**	<0.0030	**0.19**	**0.012**	0.0012		<0.004	<0.025	<0.0028	<0.00015	<0.00015	<0.00015	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	**0.44**	**0.39**	**0.38**	**0.17**		NA	NA	0.019	0.019	0.021	0.021	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	**0.00031**	<0.000042	<0.000042	<0.000042 K	0.000047 Q		<0.00020	**0.0014**	<0.000042	<0.000042	<0.000042	<0.000042	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	0.0092	0.018	0.0048	0.0042		NA	NA	<0.0022	0.0028	0.0031	0.0033	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	<0.002	<0.0024 ED	0.0034 Q	0.0013 Q	(0.00083)		<0.002	<0.001	<0.0023	<0.00064	<0.00064	(0.00083)	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	<0.001	<0.00050 N	0.00012 QN,*	(-0.00041)	(0.00047)		<0.001	<0.010	<0.00046	<0.000095	(-0.00041)	(0.00047)	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	46	25	31	35		NA	NA	11	9.8	10	11	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	<0.0014	(0.00018)	<0.000093	<0.000093		NA	NA	<0.0013	<0.000093	<0.000093	<0.00093	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	0.0087 Q	(0.0023)	(-0.0048)	0.021		NA	NA	0.009	0.0029 Q	-0.0048)	0.0047 Q	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):																						
Aroclor-1016	NS	NS	NA	<330	<33	<16	<0.33		NA	<1.0	<0.33	<0.33	<0.33	<0.33	NA	NA	NA	NA	<0.15	NA	NA	NA
Aroclor-1221	NS	NS	NA	<330	<33	<16	<0.33		NA	<2.0	<0.33	<0.33	<0.33	<0.33	NA	NA	NA	NA	<0.11	NA	NA	NA
Aroclor-1232	NS	NS	NA	<30	<33	<16	<0.33		NA	<1.0	<0.33	<0.33	<0.33	<0.33	NA	NA	NA	NA	<0.065	NA	NA	NA
Aroclor-1242	NS	NS	NA	<330	<33	<16	<0.33		NA	<1.0	<0.33	<0.33	<0.33	<0.33	NA	NA	NA	NA	<0.072	NA	NA	NA
Aroclor-1248	NS	NS	NA	4,200	720	210	5.9		NA	<1.0	<0.33	<0.33	<0.33	<0.33	NA	NA	NA	NA	<0.13	NA	NA	NA
Aroclor-1254	NS	NS	NA	3,200	620	<16	<0.33		NA	<1.0	<0.33	<0.33	<0.33	<0.33	NA	NA	NA	NA	<0.072	NA	NA	NA
Aroclor-1260	NS	NS	NA	<330	<33	49	<0.33		NA	<1.0	<0.33	<0.33	<0.33	<0.33	NA	NA	NA	NA	<0.18	NA	NA	NA
Total PCBs	0.03	0.003	NA	**7400**	**1340**	**259**	**5.9**		NA	<2.0	<0.33	<0.33	<0.33	<0.33	NA	NA	NA	NA	<0.18	NA	NA	NA
General Chemistry Parameters (mg/L)																						
Alkalinity	increase of 100		NA	940	680	640	800		NA	360	340	400	340	340	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA		NA	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA		NA	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA		NA	5.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	**270**	**260**	**270**	20		NA	24	24	26	27	26	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA		NA	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	32 ED	16	42	52		NA	43	50	47	42	51	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	NA	NA	NA	NA		NA	480	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA		NA	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA		NA	470	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	940	680	640	800		NA	NA	340	400	340	340	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	<25	<19	<1.9	<38		NA	NA	<2.5	<1.9	<1.9	<3.8	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	1700	1500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	220	0.13 Q	0.023	<44 ED		NA	NA	<0.043	<0.043	<0.044	0.12 Q	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	<2.2 ED	<0.090	<0.080	<0.080		NA	NA	<0.090	0.43	<0.080	<0.080	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	6.9	7.5		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	290	600 A(0.97)	250	240		NA	NA	4	3.8	6.5	(0.67)	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements																						
pH		IU	7.7	NA	NA	NA	NA		7.7	7.2	7.01	7.5	7.2	7.19	7.12	7.02	6.95	7.72	7.53	7.53	10.9	7.33
Conductivity		uS	780	NA	NA	NA	NA		625	500	711	725	728	722	704	721.6	725.4	659	453	453	674	689
Temperature		°C	9.8	NA	NA	NA	NA		10.4	13	10.5	10.1	9.3	9.1	10.4	9.7	10.2	10.73	10.37	10.37	9.6	11.82
Dissolved Oxygen		ppm	NA	NA	NA	NA	NA		NA	NA	1.13	3.53	1.97	1.98	0.85	0.62	0.96	0.22	0.68	0.68	0.17	1.02
Redox Potential		mV	NA	NA	NA	NA	NA		NA	NA	-68	-16	-57	-29	-41	-60	-34	-118.1	39.1	39.1	-114.6	-57.3

Note: Free Product Present In Well

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-02A												
			9-6-94	5/11/99	9/29/99	12/7/99	3/30/00	4/18/05	10/20/06	9/18/07	9/24/12	10/24/13	11/18/14	11/18/14	10/20/15
Volatile Organic Compounds (VOCs) (µg/L):														DUP	
Benzene	5	0.5	**73**	**53**	**95**	**68**	**56 Q**	<20	<51	**90**	<50	**60 J**	**56**	**54**	**28.5 J**
t-Butylbenzene	NS	NS	<5.0	<0.50	<25	<2.5	<50	<48	<120	<17	<71	<36	<18	<18	<24
Chloromethane	3	0.3								<50	<190	<81	<40.5	<40.5	<23
2-Chlorotoluene	NS	NS	<5.0	<0.65	<32	3.7 Q	<65	<42	<110	<24.5	<70	<21	<10.5	<10.5	<55
1,2-Dichloroethane	5	0.5	<5.0	**0.78 Q**	<27	<2.7	<54	<18	<45	<22.5	<50	<41	<20.5	<20.5	<60
1,1-Dichloroethane	850	85	<5.0	31	44 Q	30	<61	<38	<94	70 J	<98	<30	71	40 J	61 J
1,1-Dichloroethene	7	0.7	<5.0	**6**	<23	**5.7 Q**	<47	<28	<71	<32	<60	<40	<20	<20	<32.5
cis-1,2-Dichloroethene	70	7	<5.0	**8500 D**	**14,000 D**	**8,900 D**	**9,900**	**6,400**	**12,000**	**5,300**	**4000**	**5,800**	**4,800**	**5,000**	**3,400**
trans-1,2-Dichloroethene	100	20	<5.0	14	<32	5.3 Q	<64	<44	<110	<47.5	<79	<35	<17.5	<17.5	<27
Ethylbenzene	700	140	18	58	52 Q	34	<50	<27	<68	94	109 J	66 J	88	80 J	89 J
Isopropylbenzene	NS	NS	<5.0	2.2	<20	<1.9	<39	<30	<74	<24	<92	<30	<15	<15	<41
Methylene chloride	5	0.5	**31 B**	<0.38	<19	<1.9	<38	<22	<76	<34.5	<110	<50	<25	<25	<65
Naphthalene	100	10	**18**	**56**	**140**	**38**	<59	<37	<92	<90	<210	<170	**116 J**	**92 J**	**94 J**
n-Propylbenzene	NS	NS	<5.0	3.4	<27	<2.7	<54	<40	<100	<19	<59	<25	<12.5	<12.5	<38.5
Tetrachloroethene	5	0.5	**13**	**5.9**	<20	**2.3 Q**	<41	<22	<56	<26	<44	<33	<16.5	<16.5	<24.5
Toluene	1,000	200	180	**340 D**	**430**	**270**	**300**	110	180 Q	**590**	**450**	**340**	**380**	**370**	**390**
1,1,1-Trichloroethane	200	40	<5.0	**64**	**67 Q**	35	<53	<45	<110	32 J	<85	39 J	**42 J**	**45 J**	<42
Trichloroethene	5	0.5	**430**	**190 D**	**230**	**170**	**280**	**150**	**95 Q**	<30.5	<47	**63 J**	**62**	**66**	**43 J**
1,2,4-Trimethylbenzene	--	--	9.2	29	24 Q	18	<47	<48	<120	<60	<80	<220	<110	<110	<80
1,3,5-Trimethylbenzene	--	--	<5.0	6.6	<22	4.7 Q	<45	<42	<100	<18.5	<74	<140	<70	<70	<75
Total Trimethylbenzene	480	96	9.2	35.6	24	22.7	<47	<48	<120	<60	<80	<220	<110	<110	<80
Vinyl Chloride	0.2	0.02	<5.0	**1.3 Q**	**55**	**120**	**190**	**580**	**420**	**2,470**	**1220**	**1,070**	**1,410**	**1,430**	**700**
Xylenes, m + p	--	--	44	130	140	98	100 Q	<90	<220	272	298 J	180 J	250	239	238 J
Xylene, o	--	--	28	78	80 Q	59	<54	<42	<100	150	161 J	100 J	134	126	121 J
Total Xylenes	10,000	1,000	72	208	220	157	100	<90	<220	422	459 J	280 J	384	365	359 J
Styrene	100	10	<5.0	**13**	<18	9.8	<37	<43 &	<110	NA	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	<2.3	<10	<10	<10	NA	81	NA	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	<1.8	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA	NA
Methane	NS	NS	NA	27	59	85	56	NA	190	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):															
1-Methylnaphthalene	NS	NS	NA	4.3 D	8.8 D	6.7	3.7	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	<12	7.4 D	11 D	9.9	5.1	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	<12	<0.20	<0.20	<0.20	<0.20	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	<12	<0.18	22 D	17	<0.18	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	<12	<0.0090	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	<12	<0.0088	<0.0087	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	<12	<0.012	<0.012	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	<12	<0.016	<0.016	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	<12	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	<12	<0.0080	<0.0079	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	<12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	<12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	<12	<0.0090	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	<12	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	<12	<0.019	<0.019	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	<12	0.41	0.75	0.52	<0.020	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	<12	<0.0084	<0.0083	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	**13**	**45 D**	**76 D**	**59**	**35**	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	**<12**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	<12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	<12	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	<12	<0.013	<0.13	<0.13	<0.13	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-02A												
			9-6-94	5/11/99	9/29/99	12/7/99	3/30/00	4/18/05	10/20/06	9/18/07	9/24/12	10/24/13	11/18/14	11/18/14	10/20/15
RCRA Metals (mg/L)															
Antimony	0.006	0.0012	NA	<0.0019	0.0011	0.00028 Q	<0.00020	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	**0.006**	**0.0059 Q**	**(-0.00047)**	**0.011**	**0.0057**	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	0.13	0.088	0.078	0.082	0.11	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	<0.00043	<0.000070	<0.000070	<0.000070	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	<0.0030	<0.00017	(0.00013)	<0.000060	<0.000060	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	**0.022**	0.0031	(0.00020)	(0.00048)	(-0.00008)	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	**NA**	<0.00094	0.0017	0.0018	(-0.00041)	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	**NA**	**3.1**	(0.0097)	**2.3**	**1**	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	<0.025	<0.0028	<0.00015	<0.00015	<0.00015	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	**0.077**	**0.062**	**0.067**	**0.038**	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	<0.0002	<0.000042	<0.000042	<0.000042	<0.000042	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	<0.0022	0.002	0.0025	0.0027	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	<0.001	<0.0023	<0.00064	0.0014 Q	0.0023	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	<0.010	<0.00046	<0.000095	<0.000095	<0.00010	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	11	11	12	18	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	<0.0013	<0.000093	<0.000093	<0.000093	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	0.00039	0.01	0.0073	0.0079	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):															
Aroclor-1016	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	<0.12	NA	NA	NA
Aroclor-1221	NS	NS	<2.2	NA	NA	NA	NA	NA	NA	NA	NA	<0.086	NA	NA	NA
Aroclor-1232	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	<0.050	NA	NA	NA
Aroclor-1242	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	<0.055	NA	NA	NA
Aroclor-1248	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	NA	NA	NA
Aroclor-1254	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	<0.055	NA	NA	NA
Aroclor-1260	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	<0.14	NA	NA	NA
Total PCBs	0.03	0.003	<2.2	NA	NA	NA	NA	NA	NA	NA	NA	<0.14	NA	NA	NA
General Chemistry Parameters (mg/L)															
Alkalinity	increase of 100		660	490	60 H(1)	500	580	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	18	19	1.7	22	20	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	100	72	19	100	110	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	190	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		900	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	490	60 H(1)	500	580	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	<2.5	<1.9 H(1)	<1.9	<3.8	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	<0.043	<0.043	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	0.33	0.63	0.38	0.59	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	0.91	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	6.9	11	0.76 Q	12	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements															
pH		IU	6.98	6.79	7.09	6.92	6.83	684	6.7	6.89	7.17	6.75	6.75	6.88	6.95
Conductivity		uS	1446	870	996	1021	1098	1015	1007	983.6	973	1679	1679	1358	1354
Temperature		°C	10	11.1	10.6	9	10.6	11.4	10.4	10.4	10.9	11.29	11.29	10.16	12.06
Dissolved Oxygen		ppm	NA	1.84	1.41	1.73	1.7	2.87	2.75	--	1.23	3.15	3.15	2.07	3.88
Redox Potential		mV	NA	-66	0.26	-54	-39	-53	-81	-53	-127.8	77.3	77.3	-60.1	-14.9

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-03												
			5/20/93	9-6-94	5/11/99	9/29/99	12/7/99	3/30/00	4/15/05	10/20/06	9/18/07	9/24/12	10/24/13	11/17/14	10/12/15	10/12/15
Volatile Organic Compounds (VOCs) (µg/L):																DUP
Benzene	5	0.5	<1.5	<5.0	<0.44	<0.44	<0.44	<0.44	<0.41	<0.41	<2.35	<0.5	<0.24	<0.24	<0.44	<0.44
t-Butylbenzene	NS	NS	<2.8	<5.0	<0.50	<0.50	<0.50	<0.50	<0.97	<0.97	<1.7	<0.71	<0.36	<0.36	<1.1	<1.1
Chloromethane	3	0.3									<5	<1.9	<0.81	<0.81	<1.9	<1.9
2-Chlorotoluene	NS	NS	<1.9	<5.0	<0.65	<0.65	<0.65	<0.65	<0.85	<0.85	<2.45	<0.7	<0.21	<0.21	<0.4	<0.4
1,2-Dichloroethane	5	0.5	<1.9	<5.0	<0.54	<0.54	<0.54	<0.54	<0.36	<0.36	<2.25	<0.5	<0.41	<0.41	<0.48	<0.48
1,1-Dichloroethane	850	85	<1.7	<5.0	<0.61	0.72 Q	<0.61	<0.61	<0.75	<0.75	<2.8	<0.98	0.32 J	<0.3	<1.1	<1.1
1,1-Dichloroethene	7	0.7	<3.9	<5.0	<0.47	<0.47	<0.47	<0.47	<0.57	<0.57	<3.2	<0.6	<0.4	0.48 J	<0.65	<0.65
cis-1,2-Dichloroethene	70	7	**100**	**230**	**140**	**180 D**	**100**	**89**	**130**	**170**	**88**	**68**	**85**	**53**	**58**	**57**
trans-1,2-Dichloroethene	100	20	<1.8	<5.0	<0.64	<0.64	<0.64	<0.64	<0.89	<0.89	<4.75	<0.79	<0.35	<0.35	<0.54	<0.54
Ethylbenzene	700	140	<2.2	<5.0	<0.50	<0.50	<0.50	<0.50	<0.54	<0.54	<1.9	<0.78	<0.55	<0.55	<0.71	<0.71
Isopropylbenzene	NS	NS	<2.6	<5.0	<0.39	<0.39	<0.39	<0.39	<0.59	<0.59	<2.4	<0.92	<0.3	<0.3	<0.82	<0.82
Methylene chloride	5	0.5	<2.3	**30 B**	<0.38	<0.38	<0.38	<0.38	<0.43	<0.43	<3.45	<1.1	<0.5	<0.5	<1.3	<1.3
Naphthalene	100	10	<1.7	<5.0	<0.59	<0.59	<0.59	<0.59	<0.74	<0.74	<9	<2.1	<1.7	<1.7	<1.6	<1.6
n-Propylbenzene	NS	NS	<2.7	<5.0	<0.54	<0.54	<0.54	<0.54	<0.81	<0.81	<1.9	<0.59	<0.25	<0.25	<0.77	<0.77
Tetrachloroethene	5	0.5	<2.6	<5.0	<0.41	**0.73 Q**	<0.41	0.43 Q	<0.45	<0.45	<2.6	<0.44	0.39 J	0.41 J	<0.49	<0.49
Toluene	1,000	200	<1.5	8.6	<0.40	<0.40	<0.40	<0.40	<0.67	<0.67	<2.3	<0.53	<0.69	<0.69	<0.44	<0.44
1,1,1-Trichloroethane	200	40	<1.5	<5.0	10	13	7.1	8.7	8.0	8.9	5.3 J	5.4	5.8	3.5	5.2	5.1
Trichloroethene	5	0.5	**570**	**240**	**180**	**220 D**	**170**	**120**	**88**	**140**	**78**	**58**	**57**	**43**	**53**	**53**
1,2,4-Trimethylbenzene	--	--	<2.4	<5.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<6	<0.8	<2.2	<2.2	<1.6	<1.6
1,3,5-Trimethylbenzene	--	--	<2.4	<5.0	<0.45	<0.45	<0.45	<0.45	<0.83	<0.83	<1.85	<0.74	<1.4	<1.4	<1.5	<1.5
Total Trimethylbenzene	480	96	<2.4	<5.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<6	<0.8	<2.2	<2.2	<1.6	<1.6
Vinyl Chloride	0.2	0.02	<1.6	<5.0	<0.17	<0.17	<0.17	<0.17	<0.18	<0.18	<1	<0.18	<0.18	<0.18	<0.17	<0.17
Xylenes, m + p	--	--	<4.1	<10	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<3.35	<1.1	<0.69	<0.69	<2.2	<2.2
Xylene, o	--	--	<2.1	<5.0	<0.54	<0.54	<0.54	<0.54	<0.83	<0.83	<1.6	<0.8	<0.63	<0.63	<0.9	<0.9
Total Xylenes	10,000	1,000	<4.1	<10	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<3.35	<1.1	<0.69	<0.69	<2.2	<2.2
Styrene	100	10	<1.5	<5.0	<0.37	<0.37	<0.37	<0.37	<0.86	<0.86	NA	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	NA	<2.3	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	NA	<1.8	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA	NA
Methane	NS	NS	NA	NA	<0.9	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):																
1-Methylnaphthalene	NS	NS	NA	NA	<0.044	<0.044	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	<3	<11	<0.049	<0.049	<0.049	<0.049	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	<4	<11	<0.20	<0.20	<0.20	<0.20	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	<5	<11	<0.18	<0.18	<0.18	<0.18	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	<5	<11	<0.0090	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	<5	<11	<0.0088	<0.0087	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	<4	<11	<0.012	<0.012	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	<4	<11	<0.016	<0.016	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	<5	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	<4	<11	<0.0080	<0.0079	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	<5	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	8	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	<5	<11	<0.0090	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	<4	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	<5	<11	<0.019	<0.019	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	<4	<11	<0.02	<0.020	<0.020	<0.020	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	<4	<11	<0.0084	<0.0083	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	<5	<11	<0.12	<0.12	<0.12	<0.12	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	<5	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	<3	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	<3	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	<4	<11	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	<4	<11	<0.013	<0.13	<0.13	<0.13	NA	NA	NA	NA	NA	NA	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-03													
			5/20/93	9-6-94	5/11/99	9/29/99	12/7/99	3/30/00	4/15/05	10/20/06	9/18/07	9/24/12	10/24/13	11/17/14	10/12/15	10/12/15
RCRA Metals (mg/L)																
Antimony	0.006	0.0012	NA	NA	B(-0.0032)	**0.0012**	0.00092	<0.00020	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	<0.002	<0.0024	**(-0.00047)**	0.00061 Q	<0.00020	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	0.054	0.032	0.0333	0.035	0.033	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	NA	<0.00043	0.00011 Q	<0.000070	<0.000070	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	<0.0030	<0.00017	(0.00013)	<0.000060	0.000090 Q	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	0.006	0.0027	(0.00020)	(0.00048)	(-0.00008)	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	NA	<0.00094	0.0024	0.0036	(-0.00041)	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	NA	<0.027	(0.0097)	<0.0037	0.013	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	<0.025	<0.0028	**0.0026 Q**	**0.00026 Q**	0.00023 Q	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	NA	0.002	0.0073	0.00036	0.0013	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	**0.0023**	<0.000042	<0.000042	<0.000042	<0.000042	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	NA	0.0027 Q	0.0019	0.0024	0.0018	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	<0.001	<0.0023	0.0015 Q	0.0018 QMS	0.00095 W	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	<0.010	<0.00046	<0.000095	<0.000095	<0.00010	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	NA	4.6	4	4.5	4.5	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	NA	<0.0013	<0.000093	<0.000093	<0.0093	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	NA	0.0059	0.0083	0.0082	0.0093	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):																
Aroclor-1016	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	<2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	<2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)																
Alkalinity	increase of 100		NA	440	410	390 H(1)	410	390	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	12	14	13	7.9	7	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	110	44	43	60	52	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	740	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	930	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	640	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	NA	410	390 H(1)	410	390	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	NA	<2.5	<1.9 H(1)	<1.9	<1.9	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	NA	<0.043	<0.043	<0.044	.051 Q	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	NA	9.8	17	15	11 H(0.15)	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	21	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	NA	3.7	6.5	4.9	(0.67)	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements																
pH		lU	7.5	7.93	6.97	7.09	7.06	6.8	6.84	7.03	6.88	7.09	6.78	7.08	6.97	6.97
Conductivity		uS	976	1057	846	894	894	836	882	895.3	767	781	818	733	809	809
Temperature		°C	9.8	13.3	12.1	10.6	10.1	11	10.6	9.5	10.2	10.8	11.4	7.8	10.89	10.89
Dissolved Oxygen		ppm	NA	NA	6.11	8.55	8.56	8.01	5.13	8.2	--	4.01	7.23	7.67	8.34	8.34
Redox Potential		mV	NA	NA	53	140	139	81	116	97	103	-28.9	99.6	66.5	12.1	12.1

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-03												
			5/20/93	9-6-94	5/11/99	9/29/99	12/7/99	3/30/00	4/15/05	10/20/06	9/18/07	9/24/12	10/24/13	11/17/14	10/12/15
Volatile Organic Compounds (VOCs) (µg/L):															
Benzene	5	0.5	<0.30	<1.0	<0.44	<0.44	<0.44	<0.44	<0.41	<0.41	<0.47	<0.5	0.44 J	<0.24	<0.44
t-Butylbenzene	NS	NS	<0.56	<1.0	<0.50	<0.50	<0.50	<0.50	<0.97	<0.97	<0.34	<0.71	<0.36	<0.36	<1.1
Chloromethane	3	0.3									<1	<1.9	<0.81	<0.81	<1.9
2-Chlorotoluene	NS	NS	<0.37	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85	<0.85	<0.49	<0.7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<0.38	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36	<0.36	<0.45	<0.5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<0.34	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75	<0.75	<0.56	<0.98	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<0.78	<1.0	<0.47	<0.47	<0.47	<0.47	<0.57	<0.57	<0.64	<0.6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	<0.39	**9.4**	<0.46	<0.46	<0.46	0.47 Q	<0.83	0.84 Q	<0.68	<0.74	<0.38	<0.38	<0.45
trans-1,2-Dichloroethene	100	20	<0.35	<1.0	<0.64	<0.64	<0.64	<0.64	<0.89	<0.89	<0.95	<0.79	<0.35	<0.35	<0.54
Ethylbenzene	700	140	<0.44	<1.0	<0.50	<0.50	<0.50	<0.50	<0.54	<0.54	<0.38	<0.78	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	<0.51	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59	<0.59	<0.48	<0.92	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	<0.45	**5.3 B**	<0.38	<0.38	<0.38	<0.38	<0.43	<0.43	<0.69	<1.1	<0.5	<0.5	<1.3
Naphthalene	100	10	<0.34	<1.0	<0.59	<0.59	<0.59	<0.59	<0.74	<0.74	<1.8	<2.1	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	<0.54	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81	<0.81	<0.38	<0.59	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	<0.52	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45	<0.45	<0.52	<0.44	<0.33	<0.33	<0.49
Toluene	1,000	200	1.1	1.3	<0.40	<0.40	<0.40	<0.40	<0.67	<0.67	<0.46	<0.53	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<0.30	<1.0	<0.53	<0.53	<0.53	<0.53	<0.90	<0.90	<0.5	<0.85	<0.33	<0.33	<0.84
Trichloroethene	5	0.5	**8.4**	**2.8**	<0.49	<0.49	**1.6**	**1.1 Q**	<0.48	<0.48	<0.44	<0.47	<0.33	<0.33	<0.47
1,2,4-Trimethylbenzene	--	--	<0.47	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<0.47	<1.0	<0.45	<0.45	<0.45	<0.45	<0.83	<0.83	<0.37	<0.74	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	<0.47	<1.0	<0.47	<.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	<0.32	<1.0	<0.17	<0.17	<0.17	<0.17	<0.18	<0.18	<0.2	<0.18	<0.18	<0.18	<0.17
Xylenes, m + p	--	--	<0.81	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Xylene, o	--	--	<0.41	<1.0	<0.54	<0.54	<0.54	<0.54	<0.83	<0.83	<0.32	<0.8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	<0.81	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Styrene	100	10	<0.30	<1.0	<0.37	<0.37	<0.37	<0.37	<0.86	<0.86	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	NA	<2.3	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	NA	<1.8	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Methane	NS	NS	NA	NA	1.3	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):															
1-Methylnaphthalene	NS	NS	NA	NA	<0.044	<0.044	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	<3	<11	<0.049	<0.049	<0.049	<0.049	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	<4	<11	<0.20	<0.20	<0.20	<0.20	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	<5	<11	<0.18	<0.18	<0.18	<0.18	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	<5	<11	<0.0090	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	<5	<11	<0.0088	<0.0087	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	<4	<11	<0.012	<0.012	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	<4	<11	<0.016	<0.016	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	<5	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	<4	<11	<0.0080	<0.0079	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	<5	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	<7	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	<5	<11	<0.0090	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	<4	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	<5	<11	<0.019	<0.019	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	<4	<11	<0.02	<0.020	<0.020	<0.020	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	<4	<11	<0.0084	<0.0083	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	<5	<11	<0.12	<0.12	<0.12	<0.12	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	<5	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	<3	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	<3	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	<4	<11	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	<4	<11	<0.013	<0.13	<0.13	<0.13	NA	NA	NA	NA	NA	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-03												
			5/20/93	9-6-94	5/11/99	9/29/99	12/7/99	3/30/00	4/15/05	10/20/06	9/18/07	9/24/12	10/24/13	11/17/14	10/12/15
RCRA Metals (mg/L)															
Antimony	0.006	0.0012	NA	NA	B(-0.0032)	0.00027 Q	<0.00020	<0.0020	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	<0.002	<0.0024	**(-0.47)**	**0.0019**	**0.0017**	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	0.086	0.18	0.19	0.19	0.19	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	NA	<0.00043	<0.000070	<0.000070	<0.000070	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	<0.0030	<0.00017	(0.00013)	<0.000060	0.000090 Q	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	0.006	<0.00053	(0.00020)	(0.00048)	(-0.00008)	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	NA	<0.00094	0.00073 Q	0.00092	(-0.00041)	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	NA	0.14	(0.0097)	0.023	0.033	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	<0.025	<0.0028	0.00028 Q	<0.00015	<0.00015	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	NA	**0.056**	**0.058**	**0.065**	**0.06**	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	**0.0021**	<0.000042	<0.000042	<0.000042	<0.000042	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	NA	<0.0022	0.00056	0.00093	0.00056	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	<0.001	<0.0023	<0.00064	0.00097 Q	0.00079 Q	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	<0.010	B(0.00056)	<0.000095	<0.00005	<0.00010	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	NA	9.1	8.7	9.5	9	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	NA	<0.0013	<0.000093	<0.000093	<0.000093	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	NA	<0.00089	0.00.7 Q	0.0068	0.0042 Q	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):															
Aroclor-1016	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	<2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	<2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)															
Alkalinity	increase of 100		NA	300	320	310 H(1)	330	310	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	7.3	7.4	7.2	8.7	8	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	27	30	30	30	31	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	640	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	NA	320	310 H(1)	330	310	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	NA	<2.5	<1.9 H(1)	<1.9	<1.9	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	NA	<0.043	<0.043	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	NA	<0.090	<0.090	<0.080	(0.09)	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	<0.037	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	NA	<0.33	2	<0.50	1.5	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements															
pH		IU	7.8	7.99	7.33	7.7	7.69	7.48	7.41	7.59	7.15	8.02	6.63	8.11	7.33
Conductivity		uS	519	567	586	584	587	588	NA	614.9	619.7	591	669	616	689
Temperature		°C	10.8	8.3	10.9	10.6	8.2	10.6	9.6	9.4	11.6	10.89	10.29	7.62	11.82
Dissolved Oxygen		ppm	NA	NA	0.99	2.54	2.66	2.23	NA	1.95	1.58	0.24	0.84	0.27	1.02
Redox Potential		mV	NA	NA	101	224	239	-60	NA	0	-22	-134.8	81.3	-50.1	-57.3

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-05											
			9/7/94	5/19/99	9/30/99	12/8/99	3/30/00	4/18/05	10/18/06	9/21/07	9/26/12	10/24/13	11/17/14	10/15/15
Volatile Organic Compounds (VOCs) (µg/L):														
Benzene	5	0.5	<1.0	<0.44	<0.44	<0.44	<0.44	<0.41	<0.41	<0.47	<0.5	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS	<1.0	<0.50	<0.50	<0.50	<0.50	<0.97	<0.97	<0.34	<0.71	<0.36	<0.36	<1.1
Chloromethane	3	0.3								<1	<1.9	<0.81	<0.81	<1.9
2-Chlorotoluene	NS	NS	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85	<0.85	<0.49	<0.7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36	<0.36	<0.45	<0.5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75	<0.75	<0.56	<0.98	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<1.0	<0.47	<0.47	<0.47	<0.47	<0.57	<0.57	<0.64	<0.6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	**7.8**	**16**	**18**	**18**	**14**	**30**	**40**	**38**	**41**	**49**	**45**	**42**
trans-1,2-Dichloroethene	100	20	<1.0	<0.64	<0.64	<0.64	<0.64	<0.89	<0.89	<0.95	<0.79	<0.35	<0.35	<0.54
Ethylbenzene	700	140	<1.0	<0.50	<0.50	<0.50	<0.50	<0.54	<0.54	<0.38	<0.78	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59	<0.59	<0.48	<0.92	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	**5.7 B**	<0.38	<0.38	<0.38	<0.38	<0.43	<0.43	<0.69	<1.1	<0.5	<0.5	<1.3
Naphthalene	100	10	<1.0	<0.59	<0.59	<0.59	<0.59	<0.74	<0.74	<1.8	<2.1	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81	<0.81	<0.38	<0.59	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45	<0.45	<0.52	<0.44	<0.33	<0.33	<0.49
Toluene	1,000	200	<1.0	<0.40	<0.40	0.66 Q	<0.40	<0.67	<0.67	<0.46	<0.53	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<1.0	<0.53	<0.53	<0.53	<0.53	<0.90	<0.90	<0.5	<0.85	<0.33	<0.33	<0.84
Trichloroethene	5	0.5	**2.2**	**1.5 Q**	**1.9**	**1.8**	**1.7**	<0.48	**1.5 Q**	**1.76**	**1.53**	**1.6**	**1.75**	**1.46 J**
1,2,4-Trimethylbenzene	--	--	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<1.0	<0.45	<0.45	<0.45	<0.45	<0.83	<0.83	<0.37	<0.74	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	<1.0	**1.5 Q**	**1.7**	**1.3**	**1.3**	**2.5**	**4.4**	**3.6**	**1.93**	**2.29**	**1.26**	**0.85**
Xylenes, m + p	--	--	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Xylene, o	--	--	<1.0	<0.54	<0.54	<0.54	<0.54	<0.83	<0.83	<0.32	<0.8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Styrene	100	10	<1.0	<0.37	<0.37	<0.37	<0.37	<0.86	<0.86	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	<10	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	<10	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Methane	NS	NS	NA	<10	50	20	40	NA	35	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):														
1-Methylnaphthalene	NS	NS	NA	<0.044	<0.044	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	<11	<0.049	<0.049	<0.049	<0.049	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	<11	<0.20	<0.20	<0.20	<0.20	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	<11	<0.18	<0.18	<0.18	<0.18	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	<11	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	<11	<0.0087	<0.0087	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	<11	<0.012	<0.012	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	<11	<0.016	<0.016	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	<11	<0.0079	<0.0079	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	<11	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	<11	<0.019	<0.019	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	<11	<0.020	<0.020	<0.020	<0.020	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	<11	<0.0083	<0.0083	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	<11	0.24	0.24	0.24	<0.12	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	<11	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	<11	<0.13	<0.13	<0.13	<0.13	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-05											
			9/7/94	5/19/99	9/30/99	12/8/99	3/30/00	4/18/05	10/18/06	9/21/07	9/26/12	10/24/13	11/17/14	10/15/15
RCRA Metals (mg/L)														
Antimony	0.006	0.0012	NA	B(-0.0032)	<0.00016	**0.0013**	<0.00020	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	<0.002	<0.0024	**(-0.00047)**	**(0.00035)**	0.00064	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	0.13	0.098	0.1	0.11	0.1	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	<0.00043	<0.000070	0.00029	<0.000070	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	<0.0030	B(-0.00020)	(0.00013)	0.00031	0.000060 Q	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	**0.013**	<0.00053	(0.00020)	(0.00012)	(-0.00008)	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	0.0011 Q	0.0015	0.00067 Q	(-0.00041)	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	**0.19**	(0.0097)	(0.022)	0.12	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	<0.025	<0.0028	<0.00015	0.00027 Q	<0.00015	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	**0.07**	**0.06**	**0.063**	**0.062**	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	**0.0024**	<0.000042	<0.000042	<0.000042	<0.000042	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	<0.0022	0.0017	0.0018	0.0016	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	<0.001	<0.0023	<0.00064	0.0014 Q	0.0014 Q	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	<0.010	<0.00046	<0.000095	(-0.0004)	<0.00010	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	44	38	34	34	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	**0.0017 Q**	<0.000093	0.00028 Q	<0.000093	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	<0.00089	0.0023 Q	(-0.0048)	0.0045 Q	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):														
Aroclor-1016	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)														
Alkalinity	increase of 100		320	320	370	350	340	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		10.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	**190**	51	50	44	44	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	46	56	67	70	68	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		720	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	57	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		450	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	320	370	350	340	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	<2.5	<1.9	<1.9	<1.9	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	<0.043	<0.043	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	<0.090	<0.090	<0.080	<0.080	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	<0.037	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	2.8	2.4	1.4 Q	(0.67)	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements														
pH		IU	7.2	6.76	7.39	7.19	7.01	7.04	7.07	6.96	6.8	7.05	7.21	7.14
Conductivity		uS	800	818	827	836	807	824	840.2	798.6	801	858	758	860
Temperature		°C	12	10	12.8	10.1	9.6	7.2	10.8	13.5	12.28	11.5	8.81	11.78
Dissolved Oxygen		ppm	NA	1.59	0.58	0.66	0.98	2.7	1.03	0.98	0.21	0.27	0.43	0.47
Redox Potential		mV	NA	0	28	16	533	-52	-66	131	-78.8	69.4	-0.3	-44.9

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-05A											
			9/7/94	5/19/99	9/30/99	12/8/99	3/30/00	4/18/05	10/18/06	9/21/07	9/26/12	10/24/13	11/17/14	10/15/15
Volatile Organic Compounds (VOCs) (µg/L):														
Benzene	5	0.5	**1.0**	<0.44	<0.44	<0.44	<0.44	<0.41	<0.41	<0.47	<0.5	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS	<1.0	<0.50	<0.50	<0.50	<0.50	<0.97	<0.97	<0.34	<0.71	<0.36	<0.36	<1.1
Chloromethane	3	0.3								<1	<1.9	**1.1 J**	<0.81	<1.9
2-Chlorotoluene	NS	NS	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85	<0.85	<0.49	<0.7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36	<0.36	<0.45	<0.5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75	<0.75	<0.56	<0.98	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<1.0	<0.47	<0.47	<0.47	<0.47	<0.57	<0.57	<0.64	<0.6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	**15**	0.70 Q	1.0 Q	2.8	0.93 Q	<0.83	<0.83	<0.68	<0.74	<0.38	<0.38	<0.45
trans-1,2-Dichloroethene	100	20	<1.0	<0.64	<0.64	<0.64	<0.64	<0.89	<0.89	<0.95	<0.79	<0.35	<0.35	<0.54
Ethylbenzene	700	140	<1.0	<0.50	<0.50	<0.50	<0.50	<0.54	<0.54	<0.38	<0.78	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59	<0.59	<0.48	<0.92	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	**5.9 B**	<0.38	<0.38	<0.38	<0.38	<0.43	<0.43	<0.69	<1.1	<0.5	<0.5	<1.3
Naphthalene	100	10	<1.0	<0.59	<0.59	<0.59	<0.59	<0.74	<0.74	<1.8	<2.1	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81	<0.81	<0.38	<0.59	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45	<0.45	<0.52	<0.44	<0.33	<0.33	<0.49
Toluene	1,000	200	<1.0	<0.40	<0.40	<0.40	<0.40	<0.67	<0.67	<0.46	<0.53	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<1.0	<0.53	<0.53	<0.53	<0.53	<0.90	<0.90	<0.5	<0.85	<0.33	<0.33	<0.84
Trichloroethene	5	0.5	**5.9**	**0.84 Q**	**0.96 Q**	**1.2 Q**	**1.2 Q**	<0.48	<0.48	0.46 J	<0.47	<0.33	<0.33	<0.47
1,2,4-Trimethylbenzene	--	--	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<1.0	<0.45	<0.45	<0.45	<0.45	<0.83	<0.83	<0.37	<0.74	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	**9.8**	<0.17	**1.2**	**0.57**	<0.17	<0.18	<0.18	<0.2	<0.18	<0.18	<0.18	<0.17
Xylenes, m + p	--	--	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Xylene, o	--	--	<1.0	<0.54	<0.54	<0.54	<0.54	<0.83	<0.83	<0.32	<0.8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Styrene	100	10	<1.0	<0.37	<0.37	<0.37	<0.37	<0.86	<0.86	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	<10	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	<10	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Methane	NS	NS	NA	<10	18	11	19	NA	<10	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):														
1-Methylnaphthalene	NS	NS	NA	<0.044	<0.044	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	<11	<0.049	<0.049	<0.049	<0.049	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	<11	<0.20	<0.20	<0.20	<0.20	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	<11	<0.18	<0.18	<0.18	<0.18	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	<11	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	<11	<0.0087	<0.0087	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	<11	<0.012	<0.012	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	<11	<0.016	<0.016	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	<11	<0.0079	<0.0079	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	<11	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	<11	<0.019	<0.019	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	<11	<0.020	<0.020	<0.020	<0.020	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	<11	<0.0083	<0.0083	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	<11	<0.12	0.17 Q	0.17 Q	<0.12	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	<11	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	<11	<0.13	<0.13	<0.13	<0.13	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-05A											
			9/7/94	5/19/99	9/30/99	12/8/99	3/30/00	4/18/05	10/18/06	9/21/07	9/26/12	10/24/13	11/17/14	10/15/15
RCRA Metals (mg/L)														
Antimony	0.006	0.0012	NA	<0.0019	<0.00016	0.0011	**0.0012**	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	<0.002	<0.0024	**(-0.00047)**	**(0.00038)**	**(0.00034)**	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	0.13	0.12	0.12	0.12	0.021	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	B(0.00045)	<0.000070	0.00022	0.00021 Q	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	<0.0030	B(-0.00020)	(0.00013)	<0.000060	**0.0029**	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	<0.0044	0.00069 Q	(0.00020)	(0.00012)	(0.00017)	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	<0.00094	0.00081	0.00084	(-0.0003)	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	**0.63**	**0.67**	**0.64**	(-0.024)	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	<0.025	<0.0028	<0.00015	0.00040 Q	0.00025 Q	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	**0.072**	**0.064**	**0.073**	0.00024	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	**0.0023**	<0.000042	<0.000042	<0.000042	<0.000042	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	<0.0022	0.00097	0.0011	0.00040 Q	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	<0.001	<0.0023	<0.00064	0.00086 Q	(0.00083)	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	<0.010	<0.00046	0.00029 Q	(-0.00041)	(0.00047)	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	14	13	13	0.51	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	<0.0011	<0.000093	0.00025 Q	0.00019 Q	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	<0.00089	0.0032 Q	(-0.0048)	0.013	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):														
Aroclor-1016	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)														
Alkalinity	increase of 100		39	340	420	370	370	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	26	26	27	22	26	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	39	31	38	37	40	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		510	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	340	420	370	370	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	<2.5	<1.9	<1.9	<3.8	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	<0.043	<0.043	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	<0.090	<0.090	<0.080	<0.080	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	<0.037	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	4.3	4.1	3.6	4.5 A(0.67)	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements														
pH		IU	7	6.87	7.4	7.15	7.04	7.11	7.18	7	6.99	7.16	7.29	7.05
Conductivity		uS	500	719	732	746	728	731	727.1	700.2	705	763	699	790
Temperature		°C	11	10.2	10.9	9.2	10.6	10	9.6	10.7	10.11	10.25	8.03	10.6
Dissolved Oxygen		ppm	NA	1.96	1.21	1.2	1.01	1.09	1.26	1.6	0.16	0.3	0.6	0.48
Redox Potential		mV	NA	-66	-38	-44	-40	-48	-59	118	-110.1	55.9	-16.6	-50

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-05B											
			9/7/94	5/19/99	9/30/99	12/8/99	3/30/00	4/18/05	10/18/06	9/21/07	9/26/12	10/24/13	11/17/14	10/15/15
Volatile Organic Compounds (VOCs) (µg/L):														
Benzene	5	0.5	<1.0	<0.44	<0.44	<0.44	<0.44	<0.41	<0.41	<0.47	<0.5	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS	<1.0	<0.50	<0.50	<0.50	<0.50	<0.97	<0.97	<0.34	<0.71	<0.36	<0.36	<1.1
Chloromethane	3	0.3								<1	<1.9	**1.13 J**	<0.81	<1.9
2-Chlorotoluene	NS	NS	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85	<0.85	<0.49	<0.7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36	<0.36	<0.45	<0.5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75	<0.75	<0.56	<0.98	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<1.0	<0.47	<0.47	<0.47	<0.47	<0.57	<0.57	<0.64	<0.6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	1.6	<0.46	<0.46	1.7	<0.46	<0.83	<0.83	<0.68	<0.74	<0.38	<0.38	<0.45
trans-1,2-Dichloroethene	100	20	<1.0	<0.64	<0.64	<0.64	<0.64	<0.89	<0.89	<0.95	<0.79	<0.35	<0.35	<0.54
Ethylbenzene	700	140	<1.0	<0.50	<0.50	<0.50	<0.50	<0.54	<0.54	<0.38	<0.78	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59	<0.59	<0.48	<0.92	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	**5.8 B**	<0.38	<0.38	<0.38	<0.38	<0.43	<0.43	<0.69	<1.1	<0.5	<0.5	<1.3
Naphthalene	100	10	<1.0	<0.59	<0.59	<0.59	<0.59	<0.74	<0.74	<1.8	<2.1	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81	<0.81	<0.38	<0.59	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45	<0.45	<0.52	<0.44	<0.33	<0.33	<0.49
Toluene	1,000	200	<1.0	<0.40	<0.40	<0.40	<0.40	<0.67	<0.67	<0.46	<0.53	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<1.0	<0.53	<0.53	<0.53	<0.53	<0.90	<0.90	<0.5	<0.85	<0.33	<0.33	<0.84
Trichloroethene	5	0.5	**1.6**	<0.49	<0.49	<0.49	<0.49	<0.48	<0.48	<0.44	<0.47	<0.33	<0.33	<0.47
1,2,4-Trimethylbenzene	--	--	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<1.0	<0.45	<0.45	<0.45	<0.45	<0.83	<0.83	<0.37	<0.74	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	<1.0	<0.17	<0.17	<0.17	<0.17	<0.18	<0.18	<0.2	<0.18	<0.18	<0.18	<0.17
Xylenes, m + p	--	--	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Xylene, o	--	--	<1.0	<0.54	<0.54	<0.54	<0.54	<0.83	<0.83	<0.32	<0.8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Styrene	100	10	<1.0	<0.37	<0.37	<0.37	<0.37	<0.86	<0.86	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	<10	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	<10	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Methane	NS	NS	NA	<10	17	12	19	NA	<10	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):														
1-Methylnaphthalene	NS	NS	NA	<0.044	<0.044	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	<11	<0.049	<0.049	<0.049	<0.049	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	<11	<0.20	<0.20	<0.20	<0.20	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	<11	<0.18	<0.18	<0.18	<0.18	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	<11	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	<11	<0.0087	<0.0087	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	<11	<0.012	<0.012	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	<11	<0.016	<0.016	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	<11	<0.0079	<0.0079	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	<11	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	<11	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	<11	<0.019	<0.019	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	<11	<0.020	<0.020	<0.020	<0.020	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	<11	<0.0083	<0.0083	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	<11	<0.12	<0.12	0.16 Q	<0.12	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	<11	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	<11	<0.13	<0.13	<0.13	<0.13	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-05B											
			9/7/94	5/19/99	9/30/99	12/8/99	3/30/00	4/18/05	10/18/06	9/21/07	9/26/12	10/24/13	11/17/14	10/15/15
RCRA Metals (mg/L)														
Antimony	0.006	0.0012	NA	<0.0019	<0.00016	<0.00020	<0.00020	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	<0.002	<0.0024	**(-0.00047)**	**(0.38)**	**(0.00034)**	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	0.089	0.094	0.092	0.09	0.097	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	<0.00043	<0.000070	<0.000070	<0.000070	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	<0.0030	B(-0.0020)	(0.00013)	0.00019	**0.0024**	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	<0.0044	<0.00053	(0.00020)	(0.00012)	(0.00017)	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	<0.00094	0.00067 Q	<0.00025	(-0.0003)	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	**0.9**	**0.8**	**0.82**	**0.7**	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	<0.025	<0.0028	<0.00015	0.00016 Q	<0.00015	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	0.017	0.017	0.017	0.016	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	**0.0014**	<0.000042	<0.000042	<0.000042	<0.000042	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	<0.0022	0.00093	0.00084	0.00099	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	<0.001	<0.0023	<0.00064	<0.00064	(0.00083)	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	<0.010	<0.00046	0.00033	(-0.00041)	(0.00047)	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	13	12	12	13	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	**0.0015 Q**	<0.000093	<0.000093	<0.000093	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	<0.00089	0.0031 Q	(-0.0048)	0.005 Q	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):														
Aroclor-1016	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	<2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	<1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	<2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)														
Alkalinity	increase of 100		330	330	390	350	330	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	17	22	22	18	22	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	44	38	47	50	51	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		550	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	330	390	350	320	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	<2.5	<1.9	<1.9	8	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	<0.043	<0.043	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	<0.090	<0.090	<0.080	<0.080	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	<0.037	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	1.8	2.2	11	2.2	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements														
pH		IU	6.8	7.11	7.63	7.36	7.28	7.32	7.4	6.79	7.07	7.38	7.52	7.37
Conductivity		uS	400	688	706	710	696	716	719.4	682.7	689	715	656	745
Temperature		°C	13	10.6	10.5	9	10.6	10	9.6	11.7	9.9	10.34	7.92	10.86
Dissolved Oxygen		ppm	NA	0.76	1.49	1.56	1.54	1.58	1.05	0.73	0.18	1.75	0.53	0.73
Redox Potential		mV	NA	-98	-38	-76	-68	-63	-88	158	-109	69	-3	-53.5

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-9	WT-10							WT-11					
			note	10/19/06	9/19/07	9/26/12	10/24/13	11/18/14	10/20/15	10/20/15	10/18/06	9/20/07	9/26/12	10/22/13	11/17/14	10/15/15
Volatile Organic Compounds (VOCs) (µg/L):										DUP						
Benzene	5	0.5	Note: Free Product Present In Well	**20 Q**	<0.94	<50	<24	**20 J**	**37 J**	**39 J**	<4.1	<9.4	<5	<2.4	<2.4	<4.4
t-Butylbenzene	NS	NS		<24	<0.68	<71	<36	<18	<24	<60	<9.7	<6.8	<7.1	<3.6	<3.6	<11
Chloromethane	3	0.3		---	<200	<190	<81	<40.5	<95	<95		<9.4	<19	<8.1	<8.1	<19
2-Chlorotoluene	NS	NS		<21	<98	<70	<21	<10.5	<20	<20	<8.5	<9.8	<7	<2.1	<2.1	<4
1,2-Dichloroethane	5	0.5		<9.0	<90	<50	<41	<20.5	<24	<24	<3.6	<9	<5	<4.1	<4.1	<4.8
1,1-Dichloroethane	850	85		<19	<112	<98	<30	<15	<55	<55	<7.5	<11.2	<9.8	4.0 J	<3	<11
1,1-Dichloroethene	7	0.7		<14	<128	<60	<40	<20	<32.5	<32.5	<5.7	<12.8	<6	<4	<4	<6.5
cis-1,2-Dichloroethene	70	7		**2700**	**4,700**	**1210**	**1,600**	**3,090**	**9,200**	**9,600**	**950**	**480**	**500**	**600**	**420**	**360**
trans-1,2-Dichloroethene	100	20		<22	<190	<079	<35	<17.5	<27	<27	<8.9	<19	<7.9	<3.5	<3.5	<5.4
Ethylbenzene	700	140		<14	<76	<78	<55	<27.5	<35.5	<35.5	<5.4	<7.6	<7.8	<5.5	<5.5	<7.1
Isopropylbenzene	NS	NS		<15	<96	<92	<30	<15	<41	<41	<5.9	<9.6	<9.2	<3	<3	<8.2
Methylene chloride	5	0.5		<11	<138	<110	<50	<25	<65	<65	<4.3	<13.8	<11	<5	<5	<1.3
Naphthalene	100	10		<18	<360	<210	<170	<85	<80	<85	<7.4	<36	<21	<17	<17	<16
n-Propylbenzene	NS	NS		<20	<76	<59	<25	<12.5	<38.5	<38.5	<8.1	<7.6	<5.9	<2.5	<2.5	<7.7
Tetrachloroethene	5	0.5		<11	<104	<44	<33	<16.5	<24.5	<24.5	<4.5	<10.4	<4.4	<3.3	<3.3	<4.9
Toluene	1,000	200		120	<92	139 J	83 J	106 J	**274**	**288**	<6.7	<9.2	<5.3	<6.9	<6.9	<4.4
1,1,1-Trichloroethane	200	40		<22	<100	<85	<33	<16.5	<42	<42	<9.0	<10	<8.5	<3.3	<3.3	<8.4
Trichloroethene	5	0.5		**16 Q**	<88	<47	<33	<16.5	<23.5	<23.5	**16 Q**	**12.8 J**	**10.2 J**	**10.5**	**7.9 J**	**9.0 J**
1,2,4-Trimethylbenzene	--	--		<24	<240	<80	<220	<110	<80	<80	<9.7	<24	<8	<22	<22	<16
1,3,5-Trimethylbenzene	--	--		<21	<74	<74	<140	<70	<75	<75	<8.3	<7.4	<7.4	<14	<14	<15
Total Trimethylbenzene	480	96		<24	<240	<80	<220	<110	<80	<80	<9.7	<24	<8	<22	<22	<16
Vinyl Chloride	0.2	0.02		**1800**	**760**	**2250**	**1,050**	**2,180**	**4,400**	**4,700**	**6.7**	<4	<1.8	**13.7**	<1.8	<1.7
Xylenes, m + p	--	--		<45	<134	<110	<69	50 J	<110	<110	<18	<13.4	<11	<6.9	<6.9	<22
Xylene, o	--	--		<21	<64	<80	<63	<31.5	<45	<45	<8.3	<6.4	<8	<6.3	<6.3	<9
Total Xylenes	10,000	1,000		<45	<134	<110	<69	50 J	<45	<45	<18	<13.4	<11	<6.9	<6.9	<22
Styrene	100	10		<22	NA	NA	NA	NA	NA	NA	<8.6	NA	NA	NA	NA	NA
Ethane	NS	NS		84	NA	NA	NA	NA	NA	NA	<10	NA	NA	NA	NA	NA
Ethene	NS	NS		<10	NA	NA	NA	NA	NA	NA	<10	NA	NA	NA	NA	NA
Methane	NS	NS		110	NA	NA	NA	NA	NA	NA	<10	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):																
1-Methylnaphthalene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-9	WT-10							WT-11					
			note	10/19/06	9/19/07	9/26/12	10/24/13	11/18/14	10/20/15	10/20/15	10/18/06	9/20/07	9/26/12	10/22/13	11/17/14	10/15/15
RCRA Metals (mg/L)																
Antimony	0.006	0.0012	Note: Free Product Present In Well	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):																
Aroclor-1016	NS	NS		NA	NA	NA	<0.11	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS		NA	NA	NA	<0.081	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS		NA	NA	NA	<0.047	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS		NA	NA	NA	<0.052	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS		NA	NA	NA	<0.095	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS		NA	NA	NA	<0.052	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS		NA	NA	NA	<0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003		NA	NA	NA	<0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)																
Alkalinity	increase of 100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements																
pH		IU		6.5	7.07	6.88	7.55	10.22	7.00	7.00	6.81	6.92	6.82	7.17	7.14	7.05
Conductivity		uS		754.5	708.4	1082	1076	965	1037	1037	805	776.4	758	663	763	842
Temperature		°C		9.9	10.5	10.83	12.01	9.69	11.59	11.59	11.8	12.5	12.03	11.13	9.05	10.95
Dissolved Oxygen		ppm		0.79	--	0.23	0.38	0.39	0.45	0.45	0.95	0.53	0.14	0.45	0.21	0.63
Redox Potential		mV		-54	-116	-145.4	-37.4	-150.3	-123.5	-123.5	0.96	201	-58.2	88.6	42.1	-9.0

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-12								PZ-12			WT-13					
			10/18/06	9/20/07	9/26/12	10/22/13	11/17/14	11/17/14 DUP	10/15/15	10/15/15 DUP	10/22/13	11/17/14	10/15/15	10/19/06	9/19/07	9/25/12	10/22/13	11/17/14	10/15/15
Volatile Organic Compounds (VOCs) (µg/L):																			
Benzene	5	0.5	<4.1	<23.5	<25	**13 J**	<12	<12	<22	<22	**72 J**	**67**	**48 J**	<0.41	<0.47	<0.5	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS	<9.7	<17	<35.5	<18	<18	<18	<55	<55	<36	<18	<55	<0.97	<0.34	<0.71	<0.36	<0.36	<1.1
Chloromethane	3	0.3		<50	<95	<40.5	<40.5	<40.5	<95	<95	<81	<40.5	<95		**1.33 J**	<1.9	<0.81	<0.81	<1.9
2-Chlorotoluene	NS	NS	<8.5	<24.5	<35	<10.5	<10.5	<10.5	<20	<20	<21	<10.5	<20	<0.85	<0.49	<0.7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<3.6	<22.5	<25	<20.5	<20.5	<20.5	<24	<24	<41	<20.5	<24	<0.36	<0.45	<0.5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<7.5	<28	<49	<15	<15	<15	<55	<55	<30	<15	<55	<0.75	<0.56	<0.98	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<5.7	<32	<30	<20	<20	<20	<32.5	<32.5	<40	<20	<32.5	<0.57	<0.64	<0.6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	**730**	**940**	**2410**	**1670**	**1170**	**1100**	**820**	**870**	**4800**	**4200**	**3500**	<0.83	<0.68	<0.74	<0.38	<0.38	<0.45
trans-1,2-Dichloroethene	100	20	<8.9	<47.5	<39.5	<17.5	<17.5	<17.5	<27	<27	<35	<17.5	<27	<0.89	<0.95	<0.79	<0.35	<0.35	<0.54
Ethylbenzene	700	140	<5.4	<19	<39	<27.5	<27.5	<27.5	<35.5	<35.5	<55	<27.5	<35.5	<0.54	<0.38	<0.78	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	<5.9	<24	<46	<15	<15	<15	<41	<41	<30	<15	<41	<0.59	<0.48	<0.92	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	<4.3	<34.5	<55	<25	<25	<25	<65	<65	<50	<25	<65	<0.43	<0.69	<1.1	<0.5	<0.5	<1.3
Naphthalene	100	10	<7.4	<90	<105	<85	<85	<85	<80	<80	<170	<85	<80	<0.74	<1.8	<2.1	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	<8.1	<19	<29.5	<12.5	<12.5	<12.5	<38.5	<38.5	<25	<12.5	<38.5	<0.81	<0.38	<0.59	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	<4.5	<26	<22	<16.5	<16.5	<16.5	<24.5	<24.5	<33	<16.5	<24.5	<0.45	<0.52	<0.44	<0.33	<0.33	<0.49
Toluene	1,000	200	<6.7	<23	<26.5	<34.5	<34.5	<34.5	<22	<22	<69	<34.5	<22	<0.67	<0.46	<0.53	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<9.0	<25	<42.5	<16.5	<16.5	<16.5	<42	<42	<33	<16.5	<42	<0.90	<0.5	<0.85	<0.33	<0.33	<0.84
Trichloroethene	5	0.5	**16 Q**	**22.5 J**	**29 J**	**22.5 J**	**22.5 J**	**20.5 J**	<23.5	<23.5	<33	**21.5 J**	<23.5	<0.48	<0.44	<0.47	<0.33	<0.33	<0.47
1,2,4-Trimethylbenzene	--	--	<9.7	<60	<75	<110	<110	<110	<85	<85	<220	<110	<85	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<8.3	<18.5	<37	<70	<70	<70	<75	<75	<140	<70	<75	<0.83	<0.37	<0.74	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	<9.7	<60	<75	<110	<110	<110	<85	<85	<220	<110	<85	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	**31**	**37**	**510**	**262**	<9	**11.5 J**	<8.5	<8.5	**2980**	**2550**	**2000**	<0.18	<0.2	**0.59**	<0.18	<0.18	<0.17
Xylenes, m + p	--	--	<18	<33.5	<55	<34.5	<34.5	<34.5	<110	<110	<69	<34.5	<110	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Xylene, o	--	--	<8.3	<16	<40	<31.5	<31.5	<31.5	<45	<45	<63	<31.5	<45	<0.83	<0.32	<0.8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	<18	<33.5	<55	<34.5	<34.5	<34.5	<110	<110	<69	<34.5	<110	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Styrene	100	10	<8.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.86	NA	NA	NA	NA	NA
Ethane	NS	NS	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	NA	NA	NA	NA	NA
Ethene	NS	NS	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	NA	NA	NA	NA	NA
Methane	NS	NS	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):																			
1-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-12								PZ-12			WT-13					
			10/18/06	9/20/07	9/26/12	10/22/13	11/17/14	11/17/14	10/15/15	10/15/15	10/22/13	11/17/14	10/15/15	10/19/06	9/19/07	9/25/12	10/22/13	11/17/14	10/15/15
RCRA Metals (mg/L)																			
Antimony	0.006	0.0012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):																			
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)																			
Alkalinity	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements																			
pH		lU	7.41	7.14	6.68	7.15	7.15	7.15	7.05	7.05	7.18	7.17	6.91	7.72	7.37	7.3	7.41	7.47	7.61
Conductivity		uS	728.5	678.9	708	617	617	674	793	793	635	725	839	302.3	382.9	470	400	399	443
Temperature		°C	12.4	14	12.84	11.51	11.51	8.54	11.53	11.53	10.14	8.01	9.9	13.4	15.9	15.51	12.62	9.5	13.61
Dissolved Oxygen		ppm	0.94	0.81	0.09	0.46	0.46	0.49	0.69	0.69	0.68	0.25	0.93	8.17	--	3.47	7.24	7.98	7.55
Redox Potential		mV	41	195	-39	88.4	88.4	66.5	-4.9	-4.9	88	30.2	-0.7	115	10	-54.1	91.2	67.9	-23.1

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-14	WT-15					PZ-15A					PZ-15B				
			note	9/21/07	9/26/12	10/23/13	11/17/14	10/15/15	9/21/07	9/26/12	10/23/13	11/17/14	10/15/15	9/21/07	9/26/12	10/23/13	11/17/14	10/15/15
Volatile Organic Compounds (VOCs) (µg/L):																		
Benzene	5	0.5	Note: Free Product Present In Well	<0.47	<0.5	<0.24	<0.24	<0.44	<0.47	<0.5	<0.24	<0.24	<0.44	<0.47	<0.5	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS		<0.34	<0.71	<0.36	<0.36	<1.1	<0.34	<0.71	<0.36	<0.36	<1.1	<0.34	<0.71	<0.36	<0.36	<1.1
Chloromethane	3	0.3		<1	<1.9	<0.81	<0.81	<1.9	<1	**12.5**	<0.81	<0.81	<1.9	<1	**10.6**	<0.81	<0.81	<1.9
2-Chlorotoluene	NS	NS		<0.49	<0.7	<0.21	<0.21	<0.4	<0.49	<0.7	<0.21	<0.21	<0.4	<0.49	<0.7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5		<0.45	<0.5	<0.41	<0.41	<0.48	<0.45	<0.5	<0.41	<0.41	<0.48	<0.45	<0.5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85		<0.56	<0.98	<0.3	<0.3	<1.1	<0.56	<0.98	<0.3	<0.3	<1.1	<0.56	<0.98	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7		<0.64	<0.6	<0.4	<0.4	<0.65	<0.64	<0.6	<0.4	<0.4	<0.65	<0.64	<0.6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7		<0.68	<0.74	<0.38	<0.38	<0.45	<0.68	<0.74	<0.38	<0.38	<0.45	<0.68	<0.74	<0.38	<0.38	<0.45
trans-1,2-Dichloroethene	100	20		<0.95	<0.79	<0.35	<0.35	<0.54	<0.95	<0.79	<0.35	<0.35	<0.54	<0.95	<0.79	<0.35	<0.35	<0.54
Ethylbenzene	700	140		<0.38	<0.78	<0.55	<0.55	<0.71	<0.38	<0.78	<0.55	<0.55	<0.71	<0.38	<0.78	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS		<0.48	<0.92	<0.3	<0.3	<0.82	<0.48	<0.92	<0.3	<0.3	<0.82	<0.48	<0.92	<0.3	<0.3	<0.82
Methylene chloride	5	0.5		<0.69	<1.1	<0.5	<0.5	<1.3	<0.69	<1.1	<0.5	<0.5	<1.3	<0.69	<1.1	<0.5	<0.5	<1.3
Naphthalene	100	10		<1.8	<2.1	<1.7	<1.7	<1.6	<1.8	<2.1	<1.7	<1.7	<1.6	<1.8	<2.1	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS		<0.38	<0.59	<0.25	<0.25	<0.77	<0.38	<0.59	<0.25	<0.25	<0.77	<0.38	<0.59	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5		<0.52	<0.44	<0.33	<0.33	<0.49	<0.52	<0.44	<0.33	<0.33	<0.49	<0.52	<0.44	<0.33	<0.33	<0.49
Toluene	1,000	200		<0.46	<0.53	<0.69	<0.69	1.35 J	<0.46	<0.53	<0.69	<0.69	<0.44	<0.46	<0.53	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40		<0.5	<0.85	<0.33	<0.33	<0.84	<0.5	<0.85	<0.33	<0.33	<0.84	<0.5	<0.85	<0.33	<0.33	<0.84
Trichloroethene	5	0.5		<0.44	<0.47	<0.33	<0.33	<0.47	<0.44	<0.47	<0.33	<0.33	<0.47	<0.44	<0.47	<0.33	<0.33	<0.47
1,2,4-Trimethylbenzene	--	--		<1.2	<0.8	<2.2	<2.2	<1.6	<1.2	<0.8	<2.2	<2.2	<1.6	<1.2	<0.8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--		<0.37	<0.74	<1.4	<1.4	<1.5	<0.37	<0.74	<1.4	<1.4	<1.5	<0.37	<0.74	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96		<1.2	<0.8	<2.2	<2.2	<1.6	<1.2	<0.8	<2.2	<2.2	<1.6	<1.2	<0.8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02		<0.2	<0.18	<0.18	<0.18	<0.17	<0.2	<0.18	<0.18	<0.18	<0.17	<0.2	<0.18	<0.18	<0.18	<0.17
Xylenes, m + p	--	--		<0.67	<1.1	<0.69	<0.69	<2.2	<0.67	<1.1	<0.69	<0.69	<2.2	<0.67	<1.1	<0.69	<0.69	<2.2
Xylene, o	--	--		<0.32	<0.8	<0.63	<0.63	<0.9	<0.32	<0.8	<0.63	<0.63	<0.9	<0.32	<0.8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000		<0.67	<1.1	<0.69	<0.69	<2.2	<0.67	<1.1	<0.69	<0.69	<2.2	<0.67	<1.1	<0.69	<0.69	<2.2
Styrene	100	10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):																		
1-Methylnaphthalene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-14	WT-15					PZ-15A					PZ-15B				
			note	9/21/07	9/26/12	10/23/13	11/17/14	10/15/15	9/21/07	9/26/12	10/23/13	11/17/14	10/15/15	9/21/07	9/26/12	10/23/13	11/17/14	10/15/15
RCRA Metals (mg/L)																		
Antimony	0.006	0.0012	Note: Free Product Present In Well	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):																		
Aroclor-1016	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)																		
Alkalinity	increase of 100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements																		
pH		IU		7	6.89	7.02	7.25	7.1	7.14	6.83	6.98	7.22	7.08	7.09	6.89	7.02	7.22	7.04
Conductivity		uS		727.5	725	782	675	812	733.5	718	785	686	806	754.4	723	785	711	803
Temperature		°C		13.7	12.78	10.84	7.66	11.23	12.2	11.39	9.99	8.4	10.08	10.5	10.68	10.39	7.98	9.63
Dissolved Oxygen		ppm		3.06	1.21	2.37	3.09	2.22	3.48	1.42	2.88	2.15	2.7	0.47	1.29	0.98	1.29	1.85
Redox Potential		mV		177	-59.4	91.4	70.4	-1.7	81	-54	91.8	70.1	2.2	166	-58.8	90.7	63.1	1.6

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-16							PZ-16					PZ-16A			
			9/20/07	1/9/08	1/9/08	9/27/12	10/23/13	11/12/14	10/19/15	9/20/07	9/27/12	10/23/13	11/12/14	10/19/15	11/12/14	11/12/14	10/19/15	10/19/15
Volatile Organic Compounds (VOCs) (µg/L):					DUP											DUP		DUP
Benzene	5	0.5	**39 J**	**25 J**	<23.5	**49 J**	**46**	**30 J**	**44 J**	<9.4	**5.6 J**	**3.8 J**	**8.8**	**5.2 J**	<0.24	0.26 J	<0.44	<0.44
t-Butylbenzene	NS	NS	<17	<17	<17	<35.5	<18	<18	<55	<6.8	<7.1	<3.6	<3.6	<11	<0.36	<0.36	<1.1	<1.1
Chloromethane	3	0.3	<50	<50	<50	<95	<40.5	<40.5	<95	<20	<19	<8.1	<8.1	<19	<0.81	<0.81	<1.9	<1.9
2-Chlorotoluene	NS	NS	<24.5	<24.5	<24.5	<35	<10.5	<10.5	<20	<9.8	<7	<2.1	<2.1	<4	<0.21	<0.21	<0.4	<0.4
1,2-Dichloroethane	5	0.5	<22.5	<22.5	<22.5	<25	<20.5	<20.5	<24	<9	<5	<4.1	<4.1	<4.8	<0.41	<0.41	<0.48	<0.48
1,1-Dichloroethane	850	85	<28	<28	<28	<49	<15	<15	<55	<11.2	<9.8	<3	<3	<11	<0.3	<0.3	<1.1	<1.1
1,1-Dichloroethene	7	0.7	<32	<32	<32	<30	<20	<20	<32.5	<12.8	<6	<4	<4	<6.5	<0.4	<0.4	<0.65	<0.65
cis-1,2-Dichloroethene	70	7	**2,490**	**1,450**	**1,430**	**2,490**	**2,600**	**1,540**	**1600**	**700**	**680**	**241**	**820**	**420**	6.3	5.7	<0.45	<0.45
trans-1,2-Dichloroethene	100	20	<47.5	<47.5	<47.5	<39.5	<17.5	<17.5	<27	<19	17 J	15	18.5	16.9 J	<0.35	<0.35	<0.54	<0.54
Ethylbenzene	700	140	<19	<19	<19	<39	<27.5	<27.5	<35.5	<7.6	<7.8	<5.5	<5.5	<7.1	<0.55	<0.55	<0.71	<0.71
Isopropylbenzene	NS	NS	<24	<24	<24	<46	<15	<15	<41	<9.6	<9.2	<3	<3	<8.2	<0.3	<0.3	<0.82	<0.82
Methylene chloride	5	0.5	<34.5	<34.5	<34.5	<55	<25	<25	<65	<13.8	<11	<5	<5	<1.3	<0.5	<0.5	<1.3	<1.3
Naphthalene	100	10	<90	<90	<90	<105	<85	<85	<80	<36	<21	<17	<17	<16	<1.7	<1.7	<1.6	<1.6
n-Propylbenzene	NS	NS	<19	<19	<19	<29.5	<12.5	<12.5	<38.5	<7.6	<5.9	<2.5	<2.5	<7.7	<0.25	<0.25	<0.77	<0.77
Tetrachloroethene	5	0.5	<26	<26	<26	<22	<16.5	<16.5	<24.5	<10.4	<4.4	<3.3	<3.3	<4.9	<0.33	<0.33	<0.49	<0.49
Toluene	1,000	200	<23	<23	<23	<26.5	<34.5	<34.5	<22	<9.2	<5.3	<6.9	<6.9	<4.4	<0.69	<0.69	<0.44	<0.44
1,1,1-Trichloroethane	200	40	<25	<25	<25	<42.5	<16.5	<16.5	<42	<10	<8.5	<3.3	<3.3	<8.4	<0.33	<0.33	<0.84	<0.84
Trichloroethene	5	0.5	<22	<22	<22	<23.5	**21 J**	**17 J**	<23.5	<8.8	<4.7	**3.7 J**	**4.2 J**	<4.7	**5.4**	**4.4**	**5.4**	**5.5**
1,2,4-Trimethylbenzene	--	--	<60	<60	<60	<40	<110	<110	<85	<24	<8	<22	<22	<16	<2.2	<2.2	<1.6	<1.6
1,3,5-Trimethylbenzene	--	--	<18.5	<18.5	<18.5	<37	<70	<70	<75	<7.4	<7.4	<14	<14	<15	<1.4	<1.4	<1.5	<1.5
Total Trimethylbenzene	480	96	<60	<60	<60	<40	<110	<110	<85	<24	<8	<22	<22	<16	<2.2	<2.2	<1.6	<1.6
Vinyl Chloride	0.2	0.02	**1,430**	**950**	**850**	**2,210**	**1,890**	**1,460**	**1510**	**340**	**294**	**89**	**252**	**96**	**2.55**	**2.38**	<0.17	<0.17
Xylenes, m + p	--	--	<33.5	<33.5	<33.5	<55	<34.5	<34.5	<110	<13.4	<11	<6.9	<6.9	<22	<0.69	<0.69	<2.2	<2.2
Xylene, o	--	--	<16	<16	<16	<40	<31.5	<31.5	<45	<6.4	<9	<6.3	<6.3	<9	<0.63	<0.63	<0.9	<0.9
Total Xylenes	10,000	1,000	<33.5	<33.5	<33.5	<55	<34.5	<34.5	<110	<13.4	<11	<6.9	<6.9	<22	<0.69	<0.69	<2.2	<2.2
Styrene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):																		
1-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-16							PZ-16					PZ-16A			
			9/20/07	1/9/08	1/9/08	9/27/12	10/23/13	11/12/14	10/19/15	9/20/07	9/27/12	10/23/13	11/12/14	10/19/15	11/12/14	11/12/14	10/19/15	10/19/15
RCRA Metals (mg/L)																		
Antimony	0.006	0.0012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):																		
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)																		
Alkalinity	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements																		
pH		IU	6.93	---	---	7.25	7.34	7.37	7.29	6.81	7.29	7.43	7.45	7.39	7.43	7.54	7.26	7.26
Conductivity		uS	706	---	---	727	798	721	789	677.2	679	538	728	745	538	686	692	692
Temperature		°C	14.4	---	---	13.89	11.59	9.79	13.24	10.7	10.67	10	9.48	10.96	10	6.97	10.35	10.35
Dissolved Oxygen		ppm	1.39	---	---	0.27	0.5	0.43	0.53	1.08	0.16	0.5	0.33	0.55	0.5	0.45	0.60	0.60
Redox Potential		mV	118	---	---	-120.3	62.8	-49.1	-77.7	156	-123.9	24	-45.9	-77.8	24	-185.6	-45.9	-45.9

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-16B		PZ-16C		WT-17					WT-18				
			11/12/14	10/19/15	11/13/14	10/19/15	9/18/07	9/25/12	10/24/13	11/18/14	10/20/15	9/19/07	9/25/12	10/24/13	11/18/14	10/20/15
Volatile Organic Compounds (VOCs) (µg/L):																
Benzene	5	0.5	<0.24	<0.44	<0.24	<0.44	<4.7	<0.5	<0.24	<0.24	<0.44	**30.5 J**	**77**	**59**	**58**	**70**
t-Butylbenzene	NS	NS	<0.36	<1.1	<0.36	<1.1	<3.4	<0.71	<0.36	<0.36	<1.1	<17	<7.1	<3.6	<3.6	<11
Chloromethane	3	0.3	<0.81	<1.9	<0.81	<1.9	<10	<1.9	<0.81	<0.81	<1.9	<23.5	<19	<8.1	<8.1	<19
2-Chlorotoluene	NS	NS	<0.21	<0.4	<0.21	<0.4	<4.9	<0.7	<0.21	<0.21	<0.4	<24.5	<7	<2.1	<2.1	<4
1,2-Dichloroethane	5	0.5	<0.41	<0.48	<0.41	<0.48	<4.5	<0.5	<0.41	<0.41	<0.48	<22.5	<5	<4.1	<4.1	<4.8
1,1-Dichloroethane	850	85	<0.3	<1.1	<0.3	<1.1	<5.6	2.06 J	2.26	0.97	<1.1	<28	36	28.8	22.7	39
1,1-Dichloroethene	7	0.7	<0.4	<0.65	<0.4	<0.65	<6.4	<0.6	<0.4	0.78 J	<0.65	<32	<6	<4	<4	<6.5
cis-1,2-Dichloroethene	70	7	1.56	0.46 J	<0.38	<0.45	**199**	**155**	**119**	**176**	**75**	**238**	**20.8 J**	**9.2 J**	**50**	6.9 J
trans-1,2-Dichloroethene	100	20	<0.35	<0.54	<0.35	<0.54	<9.5	<0.79	1.38	1.31	<0.54	<47.5	<7.9	<3.5	<3.5	<5.4
Ethylbenzene	700	140	<0.55	<0.71	<0.55	<0.71	<3.8	<0.78	<0.55	<0.55	<0.71	<19	36	29.7	28.5	36
Isopropylbenzene	NS	NS	<0.3	<0.82	<0.3	<0.82	<4.8	<0.92	<0.3	<0.3	<0.82	<24	<9.22	<3	<3	<8.2
Methylene chloride	5	0.5	<0.5	<1.3	<0.5	<1.3	<6.9	<1.1	<0.5	<0.5	<1.3	<34.5	<11	<5	<5	<1.3
Naphthalene	100	10	<1.7	<1.6	<1.7	<1.6	<18	<2.1	<1.7	<1.7	<1.6	<90	**28.4 J**	**24.8 J**	**27.1 J**	**36 J**
n-Propylbenzene	NS	NS	<0.25	<0.77	<0.25	<0.77	<3.8	<0.59	<0.25	<0.25	<0.77	<19	<5.9	3.2 J	2.9 J	<7.7
Tetrachloroethene	5	0.5	<0.33	<0.49	<0.33	<0.49	<5.2	<0.44	<0.33	0.44 J	<0.49	<26	<4.4	<3.3	<3.3	<4.9
Toluene	1,000	200	<0.69	<0.44	<0.69	<0.44	<4.6	<0.53	<0.69	<0.69	<0.44	75	**203**	89	84	**221**
1,1,1-Trichloroethane	200	40	<0.33	<0.84	<0.33	<0.84	7.2 J	5.3	4.5	4.2	2.93	<25	<8.5	<3.3	<3.3	<8.4
Trichloroethene	5	0.5	**2.38**	**2.57**	<0.33	<0.47	**29.9**	**14.4**	**36**	**45**	**10**	<30.5	**5.8 J**	**3.8 J**	**3.3 J**	<4.7
1,2,4-Trimethylbenzene	--	--	<2.2	<1.6	<2.2	<1.6	<12	<0.8	<2.2	<2.2	<1.6	<60	20.4 J	<22	<22	20.7 J
1,3,5-Trimethylbenzene	--	--	<1.4	<1.5	<1.4	<1.5	<3.7	<0.74	<1.4	<1.4	<1.5	<18.5	<7.4	<14	<14	<15
Total Trimethylbenzene	480	96	<2.2	<1.6	<2.2	<1.6	<12	<0.8	<2.2	<2.2	<1.6	<60	20.4 J	<22	<22	20.7 J
Vinyl Chloride	0.2	0.02	**0.64**	<0.17	<0.18	<0.17	<2	<0.18	<0.18	**0.50 J**	**0.58**	**1,520**	**360**	**244**	**2040**	**410**
Xylenes, m + p	--	--	<0.69	<2.2	<0.69	<2.2	<6.7	<1.1	<0.69	<0.69	<2.2	<33.5	61	37	27.8	54 J
Xylene, o	--	--	<0.63	<0.9	<0.63	<0.9	<3.2	<0.8	<0.63	<0.63	<0.9	19 J	47	34	33	41
Total Xylenes	10,000	1,000	<0.69	<2.2	<0.69	<2.2	<6.7	<1.1	<0.69	<0.69	<0.9	19 J	108	101	60.8	95
Styrene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):																
1-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-16B		PZ-16C		WT-17					WT-18				
			11/12/14	10/19/15	11/13/14	10/19/15	9/18/07	9/25/12	10/24/13	11/18/14	10/20/15	9/19/07	9/25/12	10/24/13	11/18/14	10/20/15
RCRA Metals (mg/L)																
Antimony	0.006	0.0012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):																
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	<0.12	NA	NA	NA	NA	<0.12	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	<0.086	NA	NA	NA	NA	<0.086	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	<0.050	NA	NA	NA	NA	<0.050	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	<0.055	NA	NA	NA	NA	<0.055	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	<0.010	NA	NA	NA	NA	<0.10	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	<0.055	NA	NA	NA	NA	<0.055	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	<0.14	NA	NA	NA	NA	<0.14	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	<0.14	NA	NA	NA	NA	<0.14	NA	NA
General Chemistry Parameters (mg/L)																
Alkalinity	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements																
pH		IU	7.64	7.5	7.72	6.78	6.83	6.57	6.83	7.06	7.02	6.99	6.87	7.31	10.37	6.91
Conductivity		uS	666	661	558	563	515.2	725	797	677	697	947.8	1134	1200	1271	1388
Temperature		°C	8.36	10.66	8.97	10.06	10.5	10.53	10.55	9.62	10.42	10.8	11.59	11.3	10.00	11.34
Dissolved Oxygen		ppm	0.27	0.85	0.27	0.97	--	1.04	5.03	5.68	2.49	--	0.34	0.55	0.18	0.54
Redox Potential		mV	-159.4	-59.1	-71.8	-15	88	0	87.9	22	-28.9	-80	-132	-9	-123.2	-99.2

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-19					WT-20					WT-21				
			9/19/07	9/24/12	10/24/13	11/19/14	10/20/15	1/9/08	9/25/12	10/23/13	11/12/14	10/19/15	1/9/08	9/25/12	10/23/13	11/12/14	10/19/15
Volatile Organic Compounds (VOCs) (µg/L):																	
Benzene	5	0.5	<0.47	<0.5	<0.24	<0.24	<0.44	<0.47	<0.5	<0.24	<0.24	<0.44	<0.47	<0.5	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS	<0.34	<0.71	<0.36	<0.36	<1.1	<0.34	<0.71	<0.36	<0.36	<1.1	<0.34	<0.71	<0.36	<0.36	<1.1
Chloromethane	3	0.3	<0.48	<1.9	<0.81	<0.81	<1.9	<1	<1.9	<0.81	<0.81	<1.9	<0.47	<1.9	<0.81	<0.81	<1.9
2-Chlorotoluene	NS	NS	<0.49	<0.7	<0.21	<0.21	<0.63	<0.49	<0.7	<0.21	<0.21	<0.4	<0.49	<0.7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<0.45	<0.5	<0.41	<0.41	<0.48	<0.45	<0.5	<0.41	<0.41	<0.48	<0.45	<0.5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<0.56	<0.98	<0.3	<0.3	<1.1	<0.56	<0.98	<0.3	<0.3	<1.1	<0.56	<0.98	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<0.64	<0.6	<0.4	<0.4	<0.65	<0.64	<0.6	<0.4	<0.4	<0.65	<0.64	<0.6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	1.57 J	2.32 J	0.72 J	<0.38	0.56 J	<0.68	<0.74	<0.38	<0.38	0.62 J	<0.68	<0.74	<0.38	<0.38	<0.45
trans-1,2-Dichloroethene	100	20	<0.95	<0.79	<0.35	<0.35	<0.54	<0.95	<0.79	<0.35	<0.35	<0.54	<0.95	<0.79	<0.35	<0.35	<0.54
Ethylbenzene	700	140	<0.38	<0.78	<0.55	<0.55	<2.2	<0.38	<0.78	<0.55	<0.55	<0.71	<0.38	<0.78	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	<0.48	<0.92	<0.3	<0.3	<1.1	<0.48	<0.92	<0.3	<0.3	<0.82	<0.48	<0.92	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	<0.69	<1.1	<0.5	<0.5	<1.3	<0.69	<1.1	<0.5	<0.5	<1.3	<0.69	<1.1	<0.5	<0.5	<1.3
Naphthalene	100	10	<1.8	<2.1	<1.7	<1.7	<1.6	<1.8	<2.1	<1.7	<1.7	<1.6	<1.8	<2.1	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	<0.38	<0.59	<0.25	<0.25	<0.77	<0.38	<0.59	<0.25	<0.25	<0.77	<0.38	<0.59	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	<0.52	<0.44	<0.33	<0.33	<0.49	<0.52	<0.44	<0.33	<0.33	<0.49	<0.52	<0.44	<0.33	<0.33	<0.49
Toluene	1,000	200	<0.46	<0.53	<0.69	<0.69	<0.44	<0.46	<0.53	<0.69	<0.69	<0.44	<0.46	<0.53	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<0.5	<0.85	<0.33	<0.33	<0.48	<0.5	<0.85	<0.33	<0.33	<0.84	<0.5	<0.85	<0.33	<0.33	<0.84
Trichloroethene	5	0.5	**0.98 J**	**0.69 J**	**0.53 J**	**0.50 J**	**0.78 J**	<0.44	<0.47	<0.33	<0.33	<0.47	<0.44	<0.47	<0.33	<0.33	<0.47
1,2,4-Trimethylbenzene	--	--	<1.2	<0.8	<2.2	<2.2	<2.7	<1.2	<0.8	<2.2	<2.2	<1.6	<1.2	<0.8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<0.37	<0.74	<1.4	<1.4	<1.5	<0.37	<0.74	<1.4	<1.4	<1.5	<0.37	<0.74	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	<1.2	<0.8	<2.2	<2.2	<1.5	<1.2	<0.8	<2.2	<2.2	<1.6	<1.2	<0.8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	<0.2	**0.22 J**	<0.18	<0.18	<0.17	<0.2	<0.18	<0.18	<0.18	**0.38 J**	<0.2	<0.18	<0.18	<0.18	<0.17
Xylenes, m + p	--	--	<0.67	<1.1	<0.69	<0.69	<2.2	<0.67	<1.1	<0.69	<0.69	<2.2	<0.67	<1.1	<0.69	<0.69	<2.2
Xylene, o	--	--	<0.32	<0.8	<0.63	<0.63	<0.9	<0.32	<0.8	<0.63	<0.63	<0.9	<0.32	<0.8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	<0.67	<1.1	<0.69	<0.69	<0.9	<0.67	<1.1	<0.69	<0.69	<2.2	<0.67	<1.1	<0.69	<0.69	<2.2
Styrene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):																	
1-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-19					WT-20					WT-21				
			9/19/07	9/24/12	10/24/13	11/19/14	10/20/15	1/9/08	9/25/12	10/23/13	11/12/14	10/19/15	1/9/08	9/25/12	10/23/13	11/12/14	10/19/15
RCRA Metals (mg/L)																	
Antimony	0.006	0.0012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):																	
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)																	
Alkalinity	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements																	
pH		IU	7.08	6.98	6.8	6.99	6.99	---	7.07	6.88	7.22	7.06	---	8.06	7.4	7.86	7.65
Conductivity		uS	891.3	888	790	755	951	---	612	440	565	579	---	244	201	245	265
Temperature		°C	14.3	13.01	11.01	9.68	12.24	---	17.11	13.27	9.95	15.22	---	18.18	13.97	10.59	15.55
Dissolved Oxygen		ppm	--	0.79	1.02	0.52	1.07	---	0.22	1.42	1.23	0.46	---	4.89	5.54	5.68	5.31
Redox Potential		mV	71	-51.2	85.8	-65.1	-12.4	---	-42.9	88.1	57.8	-24.3	---	-58.5	89.3	104.9	-12.0

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-22					WT-23					WT-24		PZ-24A		
			1/9/08	9/27/12	10/23/13	11/12/14	10/19/15	1/9/08	9/27/12	10/23/13	11/12/14	10/19/15	11/14/14	10/15/15	11/14/14	11/14/14	10/15/15
Volatile Organic Compounds (VOCs) (µg/L):																DUP	
Benzene	5	0.5	<0.47	<0.5	<0.24	<0.24	<0.44	<0.47	<0.5	<0.24	<0.24	<0.44	<0.24	<0.44	**3.3 J**	**3.4 J**	<4.4
t-Butylbenzene	NS	NS	<0.34	<0.71	<0.36	<0.36	<1.1	<0.34	<0.71	<0.36	<0.36	<1.1	<0.36	<1.1	<3.6	<3.6	<11
Chloromethane	3	0.3	<1	<1.9	<0.81	<0.81	<1.9	<1	<1.9	<0.81	<0.81	<1.9	<0.81	<1.9	<8.1	<8.1	<19
2-Chlorotoluene	NS	NS	<0.49	<0.7	<0.21	<0.21	<0.4	<0.49	<0.7	<0.21	<0.21	<0.4	<0.21	<0.4	<2.1	<2.1	<4
1,2-Dichloroethane	5	0.5	<0.45	<0.5	<0.41	<0.41	<0.48	<0.45	<0.5	<0.41	<0.41	<0.48	<0.41	<0.48	<4.1	<4.1	<4.8
1,1-Dichloroethane	850	85	<0.56	<0.98	<0.3	<0.3	<1.1	<0.56	<0.98	<0.3	<0.3	<1.1	<0.3	<1.1	<3	<3	<11
1,1-Dichloroethene	7	0.7	<0.64	<0.6	<0.4	<0.4	<0.65	<0.64	<0.6	<0.4	<0.4	<0.65	<0.4	<0.65	<4	<4	<6.5
cis-1,2-Dichloroethene	70	7	<0.68	<0.74	<0.38	<0.38	<0.45	<0.68	2.7	<0.38	<0.38	<0.45	<0.38	<0.45	**800**	**800**	**870**
trans-1,2-Dichloroethene	100	20	<0.95	<0.79	<0.35	<0.35	<0.54	<0.95	<0.79	<0.35	<0.35	<0.54	<0.35	<0.54	4.4 J	4.4 J	7.4 J
Ethylbenzene	700	140	<0.38	<0.78	<0.55	<0.55	<0.71	<0.38	<0.78	<0.55	<0.55	<0.71	<0.55	<0.71	<5.5	<5.5	<7.1
Isopropylbenzene	NS	NS	<0.48	<0.92	<0.3	<0.3	<0.82	<0.48	<0.92	<0.3	<0.3	<0.82	<0.3	<0.82	<3	<3	<8.2
Methylene chloride	5	0.5	<0.69	<1.1	<0.5	<0.5	<1.3	<0.69	<1.1	<0.5	<0.5	<1.3	<0.5	<1.3	<5	<5	<1.3
Naphthalene	100	10	<1.8	<2.1	<1.7	<1.7	<1.6	<1.8	<2.1	<1.7	<1.7	<1.6	<1.7	<1.6	<17	<17	<16
n-Propylbenzene	NS	NS	<0.38	<0.59	<0.25	<0.25	<0.77	<0.38	<0.59	<0.25	<0.25	<0.77	<0.25	<0.77	<2.5	<2.5	<7.7
Tetrachloroethene	5	0.5	<0.52	<0.44	<0.33	<0.33	<0.49	<0.52	<0.44	<0.33	<0.33	<0.49	<0.33	<0.49	<3.3	<3.3	<4.9
Toluene	1,000	200	<0.46	<0.53	<0.69	<0.69	<0.44	<0.46	<0.53	<0.69	<0.69	<0.44	<0.69	<0.44	<6.9	<6.9	<4.4
1,1,1-Trichloroethane	200	40	<0.5	<0.85	<0.33	<0.33	<0.84	<0.5	<0.85	<0.33	<0.33	<0.84	<0.33	<0.84	<3.3	<3.3	<8.4
Trichloroethene	5	0.5	<0.44	<0.47	<0.33	<0.33	<0.47	<0.44	<0.47	<0.33	<0.33	<0.47	<0.33	<0.47	<3.3	<3.3	<4.7
1,2,4-Trimethylbenzene	--	--	<1.2	<0.8	<2.2	<2.2	<1.6	<1.2	<0.8	<2.2	<2.2	<1.6	<2.2	<1.6	<22	<22	<16
1,3,5-Trimethylbenzene	--	--	<0.37	<0.74	<1.4	<1.4	<1.5	<0.38	<0.74	<1.4	<1.4	<1.5	<1.4	<1.5	<14	<14	<15
Total Trimethylbenzene	480	96	<1.2	<0.8	<2.2	<2.2	<1.6	<1.2	<0.8	<2.2	<2.2	<1.6	<2.2	<1.6	<22	<22	<16
Vinyl Chloride	0.2	0.02	<0.2	<0.18	<0.18	<0.18	<0.17	<0.2	**1.9**	<0.18	<0.18	<0.17	<0.18	<0.17	**244**	**243**	**251**
Xylenes, m + p	--	--	<0.67	<1.1	<0.69	<0.69	<2.2	<0.67	<1.1	<0.69	<0.69	<2.2	<0.69	<2.2	<6.9	<6.9	<22
Xylene, o	--	--	<0.32	<0.8	<0.63	<0.63	<0.9	<0.32	<0.8	<0.63	<0.63	<0.9	<0.63	<0.9	<6.3	<6.3	<9
Total Xylenes	10,000	1,000	<0.67	<1.1	<0.69	<0.69	<2.2	<0.67	<1.1	<0.69	<0.69	<2.2	<0.69	<2.2	<6.9	<6.9	<22
Styrene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):																	
1-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-22					WT-23					WT-24		PZ-24A		
			1/9/08	9/27/12	10/23/13	11/12/14	10/19/15	1/9/08	9/27/12	10/23/13	11/12/14	10/19/15	11/14/14	10/15/15	11/14/14	11/14/14	10/15/15
RCRA Metals (mg/L)																	
Antimony	0.006	0.0012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):																	
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)																	
Alkalinity	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements																	
pH		IU	---	7.23	7.13	7.54	7.42	---	6.91	7.46	7.32	7.07	7.01	6.99	7.45	7.45	7.47
Conductivity		uS	---	362	687	415	382	---	718	411	642	683	869	879	662	662	681
Temperature		°C	---	16.16	13.07	11.02	14.59	---	15.82	13.83	10.32	13.9	8.28	13.02	9.00	9.00	10.45
Dissolved Oxygen		ppm	---	2.42	2.16	6.34	4.02	---	0.2	3.68	1.6	1.41	6.67	1.2	0.15	0.15	0.81
Redox Potential		mV	---	-27.5	85.2	77.8	-2.2	---	-56.2	80.2	111.3	17.9	161.8	-27.7	-318.7	-318.7	-76.3

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-24B			PZ-24C		WT-25			PZ-25A		PZ-25B		PZ-25C	
			11/14/14	10/15/15	10/15/15	11/14/14	10/15/15	11/14/14	11/14/14	10/15/15	11/14/14	10/15/15	11/14/14	10/15/15	11/14/14	10/15/15
Volatile Organic Compounds (VOCs) (µg/L):					DUP				DUP							
Benzene	5	0.5	**4.1 J**	<4.4	<4.4	**1.69**	**0.60 J**	**1.14**	**1.23**	**0.91 J**	<0.24	<0.44	<0.24	<0.44	<0.24	<0.44
t-Butylbenzene	NS	NS	<3.6	<11	<11	<0.36	<1.1	<0.36	<0.36	<0.36	<0.36	<1.1	<0.36	<1.1	<0.36	<1.1
Chloromethane	3	0.3	<8.1	<19	<19	**2.58 J**	<1.9	<0.81	<0.81	<0.81	<0.81	<1.9	<0.81	<1.9	<0.81	<1.9
2-Chlorotoluene	NS	NS	<2.1	<4	<4	<0.21	<0.4	<0.21	<0.21	<0.21	<0.21	<0.4	<0.21	<0.4	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<4.1	<4.8	<4.8	<0.41	<0.48	<0.41	<0.41	<0.41	<0.41	<0.48	<0.41	<0.48	<0.41	<0.48
1,1-Dichloroethane	850	85	<3	<11	<11	<0.3	<1.1	<0.3	<0.3	<0.3	<0.3	<1.1	<0.3	<1.1	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<4	<6.5	<6.5	<0.4	<0.65	0.41 J	<0.4	<0.4	<0.4	<0.65	<0.4	<0.65	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	**360**	**330**	**340**	<0.38	<0.45	**100**	**103**	**67**	2.75	0.79 J	1.16 J	<0.45	1.87	0.59 J
trans-1,2-Dichloroethene	100	20	3.5 J	<5.4	<5.4	<0.35	<0.54	0.46 J	0.40 J	0.40 J	<0.35	<0.54	<0.35	<0.54	<0.35	<0.54
Ethylbenzene	700	140	<5.5	<7.1	<7.1	<0.55	<0.71	<0.55	<0.55	<0.55	<0.55	<0.71	<0.55	<0.71	<0.55	<0.71
Isopropylbenzene	NS	NS	<3	<8.2	<8.2	<0.3	<0.82	<0.3	<0.3	<0.3	<0.3	<0.82	<0.3	<0.82	<0.3	<0.82
Methylene chloride	5	0.5	<5	<1.3	<1.3	<0.5	<1.3	<0.5	<0.5	<0.5	<0.5	<1.3	<0.5	<1.3	<0.5	<1.3
Naphthalene	100	10	<17	<16	<16	<1.7	<1.6	<1.7	<1.7	<1.7	<1.7	<1.6	<1.7	<1.6	<1.7	<1.6
n-Propylbenzene	NS	NS	<2.5	<7.7	<7.7	<0.25	<0.77	<0.25	<0.25	<0.25	<0.25	<0.77	<0.25	<0.77	<0.25	<0.77
Tetrachloroethene	5	0.5	<3.3	<4.9	<4.9	<0.33	<0.49	<0.33	<0.33	<0.33	<0.33	<0.49	<0.33	<0.49	<0.33	<0.49
Toluene	1,000	200	<6.9	<4.4	<4.4	<0.69	<0.44	<0.69	<0.69	<0.69	<0.69	<0.44	<0.69	<0.44	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<3.3	<8.4	<8.4	<0.33	<0.84	<0.33	<0.33	<0.33	<0.33	<0.84	<0.33	<0.84	<0.33	<0.84
Trichloroethene	5	0.5	<3.3	<4.7	<4.7	<0.33	<0.47	<0.33	<0.33	<0.33	<0.33	<0.47	<0.33	<0.47	<0.33	<0.47
1,2,4-Trimethylbenzene	--	--	<22	<16	<16	<2.2	<1.6	<2.2	<2.2	<2.2	<2.2	<1.6	<2.2	<1.6	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<14	<15	<15	<1.4	<1.5	<1.4	<1.4	<1.4	<1.4	<1.5	<1.4	<1.5	<1.4	<1.5
Total Trimethylbenzene	480	96	<22	<16	<16	<2.2	<1.6	<2.2	<2.2	<2.2	<2.2	<1.6	<2.2	<1.6	<2.2	<1.6
Vinyl Chloride	0.2	0.02	**138**	**98**	**94**	<0.18	<0.17	**4.9**	**5.2**	**5.3**	**0.31 J**	<0.17	**0.33 J**	<0.17	**0.24 J**	<0.17
Xylenes, m + p	--	--	<6.9	<22	<22	<0.69	<2.2	<0.69	<0.69	<0.69	<0.69	<2.2	<0.69	<2.2	<0.69	<2.2
Xylene, o	--	--	<6.3	<9	<9	<0.63	<0.9	<0.63	<0.63	<0.63	<0.63	<0.9	<0.63	<0.9	<0.63	<0.9
Total Xylenes	10,000	1,000	<6.9	<22	<22	<0.69	<2.2	<0.69	<0.69	<0.69	<0.69	<2.2	<0.69	<2.2	<0.69	<2.2
Styrene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):																
1-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	PZ-24B			PZ-24C		WT-25			PZ-25A		PZ-25B		PZ-25C	
			11/14/14	10/15/15	10/15/15	11/14/14	10/15/15	11/14/14	11/14/14	10/15/15	11/14/14	10/15/15	11/14/14	10/15/15	11/14/14	10/15/15
RCRA Metals (mg/L)																
Antimony	0.006	0.0012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):																
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)																
Alkalinity	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements																
pH		IU	7.58	7.58	7.58	7.61	7.44	7.53	7.53	7.66	7.80	7.93	8.19	8.3	7.53	7.6
Conductivity		uS	639	667	667	523	541	734	734	738	613	599	406	384	722	533
Temperature		°C	8.53	10.11	10.11	8.71	9.61	9.36	9.36	10.2	8.66	9.98	8.60	10.49	8.77	9.46
Dissolved Oxygen		ppm	0.33	1.04	1.04	0.27	1.25	0.18	0.18	0.56	0.13	0.67	0.15	0.54	0.28	0.87
Redox Potential		mV	-492.6	-107.7	-107.7	-430.2	-58.3	-125.1	-125.1	-117.4	-445.7	-134.8	-411.5	-183.4	-485.7	-153.1

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-26		PZ-26A		PZ-26B		PZ-26C		P-1	
			11/13/14	10/12/15	11/13/14	10/12/15	11/13/14	10/12/15	11/13/14	10/12/15	8/26/15	9/15/15
Volatile Organic Compounds (VOCs) (µg/L):												
Benzene	5	0.5	<0.24	<0.44	<0.24	<0.44	<0.24	<0.44	<0.24	<0.44	<0.44	<22
t-Butylbenzene	NS	NS	<0.36	<1.1	<0.36	<1.1	<0.36	<1.1	<0.36	<1.1	<1.1	<55
Chloromethane	3	0.3	<0.81	<1.9	<0.81	<1.9	<0.81	<1.9	<0.81	<1.9	<1.9	<95
2-Chlorotoluene	NS	NS	<0.21	<0.4	<0.21	<0.4	<0.21	<0.4	<0.21	<0.4	<0.4	<31.5
1,2-Dichloroethane	5	0.5	<0.41	<0.48	<0.41	<0.48	<0.41	<0.48	<0.41	<0.48	<0.48	<24
1,1-Dichloroethane	850	85	<0.3	<1.1	<0.3	<1.1	<0.3	<1.1	<0.3	<1.1	1.77 J	<55
1,1-Dichloroethene	7	0.7	<0.4	<0.65	<0.4	<0.65	<0.4	<0.65	<0.4	<0.65	**0.76 J**	<32.5
cis-1,2-Dichloroethene	70	7	<0.38	<0.45	<0.38	<0.45	<0.38	<0.45	<0.38	<0.45	**880**	**840**
trans-1,2-Dichloroethene	100	20	<0.35	<0.54	<0.35	<0.54	<0.35	<0.54	<0.35	<0.54	4.7	<27
Ethylbenzene	700	140	<0.55	<0.71	<0.55	<0.71	<0.55	<0.71	<0.55	<0.71	<0.71	<35.5
Isopropylbenzene	NS	NS	<0.3	<0.82	<0.3	<0.82	<0.3	<0.82	<0.3	<0.82	<0.82	<41
Methylene chloride	5	0.5	<0.5	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<1.3	<1.3	<1.3
Naphthalene	100	10	<1.7	<1.6	<1.7	<1.6	<1.7	<1.6	<1.7	<1.6	<1.6	<80
n-Propylbenzene	NS	NS	<0.25	<0.77	<0.25	<0.77	<0.25	<0.77	<0.25	<0.77	<0.77	<38.5
Tetrachloroethene	5	0.5	<0.33	<0.49	<0.33	<0.49	<0.33	<0.49	<0.33	<0.49	**1.88**	<24.5
Toluene	1,000	200	<0.69	<0.44	<0.69	<0.44	5.1	<0.44	<0.69	<0.44	<0.44	<22
1,1,1-Trichloroethane	200	40	<0.33	<0.84	<0.33	<0.84	<0.33	<0.84	<0.33	<0.84	19.2	<42
Trichloroethene	5	0.5	<0.33	<0.47	<0.33	<0.47	<0.33	<0.47	<0.33	<0.47	**105**	**90**
1,2,4-Trimethylbenzene	--	--	<2.2	<1.6	<2.2	<1.6	<2.2	<1.6	<2.2	<1.6	<1.6	<80
1,3,5-Trimethylbenzene	--	--	<1.4	<1.5	<1.4	<1.5	<1.4	<1.5	<1.4	<1.5	<1.5	<75
Total Trimethylbenzene	480	96	<2.2	<1.6	<2.2	<1.6	<2.2	<1.6	<2.2	<1.6	<1.5	<80
Vinyl Chloride	0.2	0.02	<0.18	<0.17	<0.18	<0.17	<0.18	<0.17	<0.18	<0.17	**0.6**	<8.5
Xylenes, m + p	--	--	<0.69	<2.2	<0.69	<2.2	<0.69	<2.2	<0.69	<2.2	<2.2	<110
Xylene, o	--	--	<0.63	<0.9	<0.63	<0.9	<0.63	<0.9	<0.63	<0.9	<0.9	<45
Total Xylenes	10,000	1,000	<0.69	<2.2	<0.69	<2.2	<0.69	<2.2	<0.69	<2.2	<0.9	<45
Styrene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):												
1-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WT-26		PZ-26A		PZ-26B		PZ-26C		P-1	
			11/13/14	10/12/15	11/13/14	10/12/15	11/13/14	10/12/15	11/13/14	10/12/15	8/26/15	9/15/15
RCRA Metals (mg/L)												
Antimony	0.006	0.0012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):												
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)												
Alkalinity	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements												
pH		IU	7.32	7.14	7.55	7.3	7.72	7.34	7.72	9.81	NA	NA
Conductivity		uS	885	1053	588	692	1142	828	531	611	NA	NA
Temperature		°C	6.95	11.47	9.46	10.37	8.67	10.5	9.12	9.81	NA	NA
Dissolved Oxygen		ppm	4.21	1.26	0.16	1.14	0.27	1.32	0.25	1.78	NA	NA
Redox Potential		mV	-73.3	-50.1	-372.8	-45.0	-286.6	-74.9	-132.6	-63.0	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-01 - DAMAGED - ABANDONED					
			7/11/94	5/11/99	9/30/99	12/8/99	3/31/00	4/18/05
Volatile Organic Compounds (VOCs) (µg/L):								
Benzene	5	0.5	<1.0	<0.44	<0.44	<0.44	<0.44	<0.41
t-Butylbenzene	NS	NS	NA	<0.50	<0.50	<0.50	<0.50	<0.97
Chloromethane	3	0.3						
2-Chlorotoluene	NS	NS	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85
1,2-Dichloroethane	5	0.5	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36
1,1-Dichloroethane	850	85	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75
1,1-Dichloroethene	7	0.7	<1.0	<0.47	<0.47	<0.47	<0.47	<0.57
cis-1,2-Dichloroethene	70	7	<1.0	<0.46	<0.46	<0.46	<0.46	<0.83
trans-1,2-Dichloroethene	100	20	NA	<0.64	<0.64	<0.64	<0.64	<0.89
Ethylbenzene	700	140	<1.0	<0.50	<0.50	<0.50	<0.50	<0.54
Isopropylbenzene	NS	NS	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59
Methylene chloride	5	0.5	**6.2 B**	<0.38	<0.38	<0.38	<0.38	<0.43
Naphthalene	100	10	<1.0	<0.59	<0.59	<0.59	<0.59	<0.74
n-Propylbenzene	NS	NS	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81
Tetrachloroethene	5	0.5	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45
Toluene	1,000	200	<1.0	<0.40	<0.40	<0.40	<0.40	<0.67
1,1,1-Trichloroethane	200	40	<1.0	<0.53	<0.53	<0.53	<0.53	<0.90
Trichloroethene	5	0.5	<1.0	<0.49	<0.49	<0.49	<0.49	<0.48
1,2,4-Trimethylbenzene	--	--	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97
1,3,5-Trimethylbenzene	--	--	<1.0	<0.45	<0.45	<0.45	<0.45	<0.83
Total Trimethylbenzene	480	96	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97
Vinyl Chloride	0.2	0.02	<1.0	<0.17	<0.17	<0.17	<0.17	<0.18
Xylenes, m + p	--	--	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8
Xylene, o	--	--	<1.0	<0.54	<0.54	<0.54	<0.54	<0.83
Total Xylenes	10,000	1,000	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8
Styrene	100	10	<1.0	<0.37	<0.37	<0.37	<0.37	<0.86
Ethane	NS	NS	NA	<2.3	<10	<10	<10	NA
Ethene	NS	NS	NA	<1.8	<10	<10	<10	NA
Methane	NS	NS	NA	<0.9	46	<1.0	<10	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):								
1-Methylnaphthalene	NS	NS	NA	<0.044	<0.044	<0.044	<0.044	NA
2-Methylnaphthalene	NS	NS	NA	<0.049	<0.049	<0.049	<0.049	NA
Acenaphthene	NS	NS	NA	<0.20	<0.20	<0.20	<0.20	NA
Acenaphthylene	NS	NS	NA	<0.18	<0.18	<0.18	<0.18	NA
Anthracene	3000	600	NA	<0.0090	<0.0089	<0.0089	<0.0089	NA
Benzo(a)anthracene	NS	NS	NA	<0.0088	<0.0087	<0.0087	<0.0087	NA
Benzo(a)pyrene	0.2	0.02	NA	<0.012	<0.012	<0.012	<0.012	NA
Benzo (b)fluoranthene	0.2	0.02	NA	<0.016	<0.016	<0.016	<0.016	NA
Benzo(ghi)perylene	NS	NS	NA	<0.018	<0.018	<0.018	<0.018	NA
Benzo(k)fluoranthene	NS	NS	NA	<0.0080	<0.0079	<0.0079	<0.0079	NA
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	<0.0090	<0.0089	<0.0089	<0.0089	NA
Dibenzo(a,h)anthracene	NS	NS	NA	<0.018	<0.018	<0.018	<0.018	NA
Fluoranthene	400	80	NA	<0.019	<0.019	<0.019	<0.019	NA
Fluorene	400	80	NA	<0.02	<0.02	<0.02	<0.02	NA
Indeno(1,2,3-dc)pyrene	NS	NS	NA	<0.0084	<0.0083	<0.0083	<0.0083	NA
Naphthalene	100	10	NA	<0.12	<0.12	<0.12	<0.12	NA
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	<0.011	<0.011	<0.011	<0.011	NA
Pyrene	250	50	NA	<0.013	0.15	<0.013	<0.013	NA

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-01 - DAMAGED - ABANDONED					
			7/11/94	5/11/99	9/30/99	12/8/99	3/31/00	4/18/05
RCRA Metals (mg/L)								
Antimony	0.006	0.0012	NA	<0.0019 B(-0.0032)	**0.0014**	0.00081	<0.00020	NA
Arsenic	0.01	0.001	NA	<0.0024	**0.0018 A(-0.00047)**	0.00082 A(0.00038)	0.00050 QA(0.00034)	NA
Barium	2	0.4	NA	0.032	0.031	0.04	0.059	NA
Beryllium	0.004	0.0004	NA	<0.00043	<0.000070	<0.000070	<0.000070	NA
Cadmium	0.005	0.0005	NA	<0.00017	<0.000076 A(0.00013)	<0.000060	0.00010 Q	NA
Chromium	0.1	0.01	NA	<0.00053	0.00046 A(0.00020)	0.00080 A(0.00012)	0.00014 QA(0.00017)	NA
Copper	1.3	0.13	NA	<0.00094	0.00035 Q	<0.00025	0.00086 A(-0.0003)	NA
Iron	0.3	0.15	NA	<0.027	0.012 A(0.0097)	0.110 A(0.022)	0.1 A(-0.024)	NA
Lead	0.015	0.0015	NA	<0.0028	<0.00015	<0.00015	0.00063	NA
Manganese	0.05	0.025	NA	0.0025	**0.11**	**0.057**	**0.034**	NA
Mercury	0.002	0.0002	NA	<0.000042	<0.000042	<0.000042	<0.000042	NA
Nickel	0.1	0.02	NA	<0.0022	0.0015	0.0019	0.0028	NA
Selenium	0.05	0.01	NA	<0.0023	<0.00064	0.00082 Q	<0.00064 A(0.00083)	NA
Sliver	0.05	0.01	NA	<0.00046	0.00021 Q	<0.000095 A(-0.00041)	<0.00010 A(0.00047)	NA
Sodium	increase of 10		NA	1.4	1.5	1.6	1.6	NA
Thallium	0.002	0.0004	NA	<0.0013	<0.000093	<0.000093	<0.000093	NA
Zinc	5	2.5	NA	0.06	0.029	0.015 A(-0.0048)	0.15	NA
Poychlorinated Biphenyls (PCBs) (µg/L):								
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)								
Alkalinity	increase of 100		NA	180	200	220	330	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	1.2	0.83	2.4	1	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	7.7	0.9	11	7.6	NA
TDS	increase of 200		NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	180	200	220	330	NA
Carbonate Alkalinity	NS	NS	NA	<2.5	<1.9	<1.9	<3.8	NA
Conductance, specific (umhos/c	increase of 200		NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	<0.043	<0.043	<0.044	<0.044	NA
Nitrogen, nitrate	increase of 2		NA	<0.090	<0.090	<0.080	<0.080	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	<0.037	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	1	1.3 Q	2.1	1.6	NA
Field Screening Measurements								
pH		lU	7.96	7.5	7.36	7.46	7.27	7.11
Conductivity		uS	411	333	331	381	497	784
Temperature		°C	20	11.1	13.8	8.8	8.4	7.6
Dissolved Oxygen		ppm	NA	5.78	2.14	2.39	2.33	2.66
Redox Potential		mV	NA	26	41	43	6	-99

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-02 - DAMAGED - ABANDONED				
			7/11/94	5/10/99	9/23/99	12/6/99	3/29/00
Volatile Organic Compounds (VOCs) (µg/L):							
Benzene	5	0.5	<1.0	<0.44	<0.44	<0.44	<0.44
t-Butylbenzene	NS	NS	NA	<0.50	<0.50	<0.50	<0.50
Chloromethane	3	0.3					
2-Chlorotoluene	NS	NS	<1.0	<0.65	<0.65	<0.65	<0.65
1,2-Dichloroethane	5	0.5	<1.0	<0.54	<0.54	<0.54	<0.54
1,1-Dichloroethane	850	85	<1.0	<0.61	<0.61	<0.61	<0.61
1,1-Dichloroethene	7	0.7	<1.0	<0.47	<0.47	<0.47	<0.47
cis-1,2-Dichloroethene	70	7	<1.0	<0.46	<0.46	<0.46	<0.46
trans-1,2-Dichloroethene	100	20	NA	<0.64	<0.64	<0.64	<0.64
Ethylbenzene	700	140	<1.0	<0.50	<0.50	<0.50	<0.50
Isopropylbenzene	NS	NS	<1.0	<0.39	<0.39	<0.39	<0.39
Methylene chloride	5	0.5	**6.7 B**	<0.38	<0.38	<0.38	<0.38
Naphthalene	100	10	<1.0	<0.59	<0.59	<0.59	<0.59
n-Propylbenzene	NS	NS	<1.0	<0.54	<0.54	<0.54	<0.54
Tetrachloroethene	5	0.5	<1.0	<0.41	<0.41	<0.41	<0.41
Toluene	1,000	200	<1.0	<0.40	<0.40	<0.40	<0.40
1,1,1-Trichloroethane	200	40	<1.0	<0.53	<0.53	<0.53	<0.53
Trichloroethene	5	0.5	<1.0	<0.49	<0.49	<0.49	<0.49
1,2,4-Trimethylbenzene	--	--	<1.0	<0.47	<0.47	<0.47	<0.47
1,3,5-Trimethylbenzene	--	--	<1.0	<0.45	<0.45	<0.45	<0.45
Total Trimethylbenzene	480	96	<1.0	<0.47	<0.47	<0.47	<0.47
Vinyl Chloride	0.2	0.02	<1.0	<0.52	<0.17	<0.17	<0.17
Xylenes, m + p	--	--	<2.0	<0.77	<0.77	<0.77	<0.77
Xylene, o	--	--	<1.0	<0.54	<0.54	<0.54	<0.54
Total Xylenes	10,000	1,000	<2.0	<0.77	<0.77	<0.77	<0.77
Styrene	100	10	<1.0	<0.37	<0.37	<0.37	<0.37
Ethane	NS	NS	NA	<2.3	<10	<10	<10
Ethene	NS	NS	NA	<1.4	<10	<10	<10
Methane	NS	NS	NA	300	<10	<10	<10
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):							
1-Methylnaphthalene	NS	NS	NA	<0.044	<0.044	<0.044	<0.044
2-Methylnaphthalene	NS	NS	NA	<0.049	<0.049	<0.049	<0.049
Acenaphthene	NS	NS	NA	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	NS	NS	NA	<0.18	<0.18	<0.18	<0.18
Anthracene	3000	600	NA	<0.0089	<0.0089	<0.0089	<0.0089
Benzo(a)anthracene	NS	NS	NA	<0.0087	<0.0087	<0.0087	<0.0087
Benzo(a)pyrene	0.2	0.02	NA	<0.012	<0.012	<0.012	<0.012
Benzo (b)fluoranthene	0.2	0.02	NA	<0.016	<0.016	<0.016	<0.016
Benzo(ghi)perylene	NS	NS	NA	<0.018	<0.018	<0.018	<0.018
Benzo(k)fluoranthene	NS	NS	NA	<0.0079	<0.0079	<0.0079	<0.0079
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	<0.0089	<0.0089	<0.0089	<0.0089
Dibenzo(a,h)anthracene	NS	NS	NA	<0.018	<0.018	<0.018	<0.018
Fluoranthene	400	80	NA	<0.019	<0.019	<0.019	<0.019
Fluorene	400	80	NA	<0.02	<0.02	<0.02	<0.02
Indeno(1,2,3-dc)pyrene	NS	NS	NA	<0.0083	<0.0083	<0.0083	<0.0083
Naphthalene	100	10	NA	<0.12	<0.12	<0.12	<0.12
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	<0.011	<0.011	<0.011	<0.011
Pyrene	250	50	NA	<0.013	<0.013	<0.013	0.017 Q

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-02 - DAMAGED - ABANDONED				
			7/11/94	5/10/99	9/23/99	12/6/99	3/29/00
RCRA Metals (mg/L)							
Antimony	0.006	0.0012	NA	<0.0019 B(-0.0032)	**0.0016**	<0.00020	<0.00020
Arsenic	0.01	0.001	NA	<0.0024	0.00074 A(0.00035)	0.00057 Q	0.00037 Q
Barium	2	0.4	NA	0.017	0.023	0.022	0.02
Beryllium	0.004	0.0004	NA	<0.00043	<0.000070	<0.000070	<00007
Cadmium	0.005	0.0005	NA	<0.00017	<0.000060 A(-0.00047)	<0.000060	0.00014 Q
Chromium	0.1	0.01	NA	0.00070 Q	0.00050 A(-0.00024)	0.0012 A(0.00048)	0.00047 A(-.00008)
Copper	1.3	0.13	NA	<0.00094	0.00087	0.001	0.00028 QA(-.00041)
Iron	0.3	0.15	NA	<0.027	<0.0037 A(-0.022)	<0.0037	<0.0037
Lead	0.015	0.0015	NA	<0.0028	<0.00015	0.00019 Q	<0.00015
Manganese	0.05	0.025	NA	0.00098	0.00026 A(0.00013)	0.00017Q	<0.000069
Mercury	0.002	0.0002	NA	<0.000042	<0.000042	<0.000042	<0.000042
Nickel	0.1	0.02	NA	<0.0022	0.00031 Q	0.00045	0.00016 Q
Selenium	0.05	0.01	NA	<0.00057	<0.00064	<0.00064	<0.00064
Sliver	0.05	0.01	NA	0.00052 Q B(0.00056)	<0.000095 A(-0.00089)	<0.000095	0.00027 Q
Sodium	increase of 10		NA	0.320 Q	0.45	0.49	0.47
Thallium	0.002	0.0004	NA	<0.0013	<0.000093	<0.000093	<.000093
Zinc	5	2.5	NA	0.074	0.014	0.019	0.014
Poychlorinated Biphenyls (PCBs) (µg/L):							
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)							
Alkalinity	increase of 100		NA	150	140	140	140
Ammonia	NS	NS	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA
Chloride	250	125	NA	0.62 Q	<0.24	0.57	0.30 Q
Cyanide	0.2	0.04	NA	NA	NA	NA	NA
Sulfate	250	125	NA	4.9	3.2	3.6	4.7
TDS	increase of 200		NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	150	140	140	140
Carbonate Alkalinity	NS	NS	NA	<2.5	<2.5	4.0 Q	<1.9
Conductance, specific (umhos/c	increase of 200		NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	<0.043	<0.043	<0.044	<.044
Nitrogen, nitrate	increase of 2		NA	0.23 Q	0.14	0.3	0.39
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	1.1 B(0.70)	1.4	<0.50	1.6 A(.48)
Field Screening Measurements							
pH		IU	7.76	8.14	8.36	8.03	8.02
Conductivity		uS	249	226	261	254	250
Temperature		°C	13	9.8	16.3	12.6	7.8
Dissolved Oxygen		ppm	NA	11.7	9.06	8.94	6.9
Redox Potential		mV	NA	201	111	120	220

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-04											
			7/11/94	5/10/99	9/23/99	12/6/99	3/29/00	4/14/05	10/19/06	9/19/07	9/25/12	10/22/13	11/13/14	10/15/15
Volatile Organic Compounds (VOCs) (µg/L):														
Benzene	5	0.5	<1.0	<0.44	<0.44	<0.44	<0.44	<0.41 H	<0.41	<0.47	<0.5	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS	NA	<0.50	<0.50	<0.50	<0.50	<0.97 H	<0.97	<0.34	<0.71	<0.36	<0.36	<1.1
Chloromethane	3	0.3								<1	<1.9	<0.81	<0.81	<1.9
2-Chlorotoluene	NS	NS	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85 H	<0.85	<0.49	<0.7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36 H	<0.36	<0.45	<0.5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75 H	<0.75	<0.56	<0.98	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<1.0	<0.47	<0.47	<0.47	<0.47	<0.57 H	<0.57	<0.64	<0.6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	2.4	1.3 Q	**9.8**	6.8	3.6	1.1 QH	6	**9.6**	**7.4**	**7.5**	5.2	5.1
trans-1,2-Dichloroethene	100	20	NA	<0.64	<0.64	<0.64	<0.64	<0.89 H	<0.89	<0.95	<0.79	<0.35	<0.35	<0.54
Ethylbenzene	700	140	<1.0	<0.50	<0.50	<0.50	<0.50	<0.54 H	<0.54	<0.38	<0.78	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59 H	<0.59	<0.48	<0.92	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	**10 B**	<0.38	<0.38	<0.38	<0.38	<0.43 H	<0.43	<0.69	<1.1	<0.5	<0.5	<1.3
Naphthalene	100	10	<1.0	<0.59	<0.59	<0.59	<0.59	<0.74 H	<0.74	<1.8	<2.1	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81 H	<0.81	<0.38	<0.59	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45 H	<0.45	<0.52	<0.44	<0.33	<0.33	<0.49
Toluene	1,000	200	<1.0	<0.40	<0.40	<0.40	<0.40	<0.67 H	<0.67	<0.46	<0.53	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<1.0	<0.53	<0.53	<0.53	<0.53	<0.90 H	<0.90	<0.5	<0.85	0.50 J	<0.33	<0.84
Trichloroethene	5	0.5	**6.2**	**5.5**	**8.9**	**12**	**7.7**	**2.3 H**	**5.3**	**6**	**2.66**	**3.5**	**3.4**	**3.9**
1,2,4-Trimethylbenzene	--	--	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97 H	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<1.0	<0.45	<0.45	<0.45	<0.45	<0.83 H	<0.83	<0.37	<0.74	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97 H	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	<1.0	<0.52	<0.17	<0.17	<0.17	<0.18 H	<0.18	<0.2	**0.31 J**	<0.18	<0.18	<0.17
Xylenes, m + p	--	--	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8 H	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Xylene, o	--	--	<1.0	<0.54	<0.54	<0.54	<0.54	<0.83 H	<0.83	<0.32	<0.8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8 H	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Styrene	100	10	<1.0	<0.37	<0.37	<0.37	<0.37	<0.86 H&	<0.86	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	<2.3	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	<1.4	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Methane	NS	NS	NA	4.8	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):														
1-Methylnaphthalene	NS	NS	NA	<0.044	<0.044	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	NA	<0.049	<0.049	<0.049	<0.049	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	NA	<0.20	<0.20	<0.20	<0.20	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	NA	<0.18	<0.18	<0.18	<0.18	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	NA	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	NA	<0.0087	<0.0087	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	NA	<0.012	<0.012	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	NA	<0.016	<0.016	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	NA	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	NA	<0.0079	<0.0079	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	NA	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	NA	<0.019	<0.019	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	NA	<0.02	<0.02	<0.02	<0.02	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	NA	<0.0083	<0.0083	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	NA	<0.12	<0.12	<0.12	<0.12	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	NA	<0.013	<0.013	<0.013	<0.013	NA	NA	NA	NA	NA	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-04											
			7/11/94	5/10/99	9/23/99	12/6/99	3/29/00	4/14/05	10/19/06	9/19/07	9/25/12	10/22/13	11/13/14	10/15/15
RCRA Metals (mg/L)														
Antimony	0.006	0.0012	NA	<0.0019 B(-0.0032)	0.0007	<0.00020	0.00020 Q	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	<0.0024	**0.0014 A(0.00035)**	0.00097	0.00078	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	0.043	0.047	0.052	0.051	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	<0.00043	<0.000070	<0.000070	<.000070	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	<0.00017	<0.000060 A(-0.00047)	<0.000060	0.0003	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	0.00057 Q	0.00054 A(-0.00024)	0.0017 A(0.00048)	0.00023 QA(-0.00008)	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	0.0013 Q	0.0027	0.0046	0.0059 A(-0.00041)	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	**0.17**	**0.36**	**0.36**	0.028	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	<0.0028	<0.00015	0.00037 Q	0.00051	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	**0.029**	**0.16**	**0.13**	0.0056	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	<0.000042 *	<0.000042	0.000052 Q	<0.000042	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	0.0027 Q	0.0052	0.006	0.0049	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	<0.00057	<0.00064	0.0010 Q	0.0011 Q	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	<0.00046	<0.000095 A(-0.00089)	<0.000095	<.00010	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	5.7	6.6	6.6	5.4	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	<0.0013	<0.00093	<0.000093	<0.000093	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	0.12	0.15	0.18	0.29	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):														
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)														
Alkalinity	increase of 100		NA	320	310	360	330	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	17	12	22	17	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	28	26	34	29	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	320	310	360	330	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	<2.5	<2.5	<1.9	<1.9	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/c	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	<0.043	<0.043	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	0.25 Q	0.61	1.4	1.1	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	2.7	4.2	2	4.1 A(.48)	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements														
pH		IU	7.18	7.3	7.36	7.19	7.15	7.2	7.23	6.73	7.01	7.23	7.17	7.15
Conductivity		uS	539	625	630	715	628	638	540.5	675	705	550	783	709
Temperature		°C	18	10.4	16.2	8.4	7.5	7	11.1	17	15.11	11.4	7.91	13.36
Dissolved Oxygen		ppm	NA	1.68	1.8	1.98	1.98	253	3.2	0.76	0.28	1.14	0.32	0.61
Redox Potential		mV	NA	133	116	120	80	64	34	-31	-86.8	66.1	-42	-39.9

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-05 - ABANDONED						
			7/11/94	5/10/99	10/5/99	12/8/99	3/31/00	4/14/05	9/6/07
Volatile Organic Compounds (VOCs) (µg/L):									
Benzene	5	0.5	<1.0	<0.44	<0.44	<0.44	<0.44	<0.41 H	NS
t-Butylbenzene	NS	NS	NA	<0.50	<0.50	<0.50	<0.50	<0.97 H	NS
Chloromethane	3	0.3							NS
2-Chlorotoluene	NS	NS	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85 H	NS
1,2-Dichloroethane	5	0.5	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36 H	NS
1,1-Dichloroethane	850	85	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75 H	NS
1,1-Dichloroethene	7	0.7	<1.0	<0.47	<0.47	<0.47	<0.47	<0.57 H	NS
cis-1,2-Dichloroethene	70	7	<1.0	<0.46	<0.46	<0.46	<0.46	<0.83 H	NS
trans-1,2-Dichloroethene	100	20	NA	<0.64	<0.64	<0.64	<0.64	<0.89 H	NS
Ethylbenzene	700	140	<1.0	<0.50	<0.50	<0.50	<0.50	<0.54 H	NS
Isopropylbenzene	NS	NS	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59 H	NS
Methylene chloride	5	0.5	**4.5**	<0.38	<0.38	<0.38	<0.38	<0.43 H	NS
Naphthalene	100	10	<1.0	<0.59	<0.59	<0.59	<0.59	<0.74 H	NS
n-Propylbenzene	NS	NS	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81 H	NS
Tetrachloroethene	5	0.5	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45 H	NS
Toluene	1,000	200	<1.0	<0.40	<0.40	<0.40	<0.40	<0.67 H	NS
1,1,1-Trichloroethane	200	40	<1.0	<0.53	<0.53	<0.53	<0.53	<0.90 H	NS
Trichloroethene	5	0.5	<1.0	<0.49	<0.49	<0.49	<0.49	<0.48 H	NS
1,2,4-Trimethylbenzene	--	--	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97 H	NS
1,3,5-Trimethylbenzene	--	--	<1.0	<0.45	<0.45	<0.45	<0.45	<0.83 H	NS
Total Trimethylbenzene	480	96	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97 H	NS
Vinyl Chloride	0.2	0.02	<1.0	<0.52	<0.17	<0.17	<0.17	<0.18 H	NS
Xylenes, m + p	--	--	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8 H	NS
Xylene, o	--	--	<1.0	<0.54	<0.54	<0.54	<0.54	<0.83 H	NS
Total Xylenes	10,000	1,000	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8 H	NS
Styrene	100	10	<1.0	<0.37	<0.37	<0.37	<0.37	<0.86 H&	NS
Ethane	NS	NS	NA	<2.3	<10	<10	<10	NA	NS
Ethene	NS	NS	NA	<1.4	<10	<10	<10	NA	NS
Methane	NS	NS	NA	210	280	31	180	NA	NS
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):									
1-Methylnaphthalene	NS	NS	NA	<0.044	<0.044	<0.044	<0.044	NA	NS
2-Methylnaphthalene	NS	NS	NA	<0.049	<0.049	<0.049	<0.049	NA	NS
Acenaphthene	NS	NS	NA	<0.20	<0.20	<0.20	<0.20	NA	NS
Acenaphthylene	NS	NS	NA	<0.18	<0.18	<0.18	<0.18	NA	NS
Anthracene	3000	600	NA	<0.0089	<0.0089	<0.0089	<0.0089	NA	NS
Benzo(a)anthracene	NS	NS	NA	<0.0087	<0.0087	<0.0087	<0.0087	NA	NS
Benzo(a)pyrene	0.2	0.02	NA	<0.012	<0.012	<0.012	<0.012	NA	NS
Benzo (b)fluoranthene	0.2	0.02	NA	<0.016	<0.016	<0.016	<0.016	NA	NS
Benzo(ghi)perylene	NS	NS	NA	0.019 Q	<0.018	<0.018	<0.018	NA	NS
Benzo(k)fluoranthene	NS	NS	NA	<0.0079	<0.0079	<0.0079	<0.0079	NA	NS
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NS
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NS
Chrysene	0.2	0.02	NA	**0.024 Q**	<0.0089	<0.0089	<0.0089	NA	NS
Dibenzo(a,h)anthracene	NS	NS	NA	<0.018	<0.018	<0.018	<0.018	NA	NS
Fluoranthene	400	80	NA	<0.019	<0.019	<0.019	<0.019	NA	NS
Fluorene	400	80	NA	<0.02	<0.02	<0.02	<0.02	NA	NS
Indeno(1,2,3-dc)pyrene	NS	NS	NA	<0.0083	<0.0083	<0.0083	<0.0083	NA	NS
Naphthalene	100	10	NA	<0.12	<0.12	<0.12	<0.12	NA	NS
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NS
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NS
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NS
Phenanthrene	NS	NS	NA	<0.011	<0.011	<0.011	<0.011	NA	NS
Pyrene	250	50	NA	<0.013	<0.013	<0.013	<0.013	NA	NS

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-05 - ABANDONED						
			7/11/94	5/10/99	10/5/99	12/8/99	3/31/00	4/14/05	9/6/07
RCRA Metals (mg/L)									
Antimony	0.006	0.0012	NA	<0.0019 B(-0.0032)	<0.00016	0.0023	<0.00020	NA	NS
Arsenic	0.01	0.001	NA	<0.0024	**0.0016 A(-0.00047)**	**0.0014 A(0.00038)**	**0.0018 A(0.00034)**	NA	NS
Barium	2	0.4	NA	0.043	0.058	0.045	0.046	NA	NS
Beryllium	0.004	0.0004	NA	<0.00043	<0.000070	<0.000070	<0.000070	NA	NS
Cadmium	0.005	0.0005	NA	<0.00017	<0.000076 A(0.00013)	<0.000060	0.00015 Q	NA	NS
Chromium	0.1	0.01	NA	0.00068 Q	0.0015 A(0.00020)	0.00063 A(0.00012)	0.00026 A(0.00017)	NA	NS
Copper	1.3	0.13	NA	<0.00094	0.00083	<0.00025	0.0013 A(-0.0003)	NA	NS
Iron	0.3	0.15	NA	0.034 Q	0.130 A(0.0097)	0.011 QA(0.022)	<0.0037 A(-0.024)	NA	NS
Lead	0.015	0.0015	NA	<0.0028	<0.00015	<0.00015	0.00034 Q	NA	NS
Manganese	0.05	0.025	NA	**0.33**	**0.48**	**0.32**	**0.28**	NA	NS
Mercury	0.002	0.0002	NA	<0.000042	<0.000042	<0.000042	<0.000042	NA	NS
Nickel	0.1	0.02	NA	0.0094	0.0075	0.0082	0.012	NA	NS
Selenium	0.05	0.01	NA	<0.00057	<0.00064	0.00079 Q	<0.00064 A(0.00083)	NA	NS
Sliver	0.05	0.01	NA	<0.00046	<0.000095	<0.000095 A(-0.00041)	<0.00010 A(0.00047)	NA	NS
Sodium	increase of 10		NA	5.6	4.6	5.1	6.4	NA	NS
Thallium	0.002	0.0004	NA	<0.0013	<0.000093	<0.000093	<0.000093	NA	NS
Zinc	5	2.5	NA	0.096	0.23	0.093 A(-0.0048)	0.19	NA	NS
Poychlorinated Biphenyls (PCBs) (µg/L):									
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	NS
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	NS
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	NS
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	NS
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	NS
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	NS
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	NS
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	NS
General Chemistry Parameters (mg/L)									
Alkalinity	increase of 100		NA	340	420	340	340	NA	NS
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NS
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NS
COD	increase of 25		NA	NA	NA	NA	NA	NA	NS
Chloride	250	125	NA	14	17	16	26	NA	NS
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NS
Sulfate	250	125	NA	34	29	35	34	NA	NS
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NS
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NS
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NS
Bicarbonate Alkalinity	NS	NS	NA	340	420	340	340	NA	NS
Carbonate Alkalinity	NS	NS	NA	<2.5	<1.9	<1.9	<1.9	NA	NS
Conductance, specific (umhos/c	increase of 200		NA	NA	NA	NA	NA	NA	NS
Ferrous Iron	NS	NS	NA	<0.043	<0.043	<0.044	<0.044	NA	NS
Nitrogen, nitrate	increase of 2		NA	0.98	0.43	0.16 Q	0.92	NA	NS
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	1	NA	NS
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NS
TOC as NPOC - Filtered	increase of 1		NA	3.2 B(0.70)	4.6	1.2 Q	3.7 A(0.67)	NA	NS
Field Screening Measurements									
pH		IU	6.57	6.73	6.86	6.67	6.7	6.94	NS
Conductivity		uS	850	680	722	694	692	696	NS
Temperature		°C	12	10.5	3.9	11.8	8.4	8.4	NS
Dissolved Oxygen		ppm	NA	1.4	1.09	1.33	1.29	1.79	NS
Redox Potential		mV	NA	165	33	17	26	-12	NS

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-06											
			7/11/94	5/10/99	9/23/99	12/6/99	3/29/00	4/14/05	10/19/06	9/19/07	9/25/12	10/22/13	11/17/14	10/15/15
Volatile Organic Compounds (VOCs) (µg/L):														
Benzene	5	0.5	<20	<0.44	<2.2	<0.88	<0.44	<0.41 H	<0.41	<4.7	<5	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS	<20	<0.50	<0.50	<0.50	<0.50	<0.97 H	<0.97	<3.4	<7.1	<0.36	<0.36	<1.1
Chloromethane	3	0.3								<10	<19	<0.81	<0.81	<1.9
2-Chlorotoluene	NS	NS	<20	<0.65	<3.2	<1.3	<0.65	<0.85 H	<0.85	<4.9	<7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<20	<0.54	<2.7	<0.54	<0.54	<0.36 H	<0.36	<4.5	<5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<20	0.95 Q	<3.0	<1.2	<0.61	<0.75 H	<0.75	<5.6	<9.8	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	<20	<0.47	<2.3	<0.94	<0.47	<0.57 H	<0.57	<6.4	<6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	**3,400 OC**	**200 D**	**630**	**280**	**140**	**87 H**	**81**	**249**	**185**	**22.6**	**23.3**	**141**
trans-1,2-Dichloroethene	100	20	**28**	0.90 Q	<3.2	<1.3	<0.64	<0.89 H	<0.89	<9.5	<7.9	0.38 J	<0.35	<0.54
Ethylbenzene	700	140	<20	<0.50	<2.5	<1.0	<0.50	<0.54 H	<0.54	<3.8	<7.8	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	<20	<0.39	<0.39	<0.39	<0.39	<0.59 H	<0.59	<4.8	<9.2	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	**480 B**	<0.38	<1.9	<0.76	<0.38	<0.43 H	<0.43	<6.9	<11	<0.5	<0.5	<1.3
Naphthalene	100	10	<20	<0.59	<2.9	<1.2	<0.59	<0.74 H	<0.74	<18	<21	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	<20	<0.54	<2.7	<1.1	<0.54	<0.81 H	<0.81	<3.8	<5.9	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	<20	<0.41	<2.0	<0.82	<0.41	<0.45 H	<0.45	<5.2	<4.4	<0.33	<0.33	<0.49
Toluene	1,000	200	<20	<0.40	<2.0	<0.80	<0.40	<0.67 H	<0.67	<4.6	<5.3	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<20	2.3	3.9 Q	2.2 Q	2.1	<0.90 H	1.1 Q	<5	<8.5	0.79 J	0.57 J	1.58 J
Trichloroethene	5	0.5	**43**	**20**	**28**	**26**	**21**	**11 H**	**10**	**14.3**	**11.9 J**	**5.3**	**3.9**	**6.1**
1,2,4-Trimethylbenzene	--	--	<20	<0.47	<2.3	<0.94	<0.47	<0.97 H	<0.97	<12	<8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<20	<0.45	<2.2	<0.90	<0.45	<0.83 H	<0.83	<3.7	<7.4	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	<20	<0.47	<2.3	<0.94	<0.47	<0.97 H	<0.97	<12	<8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	<20	<0.52	<0.85	<0.34	<0.17	<0.18 H	<0.18	<2	<1.8	<0.18	<0.18	<0.17
Xylenes, m + p	--	--	<40	<0.77	<3.9	<1.5	<0.77	<1.8 H	<1.8	<6.7	<11	<0.69	<0.69	<2.2
Xylene, o	--	--	<20	<0.54	<2.7	<1.1	<0.54	<0.83 H	<0.83	<3.2	<8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	<40	<0.77	<3.9	<1.5	<0.77	<1.8 H	<1.8	<6.7	<11	<0.69	<0.69	<2.2
Styrene	100	10	<20	<0.37	<1.8	<0.74	<0.37	<0.86 H&	<0.86	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	<2.3	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	<1.4	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Methane	NS	NS	NA	1.2	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):														
1-Methylnaphthalene	NS	NS	NA	<0.044	<0.044	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	NA	<0.049	<0.049	<0.049	<0.049	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	NA	<0.20	<0.20	<0.20	<0.20	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	NA	<0.18	<0.18	<0.18	<0.18	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	NA	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	NA	<0.0087	<0.0087	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	NA	<0.012	<0.012	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	NA	<0.016	<0.016	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	NA	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	NA	<0.0079	<0.0079	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	NA	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	NA	<0.019	<0.019	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	NA	<0.02	<0.02	<0.02	<0.02	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	NA	<0.0083	<0.0083	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	NA	<0.12	<0.12	<0.12	<0.12	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	NA	<0.013	<0.013	<0.013	<0.013	NA	NA	NA	NA	NA	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-06											
			7/11/94	5/10/99	9/23/99	12/6/99	3/29/00	4/14/05	10/19/06	9/19/07	9/25/12	10/22/13	11/17/14	10/15/15
RCRA Metals (mg/L)														
Antimony	0.006	0.0012	NA	<0.0019 B(-0.0032)	**0.0023**	<0.00020	<0.00020	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	<0.0024	**0.0010 A(0.00035)**	0.00045 Q	<0.00020	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	0.11	0.11	0.11	0.11	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	<0.00043	0.00021 Q	<0.000070	<0.000070	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	<0.00017	<0.000060 A(-0.00047)	<0.000060	0.00035	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	0.00058 Q	0.00039 A(-0.00024)	0.0023 A(0.00048)	0.00069 A(-0.00008)	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	<0.00094	0.0056	0.0035	0.0088	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	<0.027	0.018 A(-0.022)	0.02	0.009 Q	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	<0.0028	0.00033 Q	0.00026 Q	0.00061	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	0.008	0.0016 A(0.00013)	0.0026	0.0022	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	<0.000042	<0.000042	<0.000042	<0.000042	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	**0.027 Q**	0.0022	0.0019	0.0017	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	<0.00057	<0.00064	0.00075 Q	<0.00064	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	<0.00046	<0.000095 A(-0.00089)	<0.000095	<0.0001	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	5.2	5.1	5.1	5.4	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	<0.0013	0.00020 Q	<0.000093	<0.000093	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	0.17	0.084	0.17	0.46	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):														
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)														
Alkalinity	increase of 100		NA	470	410	430	480	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	11	12	14	15	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	35	33	32	32	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	470	410	430	480	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	<2.5	<2.5	<1.9	<1.9	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/c	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	<0.043	<0.043	<0.044	<0.088 ED	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	0.67	0.53	0.92	1.1 H(0.02)	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	2.0 B(0.70)	2.5	1.8	3.9 A(.48)	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements														
pH		IU	7.2	7.17	7.4	7.2	7.24	6.98	7.34	6.95	6.95	7.3	7.3	7.23
Conductivity		uS	930	809	785	814	818	851	786.1	808.4	787	624	668	782
Temperature		°C	10	8.9	12.6	10	8.9	7.9	10.9	11.8	11.73	10.34	7.78	10.43
Dissolved Oxygen		ppm	NA	4.6	4.21	3.98	3.9	83	3.07	--	1.56	1.64	2.6	2.68
Redox Potential		mV	NA	59	131	137	138	4.81	110	70	-41.3	84.6	254.7	-13.4

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-07											
			7/11/94	5/10/99	9/23/99	12/6/99	3/29/00	4/14/05	10/19/06	9/19/07	9/25/12	10/21/13	11/13/14	10/12/15
Volatile Organic Compounds (VOCs) (µg/L):														
Benzene	5	0.5	<1.0	<0.44	<0.44	<0.44	<0.44	<0.41 H	<0.41	<0.47	<0.5	<0.24	<0.24	<0.44
t-Butylbenzene	NS	NS	NA	<0.50	<0.50	<0.50	<0.50	<0.97 H	<0.97	<0.34	<0.71	<0.36	<0.36	<1.1
Chloromethane	3	0.3								<1	<1.9	<0.81	<0.81	<1.9
2-Chlorotoluene	NS	NS	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85 H	<0.85	<0.49	<0.7	<0.21	<0.21	<0.4
1,2-Dichloroethane	5	0.5	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36 H	<0.36	<0.45	<0.5	<0.41	<0.41	<0.48
1,1-Dichloroethane	850	85	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75 H	<0.75	<0.56	<0.98	<0.3	<0.3	<1.1
1,1-Dichloroethene	7	0.7	**1.3**	<0.47	<0.47	<0.47	<0.47	<0.57 H	<0.57	<0.64	<0.6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene	70	7	<1.0	<0.46	<0.46	<0.46	<0.46	<0.83 H	<0.83	<0.68	<0.74	<0.38	<0.38	<0.45
trans-1,2-Dichloroethene	100	20	NA	<0.64	<0.64	<0.64	<0.64	<0.89 H	<0.89	<0.95	<0.79	<0.35	<0.35	<0.54
Ethylbenzene	700	140	<1.0	<0.50	<0.50	<0.50	<0.50	<0.54 H	<0.54	<0.38	<0.78	<0.55	<0.55	<0.71
Isopropylbenzene	NS	NS	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59 H	<0.59	<0.48	<0.92	<0.3	<0.3	<0.82
Methylene chloride	5	0.5	**22 B**	<0.38	<0.38	<0.38	<0.38	<0.43 H	<0.43	<0.69	<1.1	<0.5	<0.5	<1.3
Naphthalene	100	10	<1.0	<0.59	<0.59	<0.59	<0.59	<0.74 H	<0.74	<1.8	<2.1	<1.7	<1.7	<1.6
n-Propylbenzene	NS	NS	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81 H	<0.81	<0.38	<0.59	<0.25	<0.25	<0.77
Tetrachloroethene	5	0.5	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45 H	<0.45	<0.52	<0.44	<0.33	<0.33	<0.49
Toluene	1,000	200	<1.0	<0.40	<0.40	<0.40	<0.40	<0.67 H	<0.67	<0.46	<0.53	<0.69	<0.69	<0.44
1,1,1-Trichloroethane	200	40	<1.0	<0.53	<0.53	<0.53	<0.53	<0.90 H	<0.90	<0.5	<0.85	<0.33	<0.33	<0.84
Trichloroethene	5	0.5	**1.6**	**0.59 Q**	**0.66 Q**	<0.49	<0.49	<0.48 H	<0.48	<0.44	<0.47	<0.33	<0.33	<0.47
1,2,4-Trimethylbenzene	--	--	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97 H	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene	--	--	<1.0	<0.45	<0.45	<0.45	<0.45	<0.83 H	<0.83	<0.37	<0.74	<1.4	<1.4	<1.5
Total Trimethylbenzene	480	96	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97 H	<0.97	<1.2	<0.8	<2.2	<2.2	<1.6
Vinyl Chloride	0.2	0.02	<1.0	<0.52	<0.17	<0.17	<0.17	<0.18 H	<0.18	<0.2	<0.18	<0.18	<0.18	<0.17
Xylenes, m + p	--	--	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8 H	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Xylene, o	--	--	<1.0	<0.54	<0.54	<0.54	<0.54	<0.83 H	<0.83	<0.32	<0.8	<0.63	<0.63	<0.9
Total Xylenes	10,000	1,000	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8 H	<1.8	<0.67	<1.1	<0.69	<0.69	<2.2
Styrene	100	10	<1.0	<0.37	<0.37	<0.37	<0.37	<0.86 H&	<0.86	NA	NA	NA	NA	NA
Ethane	NS	NS	NA	<2.3	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Ethene	NS	NS	NA	<1.4	<10	<10	<10	NA	<10	NA	NA	NA	NA	NA
Methane	NS	NS	NA	18	<10	<10	<10	NA	10	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):														
1-Methylnaphthalene	NS	NS	NA	<0.044	<0.044	<0.044	<0.044	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	NA	<0.049	<0.049	<0.049	<0.049	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NS	NS	NA	<0.20	<0.20	<0.20	<0.20	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NS	NS	NA	<0.18	<0.18	<0.18	<0.18	NA	NA	NA	NA	NA	NA	NA
Anthracene	3000	600	NA	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	NS	NA	<0.0087	<0.0087	<0.0087	<0.0087	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.2	0.02	NA	<0.012	<0.012	<0.012	<0.012	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene	0.2	0.02	NA	<0.016	<0.016	<0.016	<0.016	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NS	NS	NA	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NS	NS	NA	<0.0079	<0.0079	<0.0079	<0.0079	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.2	0.02	NA	<0.0089	<0.0089	<0.0089	<0.0089	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NS	NS	NA	<0.018	<0.018	<0.018	<0.018	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	400	80	NA	<0.019	<0.019	<0.019	<0.019	NA	NA	NA	NA	NA	NA	NA
Fluorene	400	80	NA	<0.02	<0.02	<0.02	<0.02	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene	NS	NS	NA	<0.0083	<0.0083	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	10	NA	<0.12	<0.12	<0.12	<0.12	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NS	NS	NA	<0.011	<0.011	<0.011	<0.011	NA	NA	NA	NA	NA	NA	NA
Pyrene	250	50	NA	<0.013	<0.013	<0.013	<0.013	NA	NA	NA	NA	NA	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-07											
			7/11/94	5/10/99	9/23/99	12/6/99	3/29/00	4/14/05	10/19/06	9/19/07	9/25/12	10/21/13	11/13/14	10/12/15
RCRA Metals (mg/L)														
Antimony	0.006	0.0012	NA	<0.0019	**0.0037**	<0.00020	<0.00020	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.01	0.001	NA	<0.0024	**0.0021 A(0.00035)**	**0.0036**	**0.0047**	NA	NA	NA	NA	NA	NA	NA
Barium	2	0.4	NA	0.072	0.082	0.065	0.046	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.004	0.0004	NA	<0.00043	0.000090 Q	<0.000070	<0.000070	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.005	0.0005	NA	<0.00017	0.00011 QA(-0.00047)	<0.000060	0.00017 Q	NA	NA	NA	NA	NA	NA	NA
Chromium	0.1	0.01	NA	<0.00053	0.00073 A(-0.00024)	0.0016 A(0.00048)	0.00087 A(-0.00008)	NA	NA	NA	NA	NA	NA	NA
Copper	1.3	0.13	NA	<0.00094	0.0018	0.0021	0.0055 A(-0.00041)	NA	NA	NA	NA	NA	NA	NA
Iron	0.3	0.15	NA	**0.26**	**0.200 A(-0.022)**	**0.28**	**0.71**	NA	NA	NA	NA	NA	NA	NA
Lead	0.015	0.0015	NA	<0.0028	0.00016 Q	<0.00015	0.00086	NA	NA	NA	NA	NA	NA	NA
Manganese	0.05	0.025	NA	**0.39**	**0.14**	**0.11**	**0.04**	NA	NA	NA	NA	NA	NA	NA
Mercury	0.002	0.0002	NA	<0.000042	<0.000042	**0.0002**	<.000042	NA	NA	NA	NA	NA	NA	NA
Nickel	0.1	0.02	NA	0.0093	0.0067	0.0056	0.004	NA	NA	NA	NA	NA	NA	NA
Selenium	0.05	0.01	NA	<0.00057	<0.00064	<0.00064	0.00089 Q	NA	NA	NA	NA	NA	NA	NA
Sliver	0.05	0.01	NA	<0.00046	<0.000095 A(-0.00089)	<0.000095	<.0001	NA	NA	NA	NA	NA	NA	NA
Sodium	increase of 10		NA	6.6	8.5	6.7	4.6	NA	NA	NA	NA	NA	NA	NA
Thallium	0.002	0.0004	NA	<0.0013	<0.000093	<0.000093	<.000093	NA	NA	NA	NA	NA	NA	NA
Zinc	5	2.5	NA	0.05	0.034	0.066	0.1	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):														
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)														
Alkalinity	increase of 100		NA	2000	360	350	340	NA	NA	NA	NA	NA	NA	NA
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	250	125	NA	14	21	21	12	NA	NA	NA	NA	NA	NA	NA
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	250	125	NA	35	38	36	27	NA	NA	NA	NA	NA	NA	NA
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	NS	NS	NA	2000	360	350	340	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	NS	NS	NA	<2.5	<2.5	<1.9	<9.5	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/c	increase of 200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NS	NS	NA	<0.043	<0.043	<0.044	0.045 Q	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate	increase of 2		NA	<0.090	<0.090	0.090 Q	0.23 QH(0.07)	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	0.26	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered	increase of 1		NA	2.5	4.4	3.9	6.5 A(.48)	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements														
pH		IU	7.18	7.09	7.16	7.28	7.07	7.09	6.95	6.57	6.91	7.03	7.15	6.88
Conductivity		uS	740	628	736	699	542	784	701.1	741.3	739	576	756	835
Temperature		°C	16	12.3	15.1	10.8	8.4	8.3	12.2	14.7	13.75	12.35	9.95	12.71
Dissolved Oxygen		ppm	NA	3.01	2.27	2.27	1.88	1.96	1.18	--	0.1	0.82	0.93	0.95
Redox Potential		mV	NA	3	26	16	40	62	73	19	-64.9	55.3	-38.2	-2.1

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-08 - ABANDONED							
			7/11/94	5/10/99	10/5/99	12/9/99	3/31/00	4/14/05	10/19/06	9/6/07
Volatile Organic Compounds (VOCs) (µg/L):										
Benzene	5	0.5	**1.1**	<0.44	<0.44	<0.44	<0.44	<0.41 H	<0.41	NS
t-Butylbenzene	NS	NS	NA	0.61 Q	<0.50	<0.50	<0.50	<0.97 H	<0.97	NS
Chloromethane	3	0.3								NS
2-Chlorotoluene	NS	NS	<1.0	<0.65	<0.65	<0.65	<0.65	<0.85 H	<0.85	NS
1,2-Dichloroethane	5	0.5	<1.0	<0.54	<0.54	<0.54	<0.54	<0.36 H	<0.36	NS
1,1-Dichloroethane	850	85	<1.0	<0.61	<0.61	<0.61	<0.61	<0.75 H	<0.75	NS
1,1-Dichloroethene	7	0.7	<1.0	<0.47	<0.47	<0.47	<0.47	<0.57 H	<0.57	NS
cis-1,2-Dichloroethene	70	7	<1.0	<0.46	<0.46	<0.46	<0.46	<0.83 H	<0.83	NS
trans-1,2-Dichloroethene	100	20	NA	<0.64	<0.64	<0.64	<0.64	<0.89 H	<0.89	NS
Ethylbenzene	700	140	<1.0	<0.50	<0.50	<0.50	<0.50	<0.54 H	<0.54	NS
Isopropylbenzene	NS	NS	<1.0	<0.39	<0.39	<0.39	<0.39	<0.59 H	<0.59	NS
Methylene chloride	5	0.5	**6.3 B**	<0.38	<0.38	<0.38	<0.38	<0.43 H	<0.43	NS
Naphthalene	100	10	1.1	<0.59	<0.59	<0.59	<0.59	<0.74 H	<0.74	NS
n-Propylbenzene	NS	NS	<1.0	<0.54	<0.54	<0.54	<0.54	<0.81 H	<0.81	NS
Tetrachloroethene	5	0.5	<1.0	<0.41	<0.41	<0.41	<0.41	<0.45 H	<0.45	NS
Toluene	1,000	200	<1.0	<0.40	<0.40	<0.40	<0.40	<0.67 H	<0.67	NS
1,1,1-Trichloroethane	200	40	<1.0	<0.53	<0.53	<0.53	<0.53	<0.90 H	<0.90	NS
Trichloroethene	5	0.5	<1.0	<0.49	<0.49	<0.49	<0.49	<0.48 H	<0.48	NS
1,2,4-Trimethylbenzene	--	--	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97 H	<0.97	NS
1,3,5-Trimethylbenzene	--	--	<1.0	<0.45	<0.45	<0.45	<0.45	<0.83 H	<0.83	NS
Total Trimethylbenzene	480	96	<1.0	<0.47	<0.47	<0.47	<0.47	<0.97 H	<0.97	NS
Vinyl Chloride	0.2	0.02	<1.0	<0.52	<0.17	<0.17	<0.17	<0.18 H	<0.18	NS
Xylenes, m + p	--	--	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8 H	<1.8	NS
Xylene, o	--	--	<1.0	<0.54	<0.54	<0.54	<0.54	<0.83 H	<0.83	NS
Total Xylenes	10,000	1,000	<2.0	<0.77	<0.77	<0.77	<0.77	<1.8 H	<1.8	NS
Styrene	100	10	<1.0	<0.37	<0.37	<0.37	<0.37	<0.86 H&	<0.86	NS
Ethane	NS	NS	NA	<1.8	<10	<10	<10	NA	<10	NS
Ethene	NS	NS	NA	<2.3	<10	<10	<10	NA	<10	NS
Methane	NS	NS	NA	140	150	260	110	NA	54	NS
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):										
1-Methylnaphthalene	NS	NS	NA	0.069 Q	<0.044	<0.044	<0.044	NA	NA	NS
2-Methylnaphthalene	NS	NS	NA	0.3	<0.049	<0.049	<0.049	NA	NA	NS
Acenaphthene	NS	NS	NA	<0.20	<0.20	<0.20	<0.20	NA	NA	NS
Acenaphthylene	NS	NS	NA	<0.18	<0.18	<0.18	<0.18	NA	NA	NS
Anthracene	3000	600	NA	0.068	0.11	0.053	0.020 Q	NA	NA	NS
Benzo(a)anthracene	NS	NS	NA	0.053	0.22	0.084	0.011 Q	NA	NA	NS
Benzo(a)pyrene	0.2	0.02	NA	**0.025 Q**	<0.012	**0.097**	<0.012	NA	NA	NS
Benzo (b)fluoranthene	0.2	0.02	NA	**0.11**	**0.28**	**0.078**	<0.016	NA	NA	NS
Benzo(ghi)perylene	NS	NS	NA	0.056 Q	NA	0.056	<0.018	NA	NA	NS
Benzo(k)fluoranthene	NS	NS	NA	0.028	NA	0.053	<0.0079	NA	NA	NS
Butyl benzyl phthalate	NS	NS	NA	NA	<0.018	NA	NA	NA	NA	NS
Bis (2-Ethylhexyl) Phthalate	NS	NS	NA	NA	0.12	NA	NA	NA	NA	NS
Chrysene	0.2	0.02	NA	**0.045**	**0.2**	**0.08**	**0.022 Q**	NA	NA	NS
Dibenzo(a,h)anthracene	NS	NS	NA	<0.018	0.026 Q	<0.018	<0.018	NA	NA	NS
Fluoranthene	400	80	NA	0.1	0.34	0.19	<0.019	NA	NA	NS
Fluorene	400	80	NA	0.13	0.11	0.071	0.053 Q	NA	NA	NS
Indeno(1,2,3-dc)pyrene	NS	NS	NA	0.031	0.19	0.064	<0.0083	NA	NA	NS
Naphthalene	100	10	NA	0.25 Q	<0.12	<0.12	<0.12	NA	NA	NS
N-Nitroso-Di-N-Propylamin	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
o-Cresol (2-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
p-Cresol (4-Methylphenol)	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
Phenanthrene	NS	NS	NA	0.2	0.35	0.16	0.049	NA	NA	NS
Pyrene	250	50	NA	<0.013	0.43	0.19	0.038 Q	NA	NA	NS

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	ES[1]	PAL[2]	WP-08 - ABANDONED							
			7/11/94	5/10/99	10/5/99	12/9/99	3/31/00	4/14/05	10/19/06	9/6/07
RCRA Metals (mg/L)										
Antimony	0.006	0.0012	NA	<0.0019 B(-0.0032)	**0.0017**	<0.00020	<0.00020	NA	NA	NS
Arsenic	0.01	0.001	NA	<0.0024	**0.0031 A(-0.00047)**	**0.002 A(0.00038)**	**0.0018 A(0.00034)**	NA	NA	NS
Barium	2	0.4	NA	0.1	0.1	0.095	0.11	NA	NA	NS
Beryllium	0.004	0.0004	NA	<0.00043	<0.000070	<0.000070	<0.000070	NA	NA	NS
Cadmium	0.005	0.0005	NA	<0.00017	<0.000076 A(0.00013	0.00023	0.00010 Q	NA	NA	NS
Chromium	0.1	0.01	NA	<0.00053	0.0027 A(0.00020)	0.0010 A(0.00012)	0.00088 A(0.00017)	NA	NA	NS
Copper	1.3	0.13	NA	<0.00094	0.0016	0.00087	0.0018 A(-0.0003)	NA	NA	NS
Iron	0.3	0.15	NA	**3.3**	**2.2**	**2.2**	**2.6**	NA	NA	NS
Lead	0.015	0.0015	NA	<0.0028	<0.00015	0.00021 Q	<0.00055	NA	NA	NS
Manganese	0.05	0.025	NA	**0.66**	**0.58**	**0.56**	**0.62**	NA	NA	NS
Mercury	0.002	0.0002	NA	<0.000042	<0.000042	<0.000042	<0.000042	NA	NA	NS
Nickel	0.1	0.02	NA	0.0051 Q	0.008	0.0099	0.013	NA	NA	NS
Selenium	0.05	0.01	NA	<0.0023	0.00076 Q	0.0022	0.0014 QA(0.00083)	NA	NA	NS
Sliver	0.05	0.01	NA	<0.00046	<0.000098	<0.000095 A(-0.00041)	<0.00010 A(0.00047)	NA	NA	NS
Sodium	increase of 10		NA	56	55	50	47	NA	NA	NS
Thallium	0.002	0.0004	NA	<0.0013	<0.000093	<0.000093	<0.000093	NA	NA	NS
Zinc	5	2.5	NA	1.1	0.2	0.42	0.22	NA	NA	NS
Poychlorinated Biphenyls (PCBs) (µg/L):										
Aroclor-1016	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
Aroclor-1221	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
Aroclor-1232	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
Aroclor-1242	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
Aroclor-1248	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
Aroclor-1254	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
Aroclor-1260	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
Total PCBs	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NS
General Chemistry Parameters (mg/L)										
Alkalinity	increase of 100		NA	830	1200	880	800	NA	NA	NS
Ammonia	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
BOD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NS
COD	increase of 25		NA	NA	NA	NA	NA	NA	NA	NS
Chloride	250	125	NA	33	35	32	29	NA	NA	NS
Cyanide	0.2	0.04	NA	NA	NA	NA	NA	NA	NA	NS
Sulfate	250	125	NA	38	41	70	37	NA	NA	NS
TDS	increase of 200		NA	NA	NA	NA	NA	NA	NA	NS
TSS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
Hardness, Total	increase of 100		NA	NA	NA	NA	NA	NA	NA	NS
Bicarbonate Alkalinity	NS	NS	NA	830	1200	880	800	NA	NA	NS
Carbonate Alkalinity	NS	NS	NA	<2.5	<19	<1.9	<9.5	NA	NA	NS
Conductance, specific (umhos/c	increase of 200		NA	NA	NA	NA	NA	NA	NA	NS
Ferrous Iron	NS	NS	NA	<0.043	0.045 Q	0.054 Q	0.37	NA	NA	NS
Nitrogen, nitrate	increase of 2		NA	<0.090	0.26 Q	0.52	0.29	NA	NA	NS
Nitrogen, NO3 + NO2	increase of 2		NA	NA	NA	NA	0.34	NA	NA	NS
pH, Laboratory (su)	increase of 1		NA	NA	NA	NA	NA	NA	NA	NS
TOC as NPOC - Filtered	increase of 1		NA	9.1	7.3	9	7.5 A(0.67)	NA	NA	NS
Field Screening Measurements										
pH		IU	6.74	6.58	6.86	6.75	6.74	6.88	6.52	NS
Conductivity		uS	1947	1456	1550	1495	14.5	1611	1518	NS
Temperature		°C	13	9.5	10.4	11.4	10.8	9.6	10.9	NS
Dissolved Oxygen		ppm	NA	1.59	0.96	0.96	0.96	2.18	1.56	NS
Redox Potential		mV	NA	-60	-44	-49	-42	-18	-56	NS

SUMMARY OF CONTAMINATES DETECTED IN GROUNDWATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

NOTES:

(1) Enforcement Standard from NR140, January 2007.
(2) Preventive Action Limit from NR140, January 2007.
NL - ES or PAL not listed in NR140.

NA - Not analyzed.
ND - Not detected.
NS - Not sampled.
J - Compound was detected at a concentration between the limit of detection (LOD) and the limit of quantitation (LOQ).
Q - Compound was detected at a concentration between the limit of detection (LOD) and the limit of quantitation (LOQ).
& - LCS recovery was outside of control limits.
H - Holding time exceeded by (n) days
D - The result is from a dilution analysis.
A - Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory LOD. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
ED - Elevated detection limit due to matric effects.
MS - Either the matrix spike or matrix spike duplicate was outside of the acceptable control limits. All other supporting QC was within the acceptable control limits.
E - Analyte concentraion exceeds calibration range (see Sample Narrative).
* - Duplicate analyses not within control limits.
B(x) - Analyte is detected in the method blank at "x" concentration. Method blank criteria is evaluated to the laboratory LOD. Additionally, method blank acceptance may be basedon project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
N - Spiked sample revocery not within control limits; post-digestion spike recovery accepted.
B - Analyte found in method blank.
OC - Elevated reporting limit due to analyte concentration.

Bold indicates a PAL exceedance.
Bold and underlining indicates an ES exceedance.

Table 3
SUMMARY OF CONTAMINATES DETECTED IN SURFACE WATER

SUMMARY OF CONTAMINATES DETECTED IN SURFACE WATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	Table 9 NR 105[1]	SG-1/SW-01 (upstream location abandoned 2003)	SG-2/SW-02 (upstream location abandoned 2003)	SG-4 (abandoned 2003)			
		4/30/1993	4/30/1993	5/19/99	9/30/99	12/8/99	3/30/00
Volatile Organic Compounds (VOCs) (µg/L):							
Benzene	140	<0.30	<0.30	<0.44	<0.44	<0.44	<0.44
t-Butylbenzene		NA	NA	<0.50	<0.50	<0.50	<0.50
Chloromethane							
2-Chlorotoluene		<0.37	<0.37	<0.65	<0.65	<0.65	<0.65
1,2-Dichloroethane	217	<0.38	<0.38	<0.54	<0.54	<0.54	<0.54
1,1-Dichloroethane		<0.34	<0.34	<0.61	<0.61	<0.61	<0.61
1,1-Dichloroethene		<0.78	<0.78	<0.47	<0.47	<0.47	<0.47
cis-1,2-Dichloroethene		<0.39	<0.39	1.4 Q	<0.46	0.8 Q	2.6
trans-1,2-Dichloroethene		<0.35	<0.35	<0.64	<0.64	<0.64	<0.64
Ethylbenzene		<0.44	<0.44	<0.50	<0.50	<0.50	<0.50
Isopropylbenzene		NA	NA	<0.39	<0.39	<0.39	<0.39
Methylene chloride	2,700	<0.45	<0.45	<0.38	<0.38	<0.38	<0.38
Naphthalene		<0.34	<0.34	<0.59	<0.59	<0.59	<0.59
n-Propylbenzene		<0.54	<0.54	<0.54	<0.54	<0.54	<0.54
Tetrachloroethene	46	<0.52	<0.52	<0.41	<0.41	<0.41	<0.41
Toluene		<0.29	<0.29	<0.40	<0.40	<0.40	<0.40
1,1,1-Trichloroethane		<0.30	<0.30	<0.53	<0.53	<0.53	<0.53
Trichloroethene	539	<0.34	<0.34	<0.49	<0.49	<0.49	<0.49
1,2,4-Trimethylbenzene		<0.47	<0.47	<0.47	<0.47	<0.47	<0.47
1,3,5-Trimethylbenzene		<0.47	<0.47	<0.45	<0.45	<0.45	<0.45
Total Trimethylbenzene		<0.47	<0.47	<0.47	<0.47	<0.47	<0.47
Vinyl Chloride	10	<0.32	<0.32	<0.52	<0.17	<0.17	0.43
Xylenes, m + p		<0.81	<0.81	<0.77	<0.77	<0.77	<0.77
Xylene, o		<0.41	<0.41	<0.54	<0.54	<0.54	<0.54
Total Xylenes		<0.81	<0.81	<0.77	<0.77	<0.77	<0.77
Styrene		<0.30	<0.30	<0.37	<0.37	<0.37	<0.37
Ethane		NA	NA	NA	NA	<10	NA
Ethene		NA	NA	NA	NA	<10	NA
Methane		NA	NA	NA	NA	32	NA
SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):							
1-Methylnaphthalene		NA	NA	<0.044	<0.044	<0.044	<0.044
2-Methylnaphthalene		NA	NA	<0.049	<0.049	<0.049	<0.049
Acenaphthene		NA	NA	<0.20	<0.20	<0.20	<0.20
Acenaphthylene		NA	NA	<0.18	<0.18	<0.18	<0.18
Anthracene		NA	NA	<0.0090	<0.0089	<0.0089	<0.0089
Benzo(a)anthracene		NA	NA	<0.0088	<0.0087	<0.0087	<0.0087
Benzo(a)pyrene		NA	NA	<0.012	<0.012	<0.012	<0.012
Benzo (b)fluoranthene		NA	NA	<0.016	<0.016	<0.016	<0.016
Benzo(ghi)perylene		NA	NA	<0.018	<0.018	<0.018	<0.018
Benzo(k)fluoranthene		NA	NA	<0.0080	<0.0079	<0.0079	<0.0079
Butyl benzyl phthalate		NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate		NA	NA	NA	NA	NA	NA
Chrysene		NA	NA	<0.0090	<0.0089	<0.0089	<0.0089
Dibenzo(a,h)anthracene		NA	NA	<0.018	<0.018	<0.018	<0.018
Fluoranthene		NA	NA	<0.019	<0.019	<0.019	<0.019
Fluorene		NA	NA	<0.020	<0.020	<0.020	<0.020
Indeno(1,2,3-dc)pyrene		NA	NA	<0.0084	<0.0083	<0.0083	<0.0083
Naphthalene		NA	NA	<0.12	<0.12	<0.12	<0.12
N-Nitroso-Di-N-Propylamin		NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)		NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)		NA	NA	NA	NA	NA	NA
Phenanthrene		NA	NA	<0.011	<0.011	<0.011	<0.011
Pyrene		NA	NA	<0.013	<0.013	<0.013	<0.013

SUMMARY OF CONTAMINATES DETECTED IN SURFACE WATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	Table 9 NR 105[1]	SG-1/SW-01 (upstream location abandoned 2003)	SG-2/SW-02 (upstream location abandoned 2003)	SG-4 (abandoned 2003)			
		4/30/1993	4/30/1993	5/19/99	9/30/99	12/8/99	3/30/00
RCRA Metals (mg/L)							
Antimony		NA	NA	<0.0021	<0.00028	<0.00028	0.00020 Q
Arsenic	0.0133	NA	NA	<0.0027	0.0021	0.0037	0.0011 A(0.00034)
Barium		NA	NA	0.047	0.2	0.27	0.036
Beryllium	0.00033	NA	NA	<0.00063	0.00024	**0.00049**	<0.000070
Cadmium		NA	NA	<0.00020	<0.00016 A(-0.00040)	0.00068	0.00017 Q
Chromium		NA	NA	0.0012 Q B(0.0011)	0.0077	0.026	0.000080 QA(0.00017)
Copper		NA	NA	0.0044 Q	0.0088	0.032	0.0021 A(-0.0003)
Iron		NA	NA	0.98	3.9	14	0.030 A(-0.024)
Lead		NA	NA	<0.003	0.0061	0.021	<0.00015
Manganese		NA	NA	0.044	0.057 E	0.32	0.014
Mercury		NA	NA	<0.000042	<0.000042	0.000057 Q	<0.000042
Nickel		NA	NA	0.0051 Q	0.006	0.018	0.0012
Selenium		NA	NA	<0.0012	0.0024 Q	0.0042 Q	<0.00064 A(0.00083)
Sliver		NA	NA	<0.00050	0.00099 N,*	<0.000090	<0.00010 A(0.00047)
Sodium		NA	NA	15	13	15	18
Thallium		NA	NA	<0.0014	0.0011 A(0.00031)	NA	<0.000093
Zinc		NA	NA	0.0068 Q	0.025 A(0.0023)	0.098	0.0037 Q
Poychlorinated Biphenyls (PCBs) (µg/L):							
Aroclor-1016		NA	NA	NA	NA	NA	NA
Aroclor-1221		NA	NA	NA	NA	NA	NA
Aroclor-1232		NA	NA	NA	NA	NA	NA
Aroclor-1242		NA	NA	NA	NA	NA	NA
Aroclor-1248		NA	NA	NA	NA	NA	NA
Aroclor-1254		NA	NA	NA	NA	NA	NA
Aroclor-1260		NA	NA	NA	NA	NA	NA
Total PCBs		NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)							
Alkalinity		NA	NA	NA	NA	NA	NA
Ammonia		NA	NA	NA	NA	NA	NA
BOD		NA	NA	NA	NA	NA	NA
COD		NA	NA	NA	NA	NA	NA
Chloride		NA	NA	NA	NA	NA	NA
Cyanide		NA	NA	NA	NA	NA	NA
Sulfate		NA	NA	NA	NA	NA	NA
TDS		NA	NA	NA	NA	NA	NA
TSS		NA	NA	NA	NA	NA	NA
Hardness, Total		NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity		NA	NA	NA	NA	NA	NA
Carbonate Alkalinity		NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)		NA	NA	NA	NA	NA	NA
Ferrous Iron		NA	NA	NA	NA	NA	NA
Nitrogen, nitrate		NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2		NA	NA	NA	NA	NA	NA
pH, Laboratory (su)		NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered		NA	NA	NA	NA	NA	NA
Field Screening Measurements							
pH		NA	NA	7.8	7.41	7.47	7.46
Conductivity		NA	NA	631	690	753	628
Temperature		NA	NA	18.2	13.1	6.9	6.8
Dissolved Oxygen		NA	NA	8.24	7.08	7.29	6.99
Redox Potential		NA	NA	147	208	211	NA

TABLE 3

SUMMARY OF CONTAMINATES DETECTED IN SURFACE WATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	Table 9 NR 105[(1)]	SG-01 (new location 2006) 2014 Sample Location 4						SG-02 (new location 2006) 2014 Sample Location 3					
		10/18/2006	9/20/2007	9/25/2012	10/22/2013	9/30/2014	10/19/2015	10/18/2006	9/20/2007	9/25/2012	10/22/2013	9/30/2014	10/19/2015
Volatile Organic Compounds (VOCs) (µg/L):													
Benzene	140	<0.41	<0.47	<0.5	0.33 J	0.40 J	<0.44	<0.41	<4.7	<5	<0.24	1.31	<0.44
t-Butylbenzene		<0.97	<0.34	<0.71	<0.36	<0.36	<1.1	<0.97	<3.4	<7.1	<0.36	<0.36	<1.1
Chloromethane			<1	<1.9	<0.81	<0.81	<1.9		<10	<19	<0.81	<0.81	<1.9
2-Chlorotoluene		<0.85	<0.49	<0.7	<0.21	<0.21	<0.4	<0.85	<4.9	<7	<0.21	<0.21	<0.4
1,2-Dichloroethane	217	<0.36	<0.45	<0.5	<0.41	<0.41	<0.46	<0.36	<4.5	<5	<0.41	<0.41	<0.46
1,1-Dichloroethane		<0.75	0.63 J	<0.98	<0.3	0.69 J	<1.1	<0.75	<4.6	<9.8	<0.3	0.96 J	<1.1
1,1-Dichloroethene		<0.57	<0.64	<0.6	<0.4	<0.4	<0.65	<0.57	<5.6	<6	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene		4.0	51.0	102	31.1	50	13.2	1.2 Q	<6.4	101	9.7	61	9.9
trans-1,2-Dichloroethene		<0.89	<0.95	<0.79	<0.35	<0.35	<0.54	<0.89	97	<7.9	<0.35	<0.35	<0.54
Ethylbenzene		<0.54	<0.38	<0.78	<0.55	<0.55	<0.71	<0.54	<3.8	<7.8	<0.55	<0.55	<0.71
Isopropylbenzene		<0.59	<0.48	<0.92	<0.3	<0.3	<0.82	<0.59	<4.8	<9.2	<0.3	<0.3	<0.82
Methylene chloride	2,700	<0.43	<0.69	<1.1	<0.5	<0.5	<1.3	<0.43	<6.9	<11	<0.5	<0.5	<1.3
Naphthalene		<0.74	<1.8	<2.1	<1.7	<1.7	<1.6	<0.74	<18	<21	<1.7	<1.7	<1.6
n-Propylbenzene		<0.81	<0.38	<0.59	<0.25	<0.25	<0.77	<0.81	<3.8	<5.9	<0.25	<0.25	<0.77
Tetrachloroethene	46	<0.45	<0.52	<0.44	<0.33	<0.33	<0.49	<0.45	<5.2	<4.4	<0.33	<0.33	<0.49
Toluene		<0.67	<0.46	<0.53	<0.69	<0.69	<0.44	<0.67	<4.6	<5.3	<0.69	<0.69	<0.44
1,1,1-Trichloroethane		<0.90	<0.5	<0.85	<0.33	<0.33	<0.84	<0.90	<5	<8.5	<0.33	<0.33	<0.84
Trichloroethene	539	<0.48	1.33 J	1.78	0.40 J	0.80 J	<0.47	<0.48	<4.4	<4.7	0.46 J	0.63 J	<0.47
1,2,4-Trimethylbenzene		<0.97	<1.2	<0.8	<2.2	<2.2	<1.6	<0.97	<12	<8	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene		<0.83	<0.37	<0.74	<1.4	<1.4	<1.5	<0.83	<3.7	<7.4	<1.4	<1.4	<1.5
Total Trimethylbenzene		<0.97	<1.2	<0.8	<2.2	<2.2	<1.6	<0.97	<12	<8	<2.2	<2.2	<1.6
Vinyl Chloride	10	1.8	**11.3**	**32**	**18.6**	**24.6**	6.0	<0.18	**51**	**105**	**12.4**	**87**	6.1
Xylenes, m + p		<1.8	<0.67	<1.1	<0.69	<0.69	<2.2	<1.8	<6.7	<11	<0.69	<0.69	<2.2
Xylene, o		<0.83	<0.32	<0.8	<0.63	<0.63	<0.9	<0.83	<3.2	<8	<0.63	<0.63	<0.9
Total Xylenes		<1.8	<0.67	<1.1	<0.69	<0.69	<0.9	<1.8	<6.7	<11	<0.69	<0.69	<0.9
Styrene		<0.86	NA	NA	NA	NA	NA	<0.86	NA	NA	NA	NA	NA
Ethane		<10	NA	NA	NA	NA	NA	<10	NA	NA	NA	NA	NA
Ethene		<10	NA	NA	NA	NA	NA	<10	NA	NA	NA	NA	NA
Methane		<10	NA	NA	NA	NA	NA	<10	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons													
1-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN SURFACE WATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	Table 9 NR 105[(1)]	SG-01 (new location 2006) 2014 Sample Location 4						SG-02 (new location 2006) 2014 Sample Location 3					
		10/18/2006	9/20/2007	9/25/2012	10/22/2013	9/30/2014	10/19/2015	10/18/2006	9/20/2007	9/25/2012	10/22/2013	9/30/2014	10/19/2015
RCRA Metals (mg/L)													
Antimony		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.0133	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.00033	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):													
Aroclor-1016		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)													
Alkalinity		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements													
pH		7.4	6.85	7.32	NA	6.44	NA	7.94	6.6	7.21	NA	6.51	NA
Conductivity		797.6	737.7	809	NA	0.758	NA	796.2	745	805	NA	0.766	NA
Temperature		9.7	17.5	15.03	NA	10.85	NA	9.8	17	13.23	NA	10.63	NA
Dissolved Oxygen		7.46	4.82	4.58	NA	5.21	NA	8.58	3.54	4.05	NA	5.32	NA
Redox Potential		147	203	-50.4	NA	23	NA	160	203	-46.4	NA	188	NA

SUMMARY OF CONTAMINATES DETECTED IN SURFACE WATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	Table 9 NR 105[(1)]	SG-03 (new location 2006) 2014 Sample Location 5						
		10/18/2006	9/20/2007	9/25/2012	10/22/2013	9/30/2014	9/30/2014 (Dup)	10/19/2015
Volatile Organic Compounds (VOCs) (µg/L):								
Benzene	140	<0.41	<0.47	<0.5	<0.24	<0.24	<0.24	<0.44
t-Butylbenzene		<0.97	<0.34	<0.71	<0.36	<0.36	<0.36	<1.1
Chloromethane			<1	<1.9	<0.81	<0.81	<0.81	<1.9
2-Chlorotoluene		<0.85	<0.49	<0.7	<0.21	<0.21	<0.21	<0.4
1,2-Dichloroethane	217	<0.36	<0.45	<0.5	<0.41	<0.41	<0.41	<0.46
1,1-Dichloroethane		<0.75	<0.56	<0.98	<0.3	<0.3	<0.3	<1.1
1,1-Dichloroethene		<0.57	<0.64	<0.6	<0.4	<0.4	<0.4	<0.65
cis-1,2-Dichloroethene		<0.83	2.83	2.31 J	<0.38	0.86 J	0.65 J	<0.45
trans-1,2-Dichloroethene		<0.89	<0.95	<0.79	<0.35	<0.35	<0.35	<0.54
Ethylbenzene		<0.54	<0.38	<0.78	<0.55	<0.55	<0.55	<0.71
Isopropylbenzene		<0.59	<0.48	<0.92	<0.3	<0.3	<0.3	<0.82
Methylene chloride	2,700	<0.43	<0.69	<1.1	<0.5	<0.5	<0.5	<1.3
Naphthalene		<0.74	<1.8	<2.1	<1.7	<1.7	<1.7	<1.6
n-Propylbenzene		<0.81	<0.38	<0.59	<0.25	<0.25	<0.25	<0.77
Tetrachloroethene	46	<0.45	<0.52	<0.44	<0.33	<0.33	<0.33	<0.49
Toluene		<0.67	<0.46	<0.53	<0.69	<0.69	<0.69	<0.44
1,1,1-Trichloroethane		<0.90	<0.5	<0.85	<0.33	<0.33	<0.33	<0.84
Trichloroethene	539	<0.48	1.0 J	0.52 J	<0.33	<0.33	<0.33	<0.47
1,2,4-Trimethylbenzene		<0.97	<1.2	<0.8	<2.2	<2.2	<2.2	<1.6
1,3,5-Trimethylbenzene		<0.83	<0.37	<0.74	<1.4	<1.4	<1.4	<1.5
Total Trimethylbenzene		<0.97	<1.2	<0.8	<2.2	<2.2	<2.2	<1.6
Vinyl Chloride	10	<0.18	<0.2	<0.18	<0.18	<0.18	<0.18	<0.17
Xylenes, m + p		<1.8	<0.7	<1.1	<0.69	<0.69	<0.69	<2.2
Xylene, o		<0.83	<0.32	<0.8	<0.63	<0.63	<0.63	<0.9
Total Xylenes		<1.8	<0.67	<1.1	<0.69	<0.69	<0.69	<0.9
Styrene		<0.86	NA	NA	NA	NA	NA	NA
Ethane		<10	NA	NA	NA	NA	NA	NA
Ethene		<10	NA	NA	NA	NA	NA	NA
Methane		<10	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons								
1-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA
Acenaphthene		NA	NA	NA	NA	NA	NA	NA
Acenaphthylene		NA	NA	NA	NA	NA	NA	NA
Anthracene		NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene		NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene		NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene		NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene		NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene		NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate		NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate		NA	NA	NA	NA	NA	NA	NA
Chrysene		NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene		NA	NA	NA	NA	NA	NA	NA
Fluoranthene		NA	NA	NA	NA	NA	NA	NA
Fluorene		NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene		NA	NA	NA	NA	NA	NA	NA
Naphthalene		NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin		NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)		NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)		NA	NA	NA	NA	NA	NA	NA
Phenanthrene		NA	NA	NA	NA	NA	NA	NA
Pyrene		NA	NA	NA	NA	NA	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN SURFACE WATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	Table 9 NR 105[(1)]	SG-03 (new location 2006) 2014 Sample Location 5						
		10/18/2006	9/20/2007	9/25/2012	10/22/2013	9/30/2014	9/30/2014 (Dup)	10/19/2015
RCRA Metals (mg/L)								
Antimony		NA	NA	NA	NA	NA	NA	NA
Arsenic	0.0133	NA	NA	NA	NA	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA	NA
Beryllium	0.00033	NA	NA	NA	NA	NA	NA	NA
Cadmium		NA	NA	NA	NA	NA	NA	NA
Chromium		NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA
Iron		NA	NA	NA	NA	NA	NA	NA
Lead		NA	NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA	NA
Mercury		NA	NA	NA	NA	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	NA	NA
Selenium		NA	NA	NA	NA	NA	NA	NA
Sliver		NA	NA	NA	NA	NA	NA	NA
Sodium		NA	NA	NA	NA	NA	NA	NA
Thallium		NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):								
Aroclor-1016		NA	NA	NA	NA	NA	NA	NA
Aroclor-1221		NA	NA	NA	NA	NA	NA	NA
Aroclor-1232		NA	NA	NA	NA	NA	NA	NA
Aroclor-1242		NA	NA	NA	NA	NA	NA	NA
Aroclor-1248		NA	NA	NA	NA	NA	NA	NA
Aroclor-1254		NA	NA	NA	NA	NA	NA	NA
Aroclor-1260		NA	NA	NA	NA	NA	NA	NA
Total PCBs		NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)								
Alkalinity		NA	NA	NA	NA	NA	NA	NA
Ammonia		NA	NA	NA	NA	NA	NA	NA
BOD		NA	NA	NA	NA	NA	NA	NA
COD		NA	NA	NA	NA	NA	NA	NA
Chloride		NA	NA	NA	NA	NA	NA	NA
Cyanide		NA	NA	NA	NA	NA	NA	NA
Sulfate		NA	NA	NA	NA	NA	NA	NA
TDS		NA	NA	NA	NA	NA	NA	NA
TSS		NA	NA	NA	NA	NA	NA	NA
Hardness, Total		NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity		NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity		NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)		NA	NA	NA	NA	NA	NA	NA
Ferrous Iron		NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate		NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2		NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)		NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered		NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements								
pH		8.14	6.71	7.18	NA	6.73	6.73	NA
Conductivity		798.3	709	828	NA	0.748	0.748	NA
Temperature		9.7	18.4	13.21	NA	11.40	11.40	NA
Dissolved Oxygen		8.4	4.04	5.22	NA	9.13	9.13	NA
Redox Potential		114	200	-80.3	NA	175	175	NA

SUMMARY OF CONTAMINATES DETECTED IN SURFACE WATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	Table 9 NR 105[(1)]	2014 Sample Location 1	2014 Sample Location 2	2014 Sample Location 6	2014 Sample Location 7	2014 Sample Location 8	2014 Sample Location 9	2014 Sample Location 10	2014 Sample Location 11	2014 Sample Location 12
		9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014
Volatile Organic Compounds (VOCs) (µg/L)										
Benzene	140	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
t-Butylbenzene		<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Chloromethane		<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81
2-Chlorotoluene		<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-Dichloroethane	217	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
1,1-Dichloroethane		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethene		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
cis-1,2-Dichloroethene		<0.38	<0.38	11.5	3.3	<0.38	<0.38	<0.38	<0.38	<0.38
trans-1,2-Dichloroethene		<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
Ethylbenzene		<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55
Isopropylbenzene		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Methylene chloride	2,700	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene		<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
n-Propylbenzene		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Tetrachloroethene	46	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Toluene		<0.69	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69
1,1,1-Trichloroethane		<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Trichloroethene	539	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
1,2,4-Trimethylbenzene		<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
1,3,5-Trimethylbenzene		<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Total Trimethylbenzene		<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
Vinyl Chloride	10	<0.18	<0.18	2.86	0.57	<0.18	<0.18	<0.18	<0.18	<0.18
Xylenes, m + p		<0.69	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69
Xylene, o		<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63
Total Xylenes		<0.69	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69
Styrene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane		NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane		NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs Polycyclic Aromatic Hydrocarbons										
1-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin		NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)		NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)		NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 3

SUMMARY OF CONTAMINATES DETECTED IN SURFACE WATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

Analyte	Table 9 NR 105[(1)]	2014 Sample Location 1	2014 Sample Location 2	2014 Sample Location 6	2014 Sample Location 7	2014 Sample Location 8	2014 Sample Location 9	2014 Sample Location 10	2014 Sample Location 11	2014 Sample Location 12
		9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014
RCRA Metals (mg/L)										
Antimony		NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.0133	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.00033	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver		NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA
Poychlorinated Biphenyls (PCBs) (µg/L):										
Aroclor-1016		NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221		NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232		NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242		NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248		NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254		NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260		NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs		NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry Parameters (mg/L)										
Alkalinity		NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia		NA	NA	NA	NA	NA	NA	NA	NA	NA
BOD		NA	NA	NA	NA	NA	NA	NA	NA	NA
COD		NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride		NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide		NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate		NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS		NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS		NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total		NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity		NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity		NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductance, specific (umhos/cm)		NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, nitrate		NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, NO3 + NO2		NA	NA	NA	NA	NA	NA	NA	NA	NA
pH, Laboratory (su)		NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC as NPOC - Filtered		NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements										
pH		7.23	7.51	6.53	6.59	6.49	6.53	6.25	7.21	6.72
Conductivity		0.656	0.705	0.752	0.736	0.775	0.737	0.987	0.971	0.825
Temperature		11.25	12.36	13.14	11.91	11.45	12.27	12.01	13.04	12.10
Dissolved Oxygen		3.22	4.21	4.01	7.22	6.21	6.53	7.32	15.71	5.73
Redox Potential		194	194	164	171	175	177	177	167	170

SUMMARY OF CONTAMINATES DETECTED IN SURFACE WATER
FORMER GRAVEL PIT
TOWN OF NEWTON, WISCONSIN

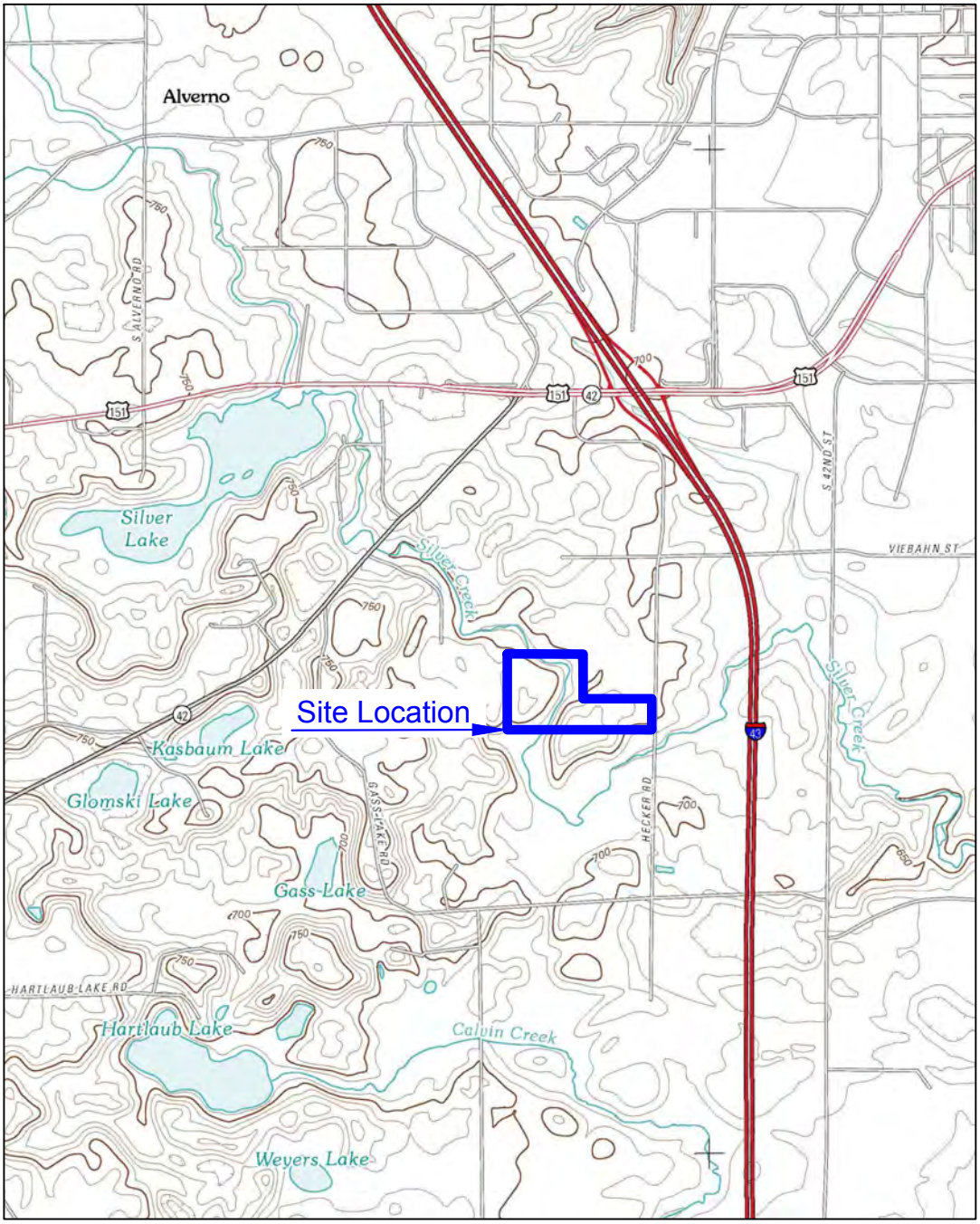
NOTES:

(1) WAC Chapter NR 105, Table 9 Human Cancer Criteria Standards for a non-public water supply that is a “warm water forage, limited forage and warm water sport fish community”.

Data for "2014 Sample Locations" sample numbers 1 thru 12 were originally presented in AECOM's *2014 Silver Creek Sampling Letter Report* dated December 2, 2014.

Bold indicates a standard exceedance.
NA - Not analyzed.
ND - Not detected.
NS - Not sampled.
J - Compound was detected at a concentration between the limit of detection (LOD) and the limit of quantitation (LOQ).
Q - Compound was detected at a concentration between the limit of detection (LOD) and the limit of quantitation (LOQ).
& - LCS recovery was outside of control limits.
H - Holding time exceeded by (n) days
D - The result is from a dilution analysis.
A - Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory LOD. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
ED - Elevated detection limit due to matric effects.
MS - Either the matrix spike or matrix spike duplicate was outside of the acceptable control limits. All other supporting QC was within the acceptable control limits.
E - Analyte concentraion exceeds calibration range (see Sample Narrative).
* - Duplicate analyses not within control limits.
B(x) - Analyte is detected in the method blank at "x" concentration. Method blank criteria is evaluated to the laboratory LOD. Additionally, method blank acceptance may be basedon project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
N - Spiked sample revocery not within control limits; post-digestion spike recovery accepted.
B - Analyte found in method blank.
OC - Elevated reporting limit due to analyte concentration.

Figures:



SCALE 1:24 000

KILOMETERS 1 0.5 0 1 2

METERS 1000 500 0 1000 2000

MILES 1 0.5 0 1

FEET 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

Topographic Map courtesy of the United States Geological Survey

http://store.usgs.gov/b2c_usgs/usgs/maplocator/(ctype=areaDetails&xcm=r3standardpitrex_prd&carea=%24ROOT&layout=6_1_61_48&uiarea=2)/.do

Map Date: 2010

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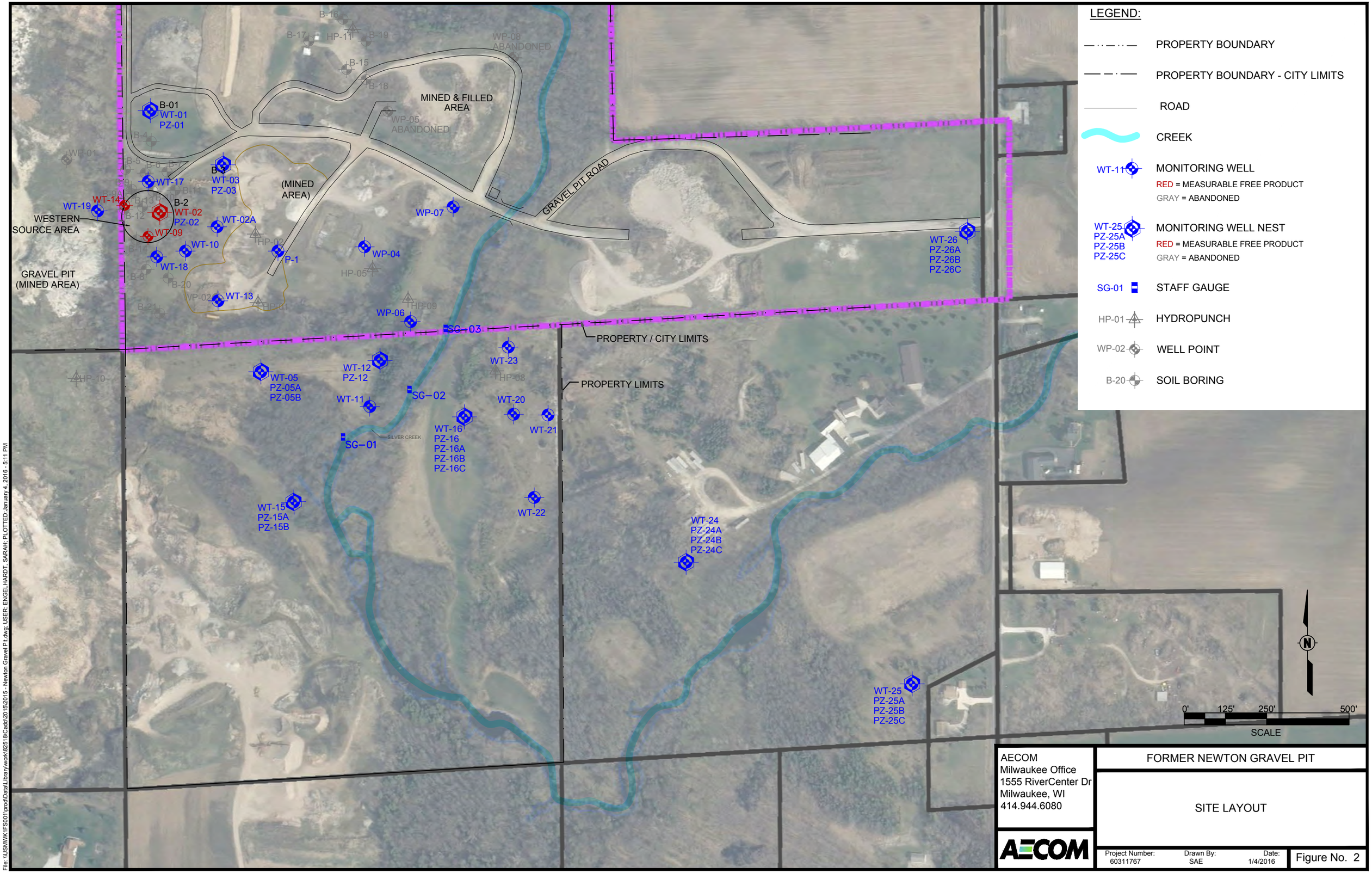
FORMER NEWTON GRAVEL PIT

SITE LOCATION

Project Number:	Drawn By:	Date:	Figure No. 1
60311767	SAE	6/10/2015	



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FORMER NEWTON GRAVEL PIT

SITE LAYOUT

Project Number:	Drawn By:	Date:	Figure No. 2
60311767	SAE	1/4/2016	

File: \\USMWK1FS001\prod\Data\Library\work\82518\Cadd\20152015 - Newton Gravel Pit.dwg, USER: ENGELHARDT, SARAH, PLOTTED: January 4, 2016 - 5:11 PM

LEGEND:

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY - CITY LIMITS
- ROAD
- CREEK
- WT-11 — MONITORING WELL
  RED = MEASURABLE FREE PRODUCT
- WT-03 — MONITORING WELL NEST
  RED = MEASURABLE FREE PRODUCT
- SG-01 — STAFF GAUGE
- WP-02 — WELL POINT
- SILVER CREEK - BASE SURVEY POINTS

NOTES:

1. SILVER CREEK WAS SURVEYED 10/2013.
2. GROUNDWATER ELEVATIONS FROM MONITORING WELLS WT-02, WT-09 AND WT-14 WERE NOT USED DUE TO THE PRESENCE OF MEASURABLE PRODUCT.

0' 150' 300' 600'
SCALE

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FORMER NEWTON GRAVEL PIT

INTERPRETED GROUNDWATER FLOW
WATER TABLE
OCTOBER 2015

Project Number:	Drawn By:	Date:	Figure No. 3
60311767	SAE	1/4/2016	

LEGEND:

PROPERTY BOUNDARY

PROPERTY BOUNDARY - CITY LIMITS

ROAD

CREEK

PZ-16A MONITORING WELL NEST

SILVER CREEK

GRAVEL PIT ROAD

PROPERTY / CITY LIMITS

PROPERTY LIMITS

PZ-01 688.08

PZ-03 686.17

PZ-02 686.72

PZ-05B 684.87

PZ-16A 682.73

PZ-26A 681.59

PZ-24A 681.38

PZ-25A 678.46

688

686

684

682

680

0' 150' 300' 600'

SCALE

N

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FORMER NEWTON GRAVEL PIT

INTERPRETED GROUNDWATER FLOW
PIEZOMETER ELEVATION - 630
OCTOBER 2015

Project Number:	Drawn By:	Date:	Figure No. 4
60311767	SAE	12/30/2015	

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LEGEND:

PROPERTY BOUNDARY

PROPERTY BOUNDARY - CITY LIMITS

ROAD

CREEK

PZ-16B MONITORING WELL NEST

SILVER CREEK

GRAVEL PIT ROAD

681.55
PZ-26B

680

PROPERTY / CITY LIMITS

PROPERTY LIMITS

PZ-16B 681.41

SILVER CREEK

681.56
PZ-24B

680

678

677.37
PZ-25B

678

0' 150' 300' 600'

SCALE

N

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FORMER NEWTON GRAVEL PIT

INTERPRETED GROUNDWATER FLOW
PIEZOMETER ELEVATION - 600
OCTOBER 2015

Project Number:	Drawn By:	Date:	Figure No. 5
60311767	SAE	12/30/2015	

File: \\USMWK1FS001\prod\Data\Library\work\82518\Cadd\20152015 - Newton Gravel Pit.dwg, USER: ENGELHARDT, SARAH; PLOTTED:December 30, 2015 - 3:33 PM

LEGEND:

PROPERTY BOUNDARY

PROPERTY BOUNDARY - CITY LIMITS

ROAD

CREEK

PZ-16C MONITORING WELL NEST

SILVER CREEK

GRAVEL PIT ROAD

680

675

670.45
PZ-26C

PROPERTY / CITY LIMITS

PROPERTY LIMITS

SILVER CREEK
680.92
PZ-16C

680.99
PZ-24C

670.63
PZ-25C

680

675

N

0' 150' 300' 600'
SCALE

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FORMER NEWTON GRAVEL PIT

INTERPRETED GROUNDWATER FLOW
BEDROCK PIEZOMETERS
OCTOBER 2015

Project Number:	Drawn By:	Date:	Figure No. 6
60311767	SAE	12/30/2015	

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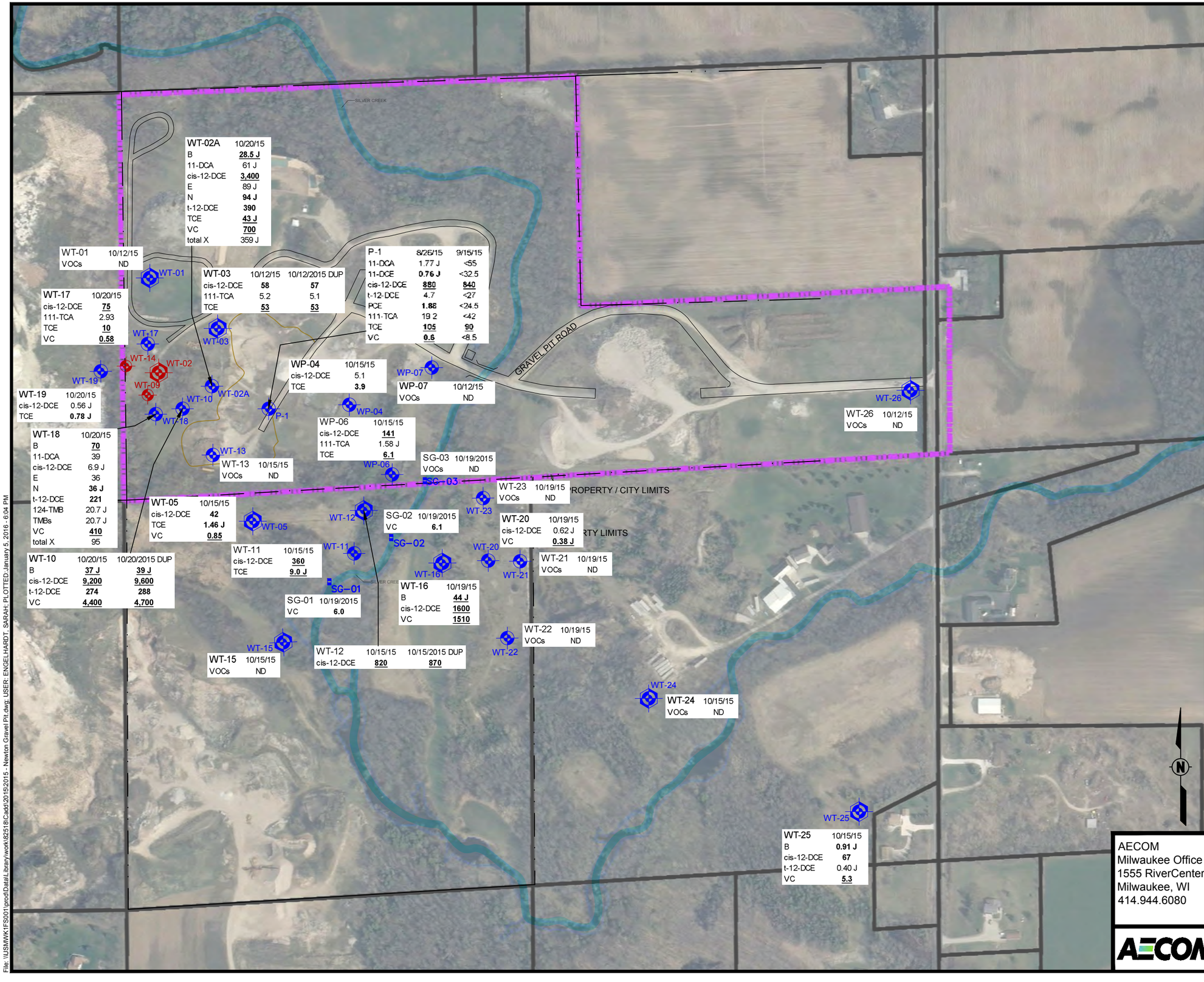

LEGEND:

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY - CITY LIMITS
- ROAD
- CREEK
- WT-11 — MONITORING WELL
  RED = MEASURABLE FREE PRODUCT (not sampled)
- WT-03 — MONITORING WELL NEST
  RED = MEASURABLE FREE PRODUCT
- SG-01 — STAFF GAUGE
- WP-02 — WELL POINT

NOTES:

VOCs = VOLATILE ORGANIC COMPOUNDS MEASURED IN MICROGRAMS PER LITER (UG/L)
ND = NO DETECTS
B = BENZENE
11-DCA = 1,1-DICHLOROETHANE
11-DCE = 1,1-DICHLOROETHENE
cis-12-DCE = CIS-1,2-DICHLOROETHENE
t-12-DCE = TRANS-1,2-DICHLOROETHENE
E = ETHYLBENZENE
N = NAPHTHALENE
PCE = TETRACHLOROETHENE
111-TCA = 1,1,1-TRICHLOROETHANE
TCE = TRICHLOROETHENE
VC = VINYL CHLORIDE
total X = TOTAL XYLENES
J = COMPOUND WAS DETECTED AT A CONCENTRATION BETWEEN THE LIMIT OF DETECTION AND THE LIMIT OF QUANTITATION

BOLD INDICATES A PREVENTIVE ACTION LIMIT (PAL) EXCEEDANCE
BOLD AND UNDERLINED INDICATES AN ENFORCEMENT STANDARD (ES) EXCEEDANCE

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FORMER NEWTON GRAVEL PIT

GROUNDWATER DATA SUMMARY
WATER TABLE WELLS
OCTOBER 2015

Project Number:	Drawn By:	Date:	Figure No. 7
60311767	SAE	1/5/2016	

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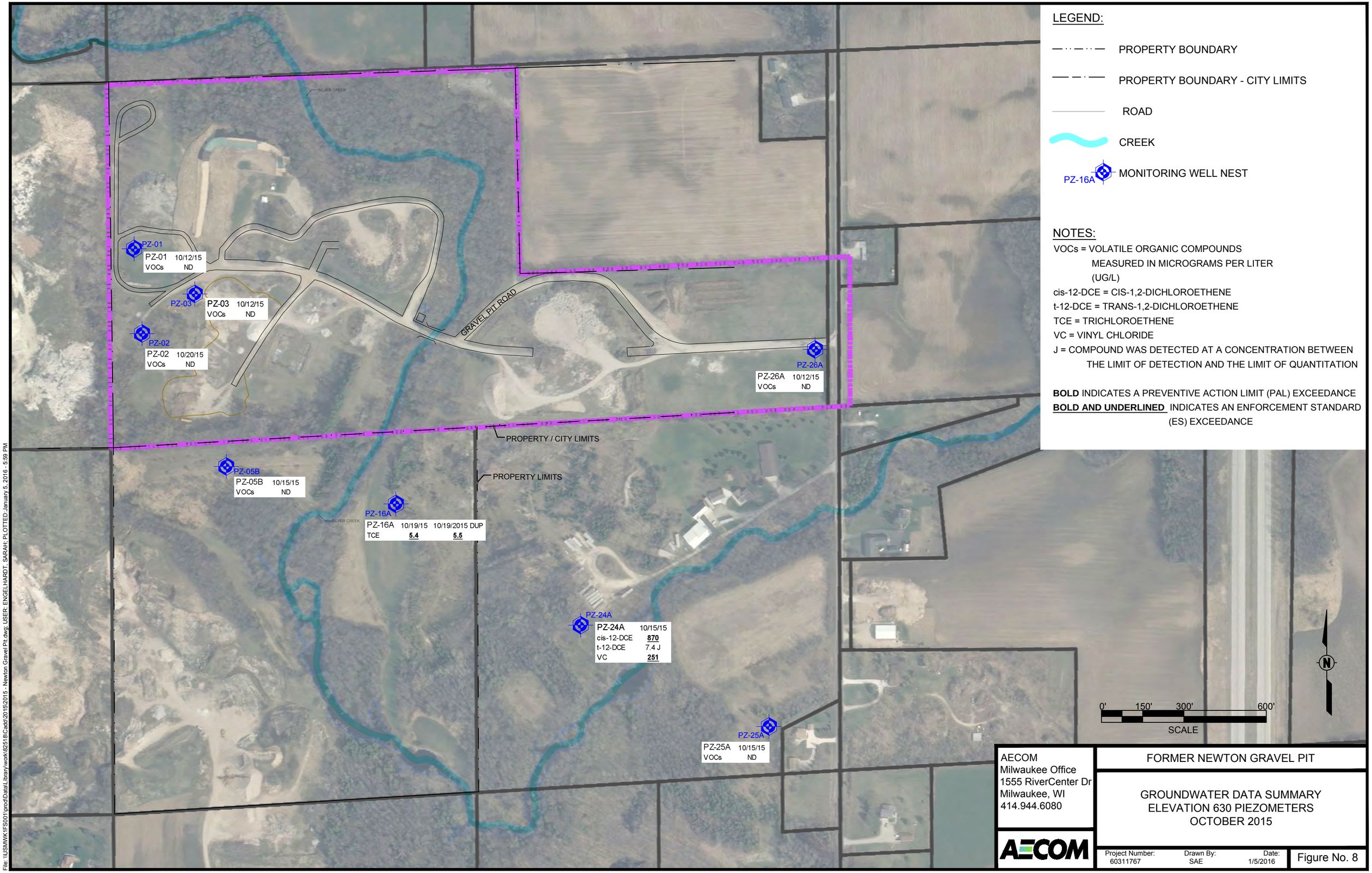

LEGEND:

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY - CITY LIMITS
- ROAD
- CREEK
- PZ-16A MONITORING WELL NEST

NOTES:

VOCs = VOLATILE ORGANIC COMPOUNDS
MEASURED IN MICROGRAMS PER LITER (UG/L)
cis-12-DCE = CIS-1,2-DICHLOROETHENE
t-12-DCE = TRANS-1,2-DICHLOROETHENE
TCE = TRICHLOROETHENE
VC = VINYL CHLORIDE
J = COMPOUND WAS DETECTED AT A CONCENTRATION BETWEEN THE LIMIT OF DETECTION AND THE LIMIT OF QUANTITATION

BOLD INDICATES A PREVENTIVE ACTION LIMIT (PAL) EXCEEDANCE
BOLD AND UNDERLINED INDICATES AN ENFORCEMENT STANDARD (ES) EXCEEDANCE

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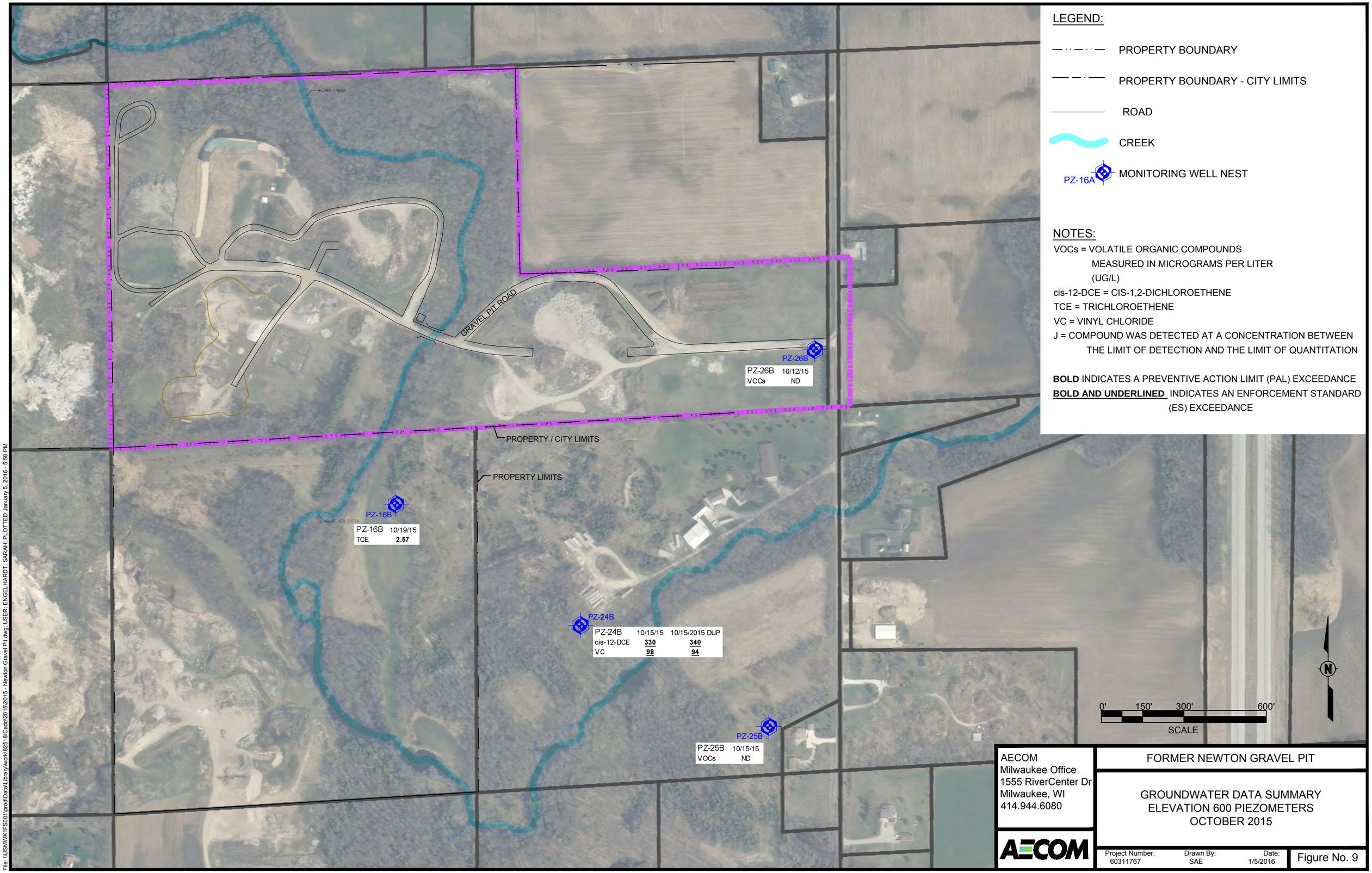
GROUNDWATER DATA SUMMARY
ELEVATION 630 PIEZOMETERS
OCTOBER 2015

Project Number:	Drawn By:	Date:	Figure No. 8
60311767	SAE	1/5/2016	



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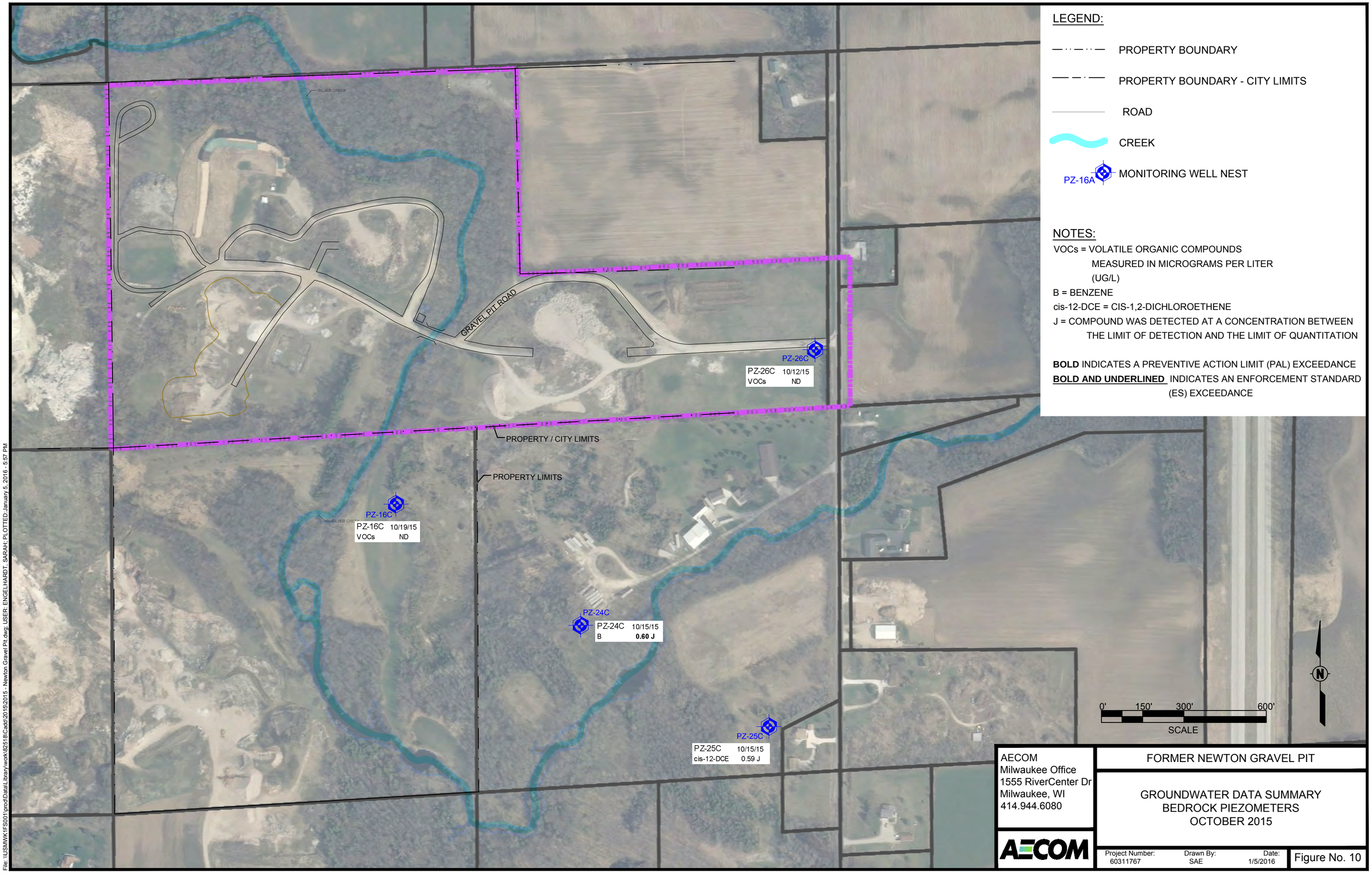
FORMER NEWTON GRAVEL PIT

GROUNDWATER DATA SUMMARY
ELEVATION 600 PIEZOMETERS
OCTOBER 2015

Project Number:	Drawn By:	Date:	Figure No. 9
60311767	SAE	1/5/2016	



LEGEND:

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY - CITY LIMITS
- ROAD
- CREEK
- PZ-16A MONITORING WELL NEST

NOTES:

VOCs = VOLATILE ORGANIC COMPOUNDS
MEASURED IN MICROGRAMS PER LITER (UG/L)
B = BENZENE
cis-12-DCE = CIS-1,2-DICHLOROETHENE
J = COMPOUND WAS DETECTED AT A CONCENTRATION BETWEEN THE LIMIT OF DETECTION AND THE LIMIT OF QUANTITATION

BOLD INDICATES A PREVENTIVE ACTION LIMIT (PAL) EXCEEDANCE
BOLD AND UNDERLINED INDICATES AN ENFORCEMENT STANDARD (ES) EXCEEDANCE

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FORMER NEWTON GRAVEL PIT

GROUNDWATER DATA SUMMARY
BEDROCK PIEZOMETERS
OCTOBER 2015

Project Number:	Drawn By:	Date:	Figure No. 10
60311767	SAE	1/5/2016	

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Attachment A:

P-1 Well Data Forms

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name: Newton Gravel Pit	License/Permit/Monitoring Number	Boring Number: P-1

Boring Drilled By: Name of crew chief (first, last) and Firm
Fist Name: Adam Last Name: Sweet
Firm: Horizon Construction & Excavation

Date Drilling Started	Date Drilling Completed	Drilling Method
8 25 15 (MM/ DD/ YY)	8 25 15 (MM/ DD/ YY)	HSA

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	8.25 inches

Local Grid Origin ☐ (Estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
1/4 of 1/4 of Section T N, R E/W
Lat ° ' "
Long ° ' "
Local Grid Location (if applicable): Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/or Village

Sample: Number and Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth in feet	Soil / Rock Description and Geological Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1.0	Blind Drilled to 13 feet, set 2" well, screened 3-13'										
			2.0											
			3.0											
			4.0											
			5.0											
			6.0											
			7.0											
			8.0											
			9.0											
			10.0											
			11.0											
			13.0											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: [signature] Firm: **AECOM**
11425 W. Lake Park Drive, Milwaukee, WI 53224

State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name: Newton Gravel Pit	Local Grid Location of Well: ft N S, ft E W	Well Name: P-1
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐	Wis. Unique Well No. / DNR Well Id No.
Facility ID	Lat. Long or St. Plane ft N ft E S/C/N	Date Well Installed: 08 / 25 / 2015 (m m d d y y y y)
Type of Well: Well Code ___ / ___	Section Location of Waste/Source: ___ 1/4 of ___ of Sec. ___, T. ___ N, R ___ W ☑ E	Well Installed By: Name (first, last) and Firm: Adam Sweet, Horizon Construction & Excavation
Distance from Waste/Source ___ ft. / Enf. Stds. Apply ☐	Location of Well relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient; d ☐ Downgradient n ☐ Not Known	Gov. Lot No.

A. Protective pipe, top elevation ___ ft. MSL
B. Well casing, top elevation ___ ft. MSL
C. Land surface elevation ___ ft. MSL
D. Surface seal, bottom ___ ft. MSL or ___ Ft

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☑ No

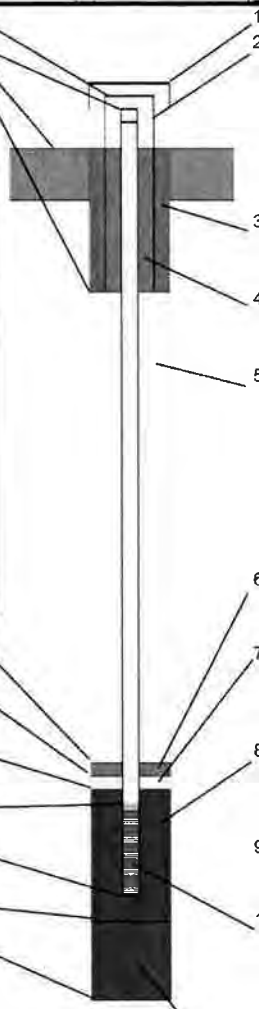
14 Drilling method used: Rotary ☐ 50; Hollow Stem Auger ☒ 41; ___ Other ☐ ___

15 Drilling fluid used: Water ☐ 02; Air ☐ 01; Drilling Mud ☐ 03; None ☑ 99

16 Drilling additives used? ☐ Yes ☐ No
Describe ___

17. Source of water (attach analysis, if required): ___

E. Bentonite seal, top ___ ft. MSL 0. ft.
F. Fine sand, top ___ ft. MSL 2.0 ft.
G. Filter Pack, top ___ ft. MSL 2.5 ft.
H. Screen joint, top ___ ft. MSL 3.0 ft.
I. Well Bottom ___ ft. MSL 13.0 ft.
J. Filter Pack, bottom ___ ft. MSL 13.0 ft.
K. Borehole, bottom ___ ft. MSL 13.0 ft.
L. Borehole, diameter 8.25 In.
M. O.D. well casing ___ In.
N. I.D. well casing 2. In.



1. Cap and lock? ☑ Yes ☑ No
2. Protective cover pipe:
a. Inside diameter: 12 In.
b. Length: 1. Ft
c. Material: Steel ☑ 04; Other ☐ ___
d. Additional Protection? ☐ Yes ☑ No
If yes, describe: ___
3. Surface seal: Bentonite ☐ 30; Concrete ☑ 01; Other ☐ ___
4. material between well casing and protective pipe: Bentonite ☑ 30; Other ☐ ___
3/8 Black Hills Bentonite
5. Annular space seal: a. Granular/Chipped Bentonite ☑ 33
b. ___ Lbs/gal mud weight... Bentonite-sand slurry ☐ 35
c. ___ Lbs/gal mud weight .. Bentonite slurry ☐ 31
d. ___ % Bentonite..... Bentonite-cement grout ☐ 50
e. 1.5 bags volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie Pumped ☐ 02; Gravity ☑ 08
6. Bentonite Seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☑ 3/8 in. ☐ 1/2 in. Bentonite Chips ☑ 32
c. bag Other ☐ ___
7. Fine sand material: Manufacturer, product name & mesh size
a. ___
b. Volume added 0.25 bag
8. Filter pack material: Manufacturer, product name & mesh size
a. Sidley OH #5
b. Volume added 4 bags
9. Well casing: Flush threaded PVC schedule 40 ☑ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ ___
10. Screen Material PVC ☐ ___
a. screen type: Factory cut ☑ 11; Continuous slot ☐ 01; Other ☐ ___
b. Manufacturer monoflex
b. Slot size: 0.010 in.
c. slotted length: 10.0 ft
11. Backfill material (below filter pack): None ☑ 14; Other ☐ ___

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: [signature] Firm: **AECOM**
1555 RiverCenter Drive, Suite 214, Milwaukee, Wisconsin, 53212

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. Note: See the instructions for more information, including where the completed forms should be sent.

AECOM

Well Development

Well No. P-1

Date: 8 / 25 / 15
Mon. Tues. Weds. Thurs. Fri.

Site: Newton Gravel Pit

Weather: _____ Project No.: _____

Development: (Pumped) Θ Bailed Θ Other: _____

Pump Type: _____ Bailer Type: _____

Volume Calculation: _____

(D.T.B - D.T.W. x vol./ft. = PVC/well volume) + (N* x H* Annulus vol./ft.) = Total well Volume

*(Wells that cannot be purged dry, 10x's the Total Well Volume must be purged)

**(Wells that can be purged dry, slowly removing water without surging until dry)

Time	Depth to Water (D.T.W.)	Depth to Bottom (D.T.B.)	Volume Removed (gal.)	PH	Cond (µS)	Temp. (°F)	Color	Odor Y/N	ORP (mV)	DO (ppm)	Turbidity
1705	5,00	15,40	80								clear

Comments: _____

*N = porosity of filter pack (0.3)

*H = length of filter pack or length of saturated filter pack (water level within screen length)

* = A 30-minute surge and purge before the 10x's the Total Well Volume

Annulus	vol./ft.
4"	0.42
6"	1.24
8"	2.38
10"	3.85

Inside Diameter	vol./ft.
1"	0.04
1.25"	0.06
(2")	0.16
4"	0.65

Signature: DSH for Jordan Junior

HNU/PPM	LEL/%	O_2/%	H_2S/PPM	CO/PPM	

Attachment B:

Well Purging and Sample Collection Forms

AECOM

Well Purging and Sample Collection

Site: Newton Gravel Pit — Well No.: P-1

Weather Conditions: Cloudy highs in 70s — Project No.:

Sampling Method (circle one): (Pumped), Bailed, Other: _____ — Pump Type (circle one): Keck, Grundfos, Other: Peristaltic

Bailer Type (circle one): Disposable, PVC, Stainless Steel, Other: _____

Volume Calculation: ~~Excel~~ (15.43 - 5.04) x 0.163 = 1.69

(D.T.B. - D.T.W. x vol./ft. = Gals./Well Vol.) — Gals./Well Vol.: 1.69

(Gals./Well Vol. x 5 = Total Volume to be Removed)

Time	Depth to Water (D.T.W.)	Depth to Bottom (D.T.B.)	Volume Removed (gal.)	pH	Cond (µS)	Temp. (°F)	Color	Odor Y/N	ORP (mV)	DO (ppm)	Turbidity
900		Sample Readings					Clear	N			None

Comments: No Reading

815 Begin Purging

Removed 6 gallons Duplicate

Field Blank Taken: No.: _____ Time: _____

Inside Diameter	vol./ft
1"	0.04
1.25"	0.06
(2")	0.16
4"	0.65

Well Duplicate No.: _____

Signature: [signature]

Date: 8/26/15

Location	HNu/PPM	LEL/%	O_2/%	H_2S/PPM	CO/PPM	Time

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-01 Date Sampled: 10/12/15

Previous Well Sampled: WT-26

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Protector Pipe:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Well Cap:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No

Ambient Temperature: 66 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 27.33 (from TPVC)

Depth to Bottom: 92.78 (from TPVC)

Length of Water: 65.45

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 9 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 13:44 Time Ended: 1411

Decon Method: Alconox + 3x Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-01 Date: 10/12/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1348	10.81	7.56	0.695	2.21	-17.6	28.09	300
1351	10.84	7.36	0.696	1.46	-44.5	28.10	300
1355	10.78	7.37	0.694	1.25	-65.1	28.12	300
1358	10.72	7.38	0.695	1.03	-73.7	28.12	300
1402	10.68	7.40	0.694	0.98	-80.5	28.12	300
1405	10.69	7.42	0.695	0.95	-82.6	28.12	300
1408	10.63	7.43	0.695	0.86	-86.0	28.12	300
1411	10.60	7.39	0.695	0.85	-89.0	28.12	300
1411	Sample						

APP

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-01 Date Sampled: 10/12/15

Previous Well Sampled: PZ-01

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	

Ambient Temperature: 69 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 26.79 (from TPVC)

Depth to Bottom: 31.30 (from TPVC)

Length of Water: 4.51

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 9 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1425 Time Ended: 1451

Decon Method: Alconox + 2x Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-01 Date: 10/12/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1430	10.26	7.11	1.008	4.73	9.7	27.18	400
1433	10.37	7.03	1.022	4.45	11.2	27.20	400
1438	10.10	6.97	1.038	4.14	12.8	27.20	400
1443	10.14	6.94	1.047	4.05	14.8	27.20	400
1448	10.10	6.93	1.050	4.01	15.2	27.20	400
1451	10.09	6.93	1.047	4.03	14.8	27.20	400
1451	Sample						

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-02 Date Sampled: 10/20/15

Previous Well Sampled: First well of day

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[x] Ok	[ ] Damaged		[ ] Missing:	Yes	No
Protector Pipe:	[x] Ok	[ ] Damaged		[ ] Missing:	Yes	No
Well Cap:	[x] Ok	[ ] Damaged		[ ] Missing:	Yes	No

Ambient Temperature: 59 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 33.89 (from TPVC)

Depth to Bottom: 88.93 (from TPVC)

Length of Water: 55.04

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 7 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 0832 Time Ended: 0916

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-02 Date: 10/20/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
0841	10.86	7.62	0.694	1.21	10.8	34.52	200
0846	10.70	7.39	0.690	1.28	-6.9	34.77	200
0851	10.62	7.31	0.717	0.99	-16.2	35.09	200
0856	10.64	7.28	0.715	109	-22.8	35.21	200
0900	10.69	7.30	0.728	0.95	-28.0	35.14	200
0905	10.57	7.26	0.741	0.83	-33.8	35.45	200
0908	10.74	7.31	0.741	0.79	-41.3	35.24	200
0912	10.72	7.31	0.741	0.77	-42.0	35.30	200
0916	10.72	7.31	0.744	0.78	-44.6	35.30	200
0916	Sample						

APP

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-02A Date Sampled: 10/20/15

Previous Well Sampled: WT-18

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged		[ ] Missing:	Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged		[ ] Missing:	Yes	No
Well Cap:	[X] Ok	[ ] Damaged		[ ] Missing:	Yes	No

Ambient Temperature: 63 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 5.40 (from TPVC)

Depth to Bottom: 59.96 (from TPVC)

Length of Water: 8.56

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 4.5 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1030 Time Ended: 1105

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: Yes

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-02A Date: 10/20/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1035	11.34	6.85	1.511	6.76	-13.6	51.90	200
1039	11.67	6.86	1.488	5.91	-12.4	51.90	200
1043	11.76	6.88	1.449	5.45	-11.5	51.90	200
1047	11.91	6.94	1.410	4.84	-13.1	51.90	200
1050	11.93	6.94	1.385	4.42	-12.6	51.90	200
1053	12.20	6.95	1.367	4.24	-13.5	51.90	200
1056	12.62	6.97	1.363	3.86	-15.7	51.90	200
1059	12.50	7.02	1.364	4.01	-17.8	51.90	200
1102	12.14	6.97	1.360	3.90	-15.7	51.90	200
1105	12.06	6.95	1.354	3.88	-14.9	51.90	200
1105	Sample						

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-03 Date Sampled: 10/12/15

Previous Well Sampled: WT-01

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	

Ambient Temperature: 69 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 32.71 (from TPVC)

Depth to Bottom: 99.65 (from TPVC)

Length of Water: 66.94

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 4.5 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1508 Time Ended: 1539

Decon Method: Alconox + 3x Rinse

IN-SITU TESTING:

Turbidity: Low

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-03 Date: 10/12/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1513	12.83	7.48	0.679	2.97	8.2	34.01	250
1518	12.19	7.28	0.681	1.32	-38.3	34.39	250
1522	11.97	7.29	0.684	1.19	-55.3	34.63	250
1526	11.79	7.25	0.684	1.14	-59.4	34.81	250
1531	11.86	7.33	0.686	1.03	-65.8	34.74	250
1536	11.79	7.33	0.688	1.03	-58.4	34.77	250
1539	11.82	7.33	0.689	1.02	-57.3	34.79	250
1539	Sample						

APP

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-03 Date Sampled: 10/12/15

Previous Well Sampled: PZ-03

DUP

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	

Ambient Temperature: 69 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 32.89 (from TPVC)

Depth to Bottom: 36.01 (from TPVC)

Length of Water: 3.12

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 5.5 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1550 Time Ended: 1620

Decon Method: Alconox + 3x Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: Collect DUP.

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

DUP

Well Purging Log

Well: WT-03 Date: 10/12/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1555	10.93	7.07	0.812	8.50	5.2	33.40	275
1558	10.71	6.90	0.810	8.45	12.6	33.38	275
1601	10.80	6.91	0.810	8.23	12.4	33.37	275
1605	10.66	6.92	0.810	8.53	12.5	33.36	275
1608	10.76	6.93	0.809	8.35	12.0	33.36	275
1612	10.73	6.98	0.808	8.60	11.3	33.36	275
1616	10.80	6.92	0.807	8.40	14.0	33.36	275
1620	10.89	6.97	0.809	8.34	12.1	33.36	275
1620	Sample						

Comments: Collect Dup

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WP-04 Date Sampled: 10/15/15

Previous Well Sampled: WT-13

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	

Ambient Temperature: 58 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 4.99 (from TPVC)

Depth to Bottom: 6.95 (from TPVC)

Length of Water: 1.96

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 3.5 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1648 Time Ended: 1711

Decon Method: Alconox + DI RINSE

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

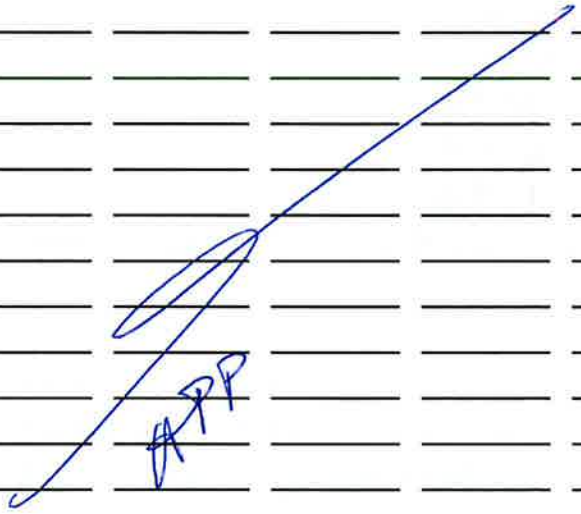
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WP-04 Date: 10/15/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1654	13.37	7.26	0.711	0.85	-15.3	5.39	225
1659	13.35	7.18	0.709	0.70	-29.1	5.21	225
1703	13.36	7.17	0.708	0.66	-33.6	5.20	225
1708	13.36	7.16	0.709	0.61	-38.5	5.20	225
1711	13.36	7.15	0.709	0.61	-39.9	5.20	225
1711	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-05A Date Sampled: 10/16/15

Previous Well Sampled: PZ-05B

GENERAL CONDITIONS:

					If Missing Replaced?
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No

Ambient Temperature: 43 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 3.42 (from TPVC)

Depth to Bottom: 40.42 (from TPVC)

Length of Water: 37.00

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 4 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1204 Time Ended: 1236

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-05A Date: 10/16/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1212	10.83	7.20	0.790	0.72	-44.4	3.52	200
1217	10.99	7.25	0.794	0.67	-52.9	3.52	200
1222	10.80	7.23	0.794	0.57	-52.8	3.52	200
1227	10.94	7.10	0.790	0.48	-51.0	3.52	200
1230	10.65	7.09	0.792	0.40	-50.6	3.52	200
1233	10.54	7.02	0.791	0.47	-48.5	3.52	200
1236	10.60	7.05	0.790	0.48	-50.0	3.52	200
1236	Sample						

APP

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-05B Date Sampled: 10/16/15

Previous Well Sampled: WT-11

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	X	Ok		Damaged		Missing:	Yes	No
Protector Pipe:	X	Ok		Damaged		Missing:	Yes	No
Well Cap:	X	Ok		Damaged		Missing:	Yes	No

Ambient Temperature: 41 °F [ ] Clear [X] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 3.11 (from TPVC)

Depth to Bottom: ~~Danger~~ 60.91 (from TPVC)

Length of Water: 57.80

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 3 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 11:30 Time Ended: 12:00

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-05B Date: 10/16/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1135	10.71	7.31	0.742	0.91	-30.7	5.65	225
1139	10.86	7.36	0.743	0.83	-42.6	5.40	225
1143	10.91	7.38	0.743	0.80	-46.0	5.13	225
1149	10.87	7.37	0.745	0.99	-50.0	5.13	225
1152	10.89	7.36	0.745	0.77	-51.0	5.13	225
1156	10.87	7.37	0.745	0.78	-53.1	5.13	225
1200	10.86	7.37	0.745	0.73	-53.5	5.13	225
1200	Sample						

APP

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-05 Date Sampled: 10/16/15

Previous Well Sampled: PZ-05A

GENERAL CONDITIONS:

					If Missing Replaced?
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No

Ambient Temperature: 42 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 3.08 (from TPVC)

Depth to Bottom: 20.94 (from TPVC)

Length of Water: 17.86

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 4 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1240 Time Ended: 1315

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

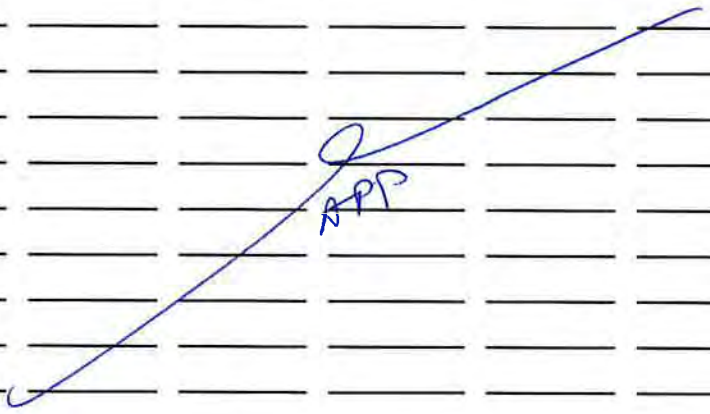
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-05 Date: 10/16/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1247	11.68	7.21	0.869	0.64	-53.0	3.18	250
1251	11.73	7.18	0.868	0.46	-54.3	3.18	250
1256	11.79	7.13	0.863	0.48	-51.1	3.18	250
1300	11.85	7.12	0.860	0.49	-47.9	3.18	250
1303	11.84	7.14	0.862	0.46	-48.2	3.18	250
1306	11.78	7.13	0.860	0.48	-45.8	3.18	250
1309	11.74	7.12	0.860	0.49	-44.4	3.18	250
1312	11.75	7.12	0.860	0.43	-43.6	3.18	250
1315	11.78	7.14	0.860	0.47	-44.9	3.18	250
1315	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WP-06 Date Sampled: 10/15/15

Previous Well Sampled: WP-04

GENERAL CONDITIONS:

					If Missing Replaced?
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No

Ambient Temperature: 59 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 16.20 (from TPVC)

Depth to Bottom: 18.67 (from TPVC)

Length of Water: 2.47

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 3.5 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1720 Time Ended: 1743

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

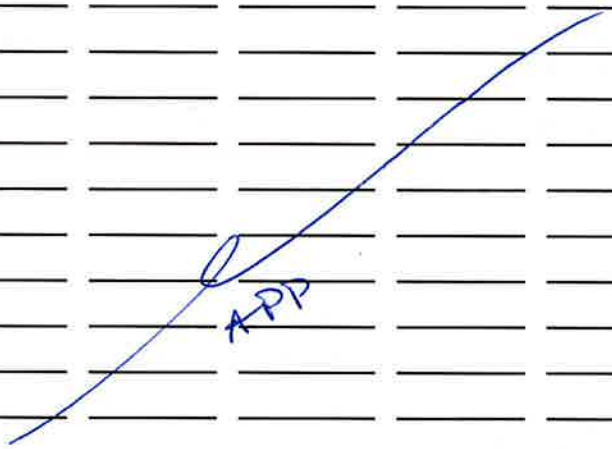
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WP-06 Date: 10/15/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1725	10.67	7.32	0.791	2.16	-10.4	16.51	200
1729	10.53	7.20	0.780	2.34	-9.2	16.51	200
1734	10.45	7.24	0.780	2.59	-12.2	16.51	200
1737	10.44	7.22	0.781	2.63	-12.8	16.51	200
1740	10.45	7.23	0.782	2.66	-13.4	16.51	200
1743	10.43	7.23	0.782	2.68	-13.4	16.51	200
1743	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WP-07 Date Sampled: 10/12/15

Previous Well Sampled: WT-03

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Protector Pipe:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Well Cap:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No

Ambient Temperature: 65°F [ ] Clear [X] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 11.51 (from TPVC)

Depth to Bottom: 13.57 (from TPVC)

Length of Water: 2.06

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 4.5 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1702 Time Ended: 1730

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WP-07 Date: 10/12/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
17:07	12.89	7.14	0.848	1.08	29.0	11.56	225
17:11	12.81	6.99	0.840	0.96	23.6	11.56	225
17:15	12.77	6.94	0.839	0.91	16.0	11.56	225
17:18	12.86	6.93	0.843	0.91	7.9	11.56	225
17:21	12.82	6.93	0.838	0.90	2.7	11.56	225
17:24	12.74	6.90	0.835	0.90	1.7	11.56	225
17:27	12.72	6.89	0.835	0.94	-1.1	11.56	225
17:30	12.71	6.88	0.835	0.95	-2.1	11.56	225
1730	Sample						

APP

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-10 Date Sampled: 10/20/15

Previous Well Sampled: WT-02R

DUP

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No

Ambient Temperature: 65 °F [ ] Clear [X] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 41.98 (from TPVC)

Depth to Bottom: 48.33 (from TPVC)

Length of Water: 6.35

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Submersible Sampling Device: SS Submersible

Volume Required: — [X] See back of page for field readings during purge

Volume Purged: 4 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1120 Time Ended: 1154

Decon Method: Alconox & DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: Yes

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments: Duplicate collected

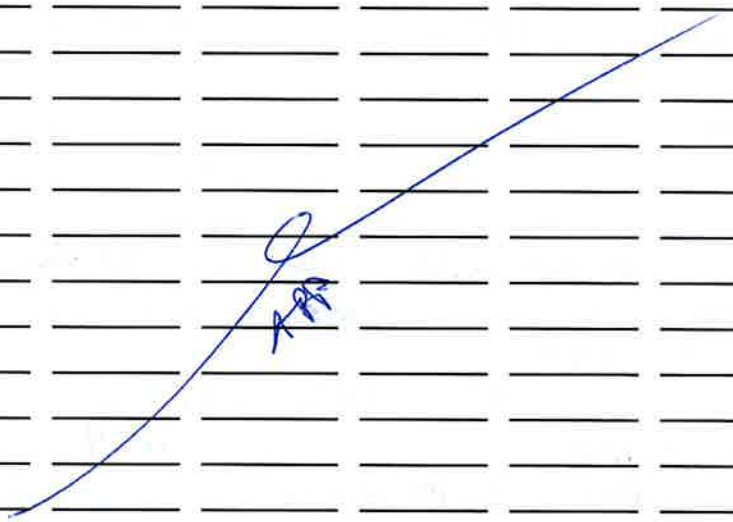
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: MT-10 Date: 10/20/15 DUP

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1121	13.54	7.37	1.152	2.23	-67.2	41.98	250
1126	11.51	7.11	1.083	0.66	-106.1	41.98	250
1131	11.43	7.05	1.040	0.58	-123.8	41.98	250
1135	11.51	7.02	1.033	0.48	-124.3	41.98	250
1138	11.45	6.99	1.039	0.49	-122.3	41.98	250
1142	11.60	7.04	1.042	0.51	-126.4	41.98	250
1145	11.61	7.00	1.034	0.46	-121.6	41.98	250
1148	11.67	7.00	1.034	0.47	-126.1	41.98	250
1151	11.61	7.02	1.038	0.48	-127.5	41.98	250
1154	11.59	7.00	1.037	0.45	-123.5	41.98	250
1154	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-11 Date Sampled: 10/16/15

Previous Well Sampled: WT-15

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	X	Ok		Damaged		Missing:	Yes	No
Protector Pipe:	X	Ok		Damaged		Missing:	Yes	No
Well Cap:	X	Ok		Damaged		Missing:	Yes	No

Ambient Temperature: 41 °F [ ] Clear [X] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 4.22 (from TPVC)

Depth to Bottom: 15.21 (from TPVC)

Length of Water: 10.99

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 4gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 10:49 Time Ended: 11:20

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

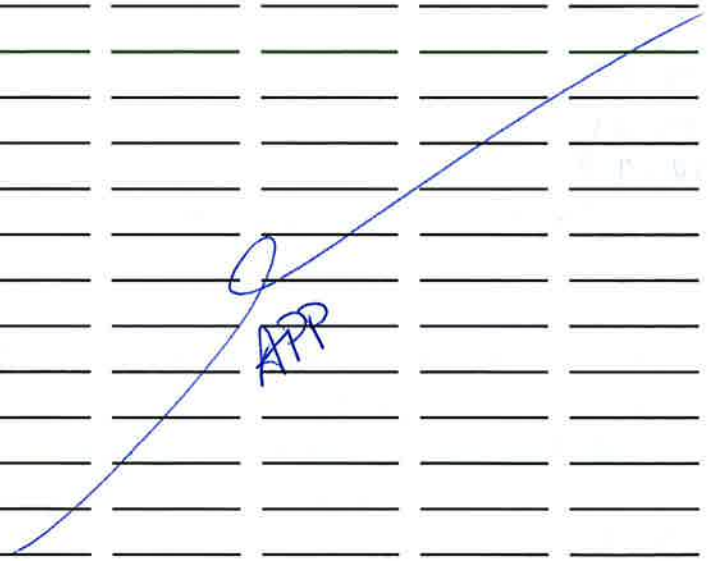
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-11 Date: 10/16/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
10.59	10.88	7.11	0.846	0.84	-1.8	4.31	200
1102	10.91	7.10	0.846	0.79	-3.5	4.31	200
1106	10.92	7.08	0.846	0.72	-5.4	4.31	200
1111	10.93	7.07	0.845	0.77	-7.0	4.31	200
1114	10.96	7.04	0.844	0.69	-8.0	4.31	200
1117	10.92	7.06	0.843	0.62	-8.7	4.31	200
1120	10.95	7.05	0.842	0.63	-9.0	4.31	200
1120	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-12 Date Sampled: 10/16/15

Previous Well Sampled: First well of Day

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	

Ambient Temperature: 43 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 3.98 (from TPVC)

Depth to Bottom: 27.34 (from TPVC)

Length of Water: 13.36

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 5 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 0747 Time Ended: 0818

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

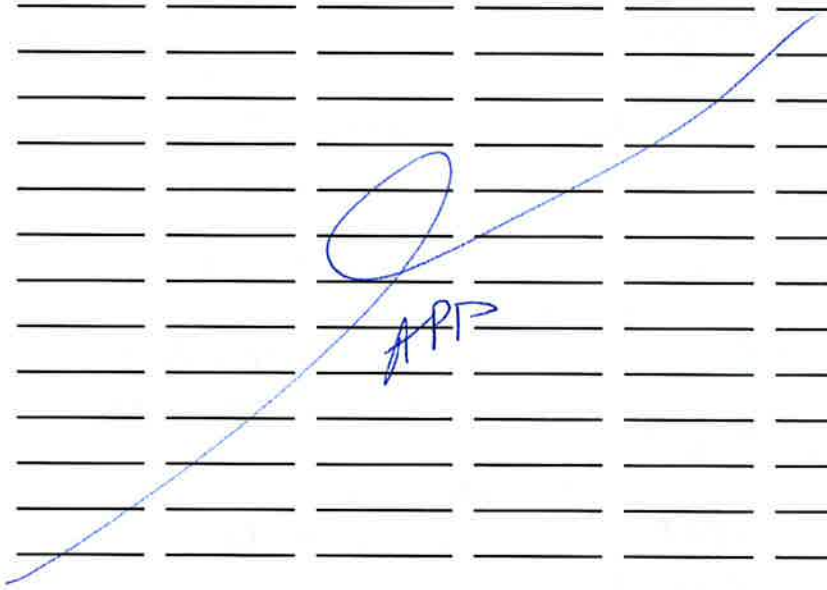
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-12 Date: 10/16/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
0751	9.87	7.48	0.841	1.75	16.9	4.20	250
0754	9.89	7.20	0.844	1.72	15.9	4.20	250
0804	9.81	6.90	0.845	1.11	5.0	4.12	250
0809	9.90	6.91	0.841	1.05	2.0	4.12	250
0812	9.93	6.92	0.840	0.94	0.3	4.12	250
0815	9.92	6.91	0.840	0.97	-0.3	4.12	250
0818	9.90	6.91	0.839	0.93	-0.7	4.12	250
0818	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

DUP

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-12 Date Sampled: 10/16/15

Previous Well Sampled: PZ-12

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No

Ambient Temperature: 45 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 4.65 (from TPVC)

Depth to Bottom: 15.26 (from TPVC)

Length of Water: 10.61

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 4.5gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 0823 Time Ended: 0850

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments: DUP

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-12 Date: 10/16/15 DUP

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
0826	11.38	7.15	0.790	0.97	-6.0	4.67	225
0832	11.49	7.10	0.793	0.82	-6.2	4.69	225
0836	11.50	7.06	0.792	0.71	-5.3	4.76	225
0841	11.52	7.05	0.793	0.66	-5.3	4.82	225
0845	11.53	7.04	0.793	0.72	-5.0	4.84	225
0850	11.53	7.05	0.793	0.69	-4.9	4.84	225
0850	Sample						

Comments: Collect Dup

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

MS/MSD

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-13 Date Sampled: 10/15/15

Previous Well Sampled: WT-25

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	X	Ok		Damaged		Missing:	Yes	No
Protector Pipe:	X	Ok		Damaged		Missing:	Yes	No
Well Cap:	X	Ok		Damaged		Missing:	Yes	No

Ambient Temperature: 60°F X Clear Cloudy Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 11.74 (from TPVC)

Depth to Bottom: 15.38 (from TPVC)

Length of Water: 3.64

Free Product Observed: Yes X No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: See back of page for field readings during purge

Volume Purged: 5 gal

Could Well Bail Dry? Yes X No X Low Flow Technique

Purging - Time Start: 16:04 Time Ended: 1631

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments: MS/MSD

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

MS/MSD

Well Purging Log

Well: WT-13 Date: 10/15/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1610	13.60	7.86	0.407	8.20	-43.3	12.71	250
1615	13.60	7.75	0.433	7.63	-36.0	12.52	250
1620	13.59	7.66	0.441	7.53	-30.6	12.51	250
1624	13.62	7.65	0.440	7.43	-28.7	12.51	250
1628	13.64	7.63	0.441	7.52	-25.7	12.51	250
1631	13.61	7.61	0.443	7.55	-23.1	12.51	250
1631	Sample						

APP

Comments: Collect MS/MSD

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-15A Date Sampled: 10/16/15

Previous Well Sampled: PZ-15B

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	

Ambient Temperature: 41 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 2.65 (from TPVC)

Depth to Bottom: 27.40 (from TPVC)

Length of Water: 24.75

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 2.5 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 0937 Time Ended: 1007

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

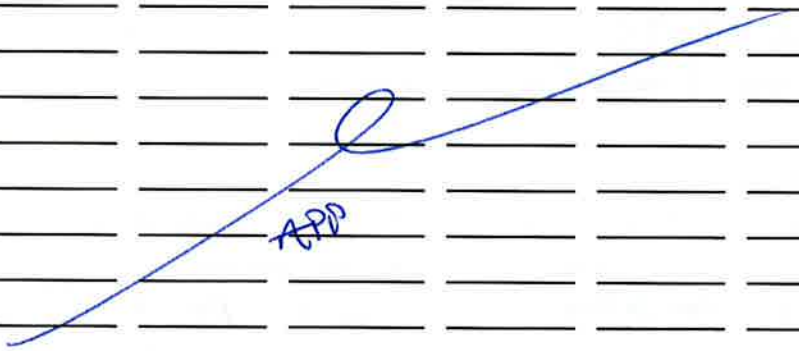
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-15A Date: 10/16/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
0940	10.07	7.16	0.789	3.24	1.3	3.01	200
0945	10.05	7.10	0.805	2.75	1.9	3.09	200
0949	10.14	7.12	0.808	2.65	0.6	3.09	200
0952	10.14	7.16	0.809	2.57	1.2	3.09	200
0955	10.21	7.09	0.809	2.64	2.1	3.09	200
0959	10.13	7.10	0.811	2.58	1.3	3.09	200
1003	10.09	7.08	0.808	2.69	2.3	3.09	200
1007	10.08	7.08	0.806	2.70	2.2	3.09	200
1007	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-15B Date Sampled: 10/16/15

Previous Well Sampled: WT-12

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X]	Ok	[ ]	Damaged	[ ] Missing:	Yes	No
Protector Pipe:	[X]	Ok	[ ]	Damaged	[ ] Missing:	Yes	No
Well Cap:	[X]	Ok	[ ]	Damaged	[ ] Missing:	Yes	No

Ambient Temperature: 40 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 2.74 (from TPVC)

Depth to Bottom: 37.00 (from TPVC)

Length of Water: 34.26

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 3gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 0905 Time Ended: 0930

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: ~~MW~~ PZ-15B Date: 10/16/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
0915	9.72	7.05	0.802	1.98	6.6	2.76	200
0919	9.64	7.04	0.802	1.94	5.2	2.76	200
0922	9.70	7.05	0.802	1.96	2.9	2.76	200
0927	9.67	7.05	0.802	1.87	1.4	2.76	200
0930	9.63	7.04	0.803	1.85	1.6	2.76	200
0930	Sample						

APP

Comments: Cannot fit pump down well due to slightly bent PVC pipe 2' down.

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: NT-15 Date Sampled: 10/16/15

Previous Well Sampled: PZ-15A

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged		[ ] Missing:	Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged		[ ] Missing:	Yes	No
Well Cap:	[X] Ok	[ ] Damaged		[ ] Missing:	Yes	No

Ambient Temperature: 42 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 3.06 (from TPVC)

Depth to Bottom: 12.23 (from TPVC)

Length of Water: 9.17

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 4 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1010 Time Ended: 1040

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-15 Date: 10/16/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1014	11.42	7.19	0.810	2.40	-0.5	3.10	200
1020	11.38	7.13	0.813	2.30	-2.2	3.10	200
1024	11.41	7.13	0.812	2.22	-2.3	3.10	200
1027	11.42	7.12	0.812	2.22	-2.1	3.10	200
1030	11.37	7.13	0.812	2.17	-2.5	3.10	200
1033	11.31	7.11	0.812	2.21	-2.2	3.10	200
1036	11.25	7.10	0.812	2.17	-1.8	3.10	200
1040	11.23	7.10	0.812	2.22	-1.7	3.10	200
1040	Sample						

APP

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-16 Date Sampled: 10/19/15

Previous Well Sampled: PZ-16A

GENERAL CONDITIONS:

					If Missing Replaced?
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No

Ambient Temperature: 59 °F [ ] Clear [X] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 5.02 (from TPVC)

Depth to Bottom: 26.55 (from TPVC)

Length of Water: 21.53

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: — [X] See back of page for field readings during purge

Volume Purged: 5 gallons

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1149 Time Ended: 1220

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

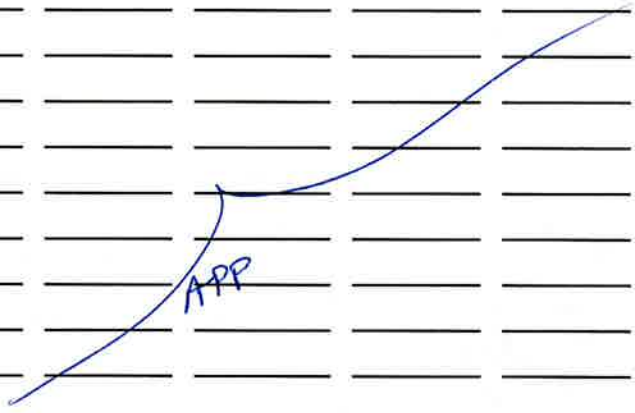
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-16 Date: 10/19/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1153	10.55	7.34	0.751	0.66	-59.3	5.41	200
1157	10.56	7.32	0.750	0.65	-67.7	5.39	200
1201	10.57	7.33	0.750	0.55	-73.3	5.39	200
1204	10.71	7.37	0.750	0.57	-76.2	5.37	200
1207	10.74	7.39	0.750	0.55	-77.6	5.37	200
1210	10.72	7.39	0.750	0.56	-78.1	5.34	200
1214	10.74	7.38	0.750	0.58	-78.2	5.34	200
1217	10.83	7.37	0.749	0.55	-77.9	5.33	200
1220	10.96	7.39	0.748	0.55	-77.8	5.32	200
1220	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-16A Date Sampled: 10/19/15

Previous Well Sampled: PZ-16B

DUP

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged		[ ] Missing:		Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged		[ ] Missing:		Yes	No
Well Cap:	[X] Ok	[ ] Damaged		[ ] Missing:		Yes	No

Ambient Temperature: 59 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 4.79 (from TPVC)

Depth to Bottom: 57.80 (from TPVC)

Length of Water: 53.01

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 5 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1102 Time Ended: 1138

Decon Method: Alconox + DI RINSE

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments: Collect DUP

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-16A Date: 10/19/15 DUP

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1108	11.39	7.37	0.665	0.94	-19.7	4.84	200
1113	11.18	7.39	0.686	0.79	-31.0	4.86	200
1117	10.95	7.30	0.690	0.65	-29.5	4.86	200
1120	10.87	7.33	0.692	0.70	-31.7	4.86	200
1124	10.86	7.36	0.692	0.65	-36.9	4.90	200
1128	10.56	7.29	0.691	0.64	-39.7	4.89	200
1132	10.36	7.25	0.691	0.63	-42.2	4.89	200
1135	10.37	7.25	0.691	0.61	-44.9	4.89	200
1138	10.35	7.26	0.692	0.60	-45.9	4.89	200
1138	Sample						

APP

Comments: Collect DUP

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-16B Date Sampled: 10/19/15

Previous Well Sampled: PZ-16C

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	X	Ok		Damaged		Missing:	Yes	No
Protector Pipe:	X	Ok		Damaged		Missing:	Yes	No
Well Cap:	X	Ok		Damaged		Missing:	Yes	No

Ambient Temperature: 56 °F X Clear Cloudy Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 6.12 (from TPVC)

Depth to Bottom: 87.40 (from TPVC)

Length of Water: 81.28

Free Product Observed: Yes X No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: See back of page for field readings during purge

Volume Purged: 4 gal.

Could Well Bail Dry? Yes X No Low Flow Technique

Purging - Time Start: 1014 Time Ended: 1050

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-16B Date: 10/19/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1020	10.82	7.51	0.526	1.82	5.7	7.21	200
1025	10.72	7.41	0.579	1.13	-7.3	6.99	200
1030	10.56	7.45	0.622	0.89	-30.1	7.24	200
1035	10.54	7.46	0.646	0.83	-37.5	7.30	200
1040	10.58	7.47	0.654	0.88	-46.4	7.37	200
1044	10.59	7.50	0.660	0.81	-52.5	7.39	200
1047	10.62	7.47	0.660	0.84	-54.6	7.42	200
1050	10.66	7.50	0.661	0.85	-59.1	7.42	200
1050	Sample						

Comments:

AECOM **Groundwater - Well Sampling Field Sheet**

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-16C Date Sampled: 10/19/15

Previous Well Sampled: First well of day

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	X	Ok		Damaged		Missing:	Yes	No
Protector Pipe:	X	Ok		Damaged		Missing:	Yes	No
Well Cap:	X	Ok		Damaged		Missing:	Yes	No

Ambient Temperature: 56°F X Clear Cloudy Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 6.65 (from TPVC)

Depth to Bottom: 106.88 (from TPVC)

Length of Water: 100.23

Free Product Observed: Yes X No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: See back of page for field readings during purge

Volume Purged: 4 gal

Could Well Bail Dry? Yes X No X Low Flow Technique

Purging - Time Start: 0920 Time Ended: 0956

Decon Method: Alconox + 3x Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

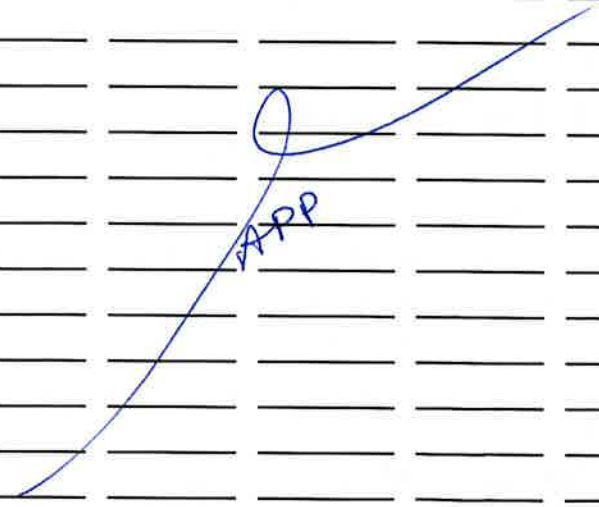
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-16C Date: 10/19/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
0925	11.34	6.69	0.425	2.55	77.1	6.88	175
0929	11.02	6.71	0.509	1.58	40.8	6.89	175
0933	10.68	6.62	0.520	1.24	23.5	6.89	175
0937	10.30	6.59	0.534	1.13	11.3	6.89	175
0942	10.28	6.64	0.546	1.03	6.9	6.89	175
0946	10.12	6.70	0.553	0.94	-0.3	6.89	175
0950	10.12	6.74	0.559	0.95	-5.1	6.89	175
0953	10.07	6.77	0.562	0.99	-11.8	6.89	175
0956	10.06	6.78	0.563	0.97	-15.0	6.89	175
0956	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-16 Date Sampled: _____

Previous Well Sampled: P2-16

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[x]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Protector Pipe:	[x]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Well Cap:	[x]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No

Ambient Temperature: 60 °F [ ] Clear [x] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 4.91 (from TPVC)

Depth to Bottom: 14.00 (from TPVC)

Length of Water: 9.09

Free Product Observed: [ ] Yes [x] No Thickness: _____

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Submersible Sampling Device: SS Submersible

Volume Required: _____ [x] See back of page for field readings during purge

Volume Purged: 4 gal.

Could Well Bail Dry? [ ] Yes [x] No [x] Low Flow Technique

Purging - Time Start: 1225 Time Ended: 1300

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

SAMPLES COLLECTED

VOCs -	X	Cyanide	[ ]
Metals -	[ ]	Hexchrome	[ ]
SVOC	[ ]	Alkalinity	[ ]
TOC	[ ]	Chloride	[ ]
Sulfide	[ ]	Ammonia	[ ]
Phenolics	[ ]	PAHs	[ ]

Well Purging Log

Well: WT-16 Date: 10/19/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
12:31	13.13	7.42	0.797	0.61	-82.4	4.80	300
1234	13.26	7.34	0.795	0.56	-88.2	4.80	300
1239	13.39	7.35	0.786	0.64	-84.6	4.80	300
1243	13.36	7.35	0.784	0.65	-87.3	4.80	300
1247	13.28	7.31	0.786	0.61	-82.7	4.80	300
1251	13.27	7.31	0.788	0.50	-79.5	4.80	300
1256	13.24	7.29	0.789	0.53	-77.7	4.8	300
1300 - SAMPLE							

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-17 Date Sampled: 10/20/15

Previous Well Sampled: WT-10

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	X	Ok		Damaged		Missing:	Yes	No
Protector Pipe:	X	Ok		Damaged		Missing:	Yes	No
Well Cap:	X	Ok		Damaged		Missing:	Yes	No

Ambient Temperature: 66°F X Clear Cloudy Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 33.35 (from TPVC)

Depth to Bottom: 38.83 (from TPVC)

Length of Water: 5.48

Free Product Observed: Yes X No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: See back of page for field readings during purge

Volume Purged: 5 gal.

Could Well Bail Dry? Yes X No X Low Flow Technique

Purging - Time Start: 1208 Time Ended: 1238

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: Yes

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-17 Date: 10/20/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1211	11.12	7.21	0.744	3.27	-43.1	33.50	200
1215	11.01	7.03	0.738	3.03	-35.2	33.50	200
1220	10.51	6.98	0.714	2.72	-30.3	33.50	200
1225	10.45	7.00	0.710	2.61	-30.8	33.50	200
1229	10.38	6.98	0.704	2.52	-28.8	33.50	200
1232	10.34	6.99	0.704	2.57	-28.3	33.50	200
1235	10.40	7.00	0.699	2.49	-28.1	33.50	200
1238	10.42	7.02	0.697	2.49	-28.9	33.50	200
1238	Sample						

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-18 Date Sampled: 10/20/15

Previous Well Sampled: PZ-02

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged		[ ] Missing:		Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged		[ ] Missing:		Yes	No
Well Cap:	[X] Ok	[ ] Damaged		[ ] Missing:		Yes	No

Ambient Temperature: 61 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 45.92 (from TPVC)

Depth to Bottom: 51.78 (from TPVC)

Length of Water: 5.86

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 6 gal

Could Well Bail Dry? [X] Yes [ ] No [X] Low Flow Technique

Purging - Time Start: 0936 Time Ended: 1015

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: Yes

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Comments: Upon initial purge, black sediment.

Well Purging Log

Well: WT-18 Date: 10/20/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
0940	11.84	6.87	1,446	0.73	-63.9	46.40	200
0945	11.92	6.83	1.476	0.72	-74.6	46.89	200
0948	11.61	6.82	1.497	0.61	-78.6	47.05	200
0953	11.49	6.82	1.470	0.58	-82.9	47.06	200
0956	11.51	6.82	1.448	0.55	-86.5	47.13	200
0959	11.37	6.88	1.422	0.50	-92.2	47.44	200
1002	11.35	6.87	1.416	0.47	-92.6	47.57	200
1006	11.37	6.88	1.404	0.48	-94.7	47.69	200
1009	11.35	6.89	1.389	0.48	-97.4	47.69	200
1012	11.33	6.90	1.390	0.49	-98.1	47.69	200
1015	11.34	6.91	1.388	0.54	-99.2	47.69	200
1015	Sample						

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-19 Date Sampled: 10/20/15

Previous Well Sampled: WT-17

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	

Ambient Temperature: 69°F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 16.28 (from TPVC)

Depth to Bottom: 21.26 (from TPVC)

Length of Water: 4.98

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: Peristaltic Sampling Device: Peristaltic

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 3.5gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1252 Time Ended: 1317

Decon Method: Disposal

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-19 Date: 10/20/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1253	12.51	7.22	0.924	2.64	1.4	16.45	250
1257	12.49	6.95	0.922	1.52	5.8	16.45	250
1301	12.50	7.00	0.939	1.43	-1.8	16.45	250
1304	12.65	7.06	0.945	1.38	-8.5	16.45	250
1308	12.20	7.07	0.950	1.27	-9.9	16.45	250
1311	12.39	7.01	0.949	1.15	-11.3	16.45	250
1314	12.29	7.01	0.948	1.05	-11.7	16.45	250
1317	12.24	6.99	0.951	1.07	-12.4	16.45	250
1317	Sample						

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-20 Date Sampled: 10/19/15

Previous Well Sampled: WT-16

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No

Ambient Temperature: 60 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 4.42 (from TPVC)

Depth to Bottom: 14.42 (from TPVC)

Length of Water: 10.00

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 4 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1311 Time Ended: 1350

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-20 Date: 10/19/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1315	15.59	7.20	0.581	0.67	-25.1	4.65	200
1320	15.32	7.09	0.578	0.86	-19.9	4.65	200
1324	15.43	7.06	0.579	0.62	-19.0	4.65	200
1328	15.38	7.05	0.582	0.50	-18.7	4.65	200
1332	15.35	7.04	0.580	0.48	-13.4	4.65	200
1335	15.12	7.03	0.582	0.47	-18.3	4.65	200
1338	15.08	7.02	0.580	0.47	-19.4	4.65	200
1341	15.05	7.01	0.579	0.46	-20.1	4.65	200
1344	15.18	7.03	0.578	0.42	-21.6	4.65	200
1347	15.20	7.04	0.577	0.44	-22.6	4.65	200
1350	15.22	7.06	0.579	0.46	-24.3	4.65	200
1350	Sample						

APP

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-21 Date Sampled: 10/19/15

Previous Well Sampled: WT-20

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:		Yes	No

Ambient Temperature: 62°F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 5.75 (from TPVC)

Depth to Bottom: 14.30 (from TPVC)

Length of Water: 8.55

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 7 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 13:59 Time Ended: 1431

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

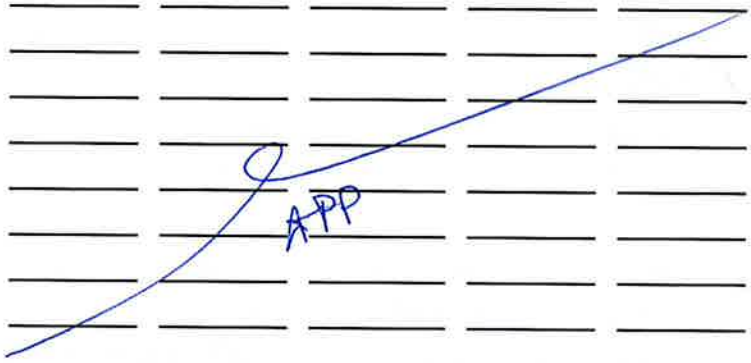
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-21 Date: 10/19/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1402	15.80	7.71	0.278	5.21	-20.8	5.94	200
1407	15.63	7.54	0.269	5.54	-9.6	6.07	200
1412	15.60	7.60	0.267	5.39	-15.2	6.09	200
1416	15.58	7.64	0.266	5.39	-15.3	6.10	200
1420	15.59	7.65	0.264	5.40	-13.4	6.10	200
1424	15.60	7.66	0.264	5.28	-12.8	6.10	200
1428	15.52	7.65	0.265	5.34	-12.3	6.10	200
1431	15.55	7.65	0.265	5.31	-12.0	6.10	200
1431	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-22 Date Sampled: 10/19/15

Previous Well Sampled: WT-21

GENERAL CONDITIONS:

					If Missing Replaced?
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No

Ambient Temperature: 63 °F [ ] Clear [X] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 5.53 (from TPVC)

Depth to Bottom: 14.09 (from TPVC)

Length of Water: 8.56

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 7 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 14:44 Time Ended: 1522

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

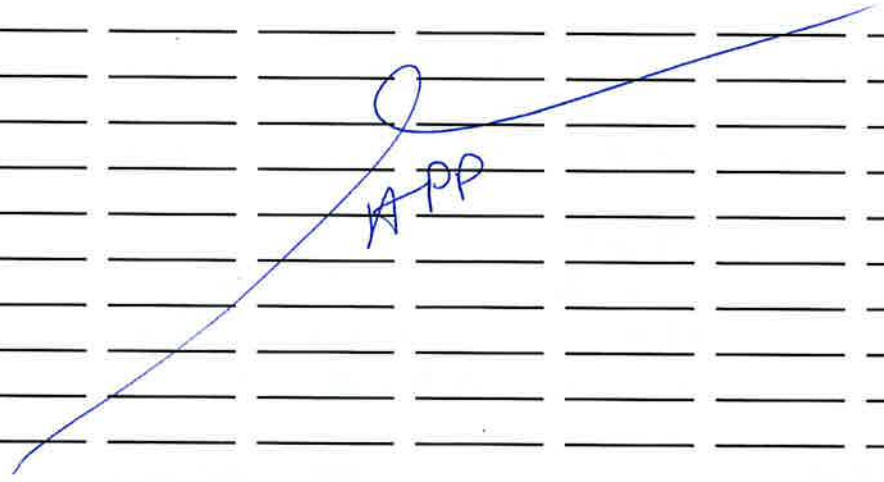
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-22 Date: 10/19/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1452	14.88	7.38	0.394	3.93	8.6	5.57	225
1456	14.72	7.42	0.394	3.97	3.8	5.57	225
1459	14.65	7.39	0.392	4.03	4.4	5.57	225
1503	14.50	7.38	0.389	4.05	3.5	5.57	225
1507	14.55	7.41	0.387	4.09	0.5	5.57	225
1510	14.55	7.44	0.385	4.08	-2.5	5.57	225
1513	14.60	7.43	0.384	4.01	-2.5	5.57	225
1516	14.61	7.44	0.382	4.04	-3.2	5.57	225
1519	14.59	7.43	0.383	4.04	-2.6	5.57	225
1522	14.59	7.42	0.382	4.02	-2.2	5.57	225
1522	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-23 Date Sampled: 10/19/15

Previous Well Sampled: WT-22

GENERAL CONDITIONS:

					If Missing Replaced?
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No

Ambient Temperature: 62 °F [ ] Clear [X] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 5.17 (from TPVC)

Depth to Bottom: 14.23 (from TPVC)

Length of Water: 9.06

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 8 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1537 Time Ended: 1616

Decon Method: Alconox + DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-23 Date: 10/19/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1544	14.13	7.11	0.645	2.31	32.7	5.25	200
1549	14.02	7.11	0.649	2.24	26.4	5.25	200
1552	13.96	7.09	0.655	1.97	23.5	5.25	200
1555	13.96	7.08	0.660	2.07	22.2	5.25	200
1559	13.87	7.10	0.670	1.77	16.7	5.25	200
1602	13.80	7.06	0.672	1.43	20.1	5.25	200
1607	13.81	7.04	0.680	1.39	19.4	5.25	200
1610	13.81	7.04	0.680	1.45	21.2	5.25	200
1613	13.87	7.05	0.681	1.50	19.0	5.25	200
1616	13.90	7.07	0.683	1.41	17.9	5.25	200
1616	Sample						

APP

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: MANITOWOC, WI Tester: JRJ/APP

Well Number: PZ-24A Date Sampled: 10/15/15

Previous Well Sampled: PZ-24B

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged		[ ] Missing:		Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged		[ ] Missing:		Yes	No
Well Cap:	[X] Ok	[ ] Damaged		[ ] Missing:		Yes	No

Ambient Temperature: 59 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 7.14 (from TPVC)

Depth to Bottom: 56.70 (from TPVC)

Length of Water: 49.56

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 5 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1045 Time Ended: 1120

Decon Method: Alconox + 3X Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-24A Date: 10/15/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1049	11.31	7.74	0.689	1.68	-67.4	7.67	225
1054	10.69	7.46	0.690	0.97	-60.3	8.10	225
1059	11.05	7.51	0.687	0.90	-69.2	7.92	225
1107	10.35	7.48	0.686	0.91	-70.3	8.41	225
1113	10.39	7.47	0.683	0.83	-72.9	8.67	225
1117	10.44	7.47	0.682	0.81	-73.6	8.75	225
1120	10.45	7.47	0.681	0.81	-76.3	8.91	225
1120	Sample						

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-24B Date Sampled: 10/15/15

Previous Well Sampled: PZ-24C

DUP

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	X	Ok		Damaged		Missing:	Yes	No
Protector Pipe:	X	Ok		Damaged		Missing:	Yes	No
Well Cap:	X	Ok		Damaged		Missing:	Yes	No

Ambient Temperature: 55 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 6.98 (from TPVC)

Depth to Bottom: 87.40 (from TPVC)

Length of Water: 80.42

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 4.5 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 0957 Time Ended: 1031

Decon Method: Alconox + 3X RINSE

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: DUP

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-24B Date: 10/15/15

DUP

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1001	11.52	7.73	0.665	2.17	-72.5	6.99	200
1006	11.42	7.64	0.665	1.57	-81.7	7.37	200
1010	10.44	7.66	0.663	1.20	-93.7	9.09	200
1015	10.17	7.49	0.662	1.13	-96.4	11.64	200
1020	10.15	7.68	0.667	1.11	-110.4	11.79	200
1025	9.97	7.58	0.667	1.10	-105.6	12.55	200
1028	10.10	7.54	0.667	1.05	-105.8	13.31	200
1031	10.11	7.58	0.667	1.04	-107.7	14.01	200

Comments: Collect DUP

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-24C Date Sampled: 10/15/15

Previous Well Sampled: First Well of Day

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Protector Pipe:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Well Cap:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No

Ambient Temperature: 53 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 7.74 (from TPVC)

Depth to Bottom: 123.60 (from TPVC)

Length of Water: 115.86

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 8 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 0906 Time Ended: 0941

Decon Method: Alconox + 3X Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-24C Date: 10/15/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
0924	9.59	7.61	0.539	1.19	-10.1	7.91	200
0928	9.61	7.45	0.540	1.23	-27.4	7.90	200
0932	9.62	7.44	0.541	1.18	-41.3	7.90	200
0935	9.62	7.45	0.541	1.24	-51.3	7.90	200
0938	9.60	7.44	0.541	1.26	-57.4	7.90	200
0941	9.61	7.44	0.541	1.25	-58.3	7.90	200
0941	Sample						

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135741

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-24 Date Sampled: 10/15/15

Previous Well Sampled: PZ-24A

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	X	Ok		Damaged		Missing:	Yes	No
Protector Pipe:	X	Ok		Damaged		Missing:	Yes	No
Well Cap:	X	Ok		Damaged		Missing:	Yes	No

Ambient Temperature: 62 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 7.25 (from TPVC)

Depth to Bottom: 16.59 (from TPVC)

Length of Water: 9.34

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 2 gal

Could Well Bail Dry? [X] Yes [ ] No [X] Low Flow Technique

Purging - Time Start: 1129 Time Ended: 1149

Decon Method: Alconox + 3x Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

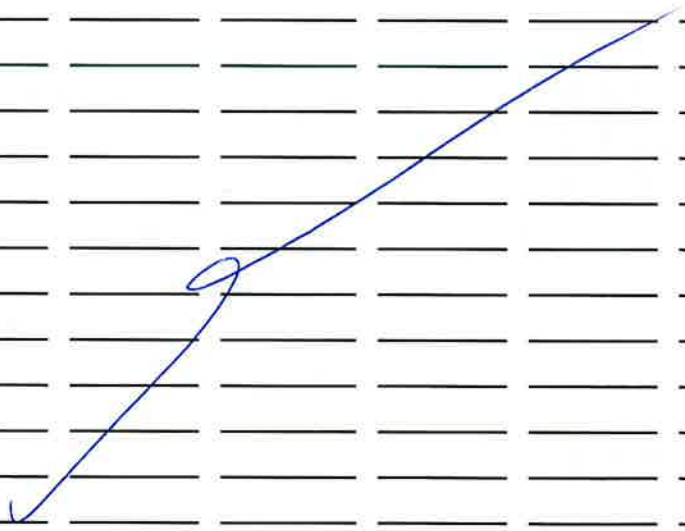
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-24 Date: 10/15/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1131	14.13	7.29	0.851	3.28	-34.4	8.01	150
1136	13.95	7.13	0.859	1.65	-32.3	8.55	150
1140	13.92	7.07	0.881	1.45	-30.1	10.35	150
1143	13.90	6.98	0.879	1.20	-25.5	10.39	150
1146	13.82	6.99	0.884	1.24	-26.3	10.66	150
1149	13.62	6.99	0.879	1.20	-27.7	11.33	150
1149	Sample						



Comments: Well was drawing down.

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-25A Date Sampled: 10/15/15

Previous Well Sampled: PZ-25B

GENERAL CONDITIONS:

					If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No	

Ambient Temperature: 60 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 10.31 (from TPVC)

Depth to Bottom: 67.50 (from TPVC)

Length of Water: 57.19

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 5 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1421 Time Ended: 1503

Decon Method: Alconox + DI RINSE

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

SAMPLES COLLECTED

VOCs -	[X]	Cyanide	[ ]
Metals -	[ ]	Hexchrome	[ ]
SVOC	[ ]	Alkalinity	[ ]
TOC	[ ]	Chloride	[ ]
Sulfide	[ ]	Ammonia	[ ]
Phenolics	[ ]	PAHs	[ ]

Well Purging Log

Well: PZ-25A Date: 10/15/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1430	12.03	8.17	0.595	0.85	-129.7	11.63	200
1434	11.02	8.12	0.599	0.68	-133.4	12.41	200
1438	11.02	7.89	0.597	0.76	-132.4	13.79	200
1443	11.20	8.01	0.597	0.63	-139.8	15.21	200
1447	10.57	7.93	0.598	0.62	-134.8	16.35	200
1450	10.47	7.90	0.598	0.53	-133.7	17.49	200
1454	10.39	7.93	0.600	0.58	-136.2	18.66	200
1457	10.16	7.85	0.598	0.57	-131.8	19.72	200
1500	10.31	7.87	0.597	0.60	-132.8	20.95	200
1503	9.98	7.93	0.599	0.67	-134.8	22.37	200
1503	Sample						

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Monitowoc, WI Tester: JRJ/APP

Well Number: PZ-25B Date Sampled: 10/15/15

Previous Well Sampled: PZ-25C

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[x]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Protector Pipe:	[x]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Well Cap:	[x]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No

Ambient Temperature: 60 °F [ ] Clear [x] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 11.32 (from TPVC)

Depth to Bottom: 97.32 (from TPVC)

Length of Water: 86.00

Free Product Observed: [ ] Yes [x] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Submersible Sampling Device: SS Submersible

Volume Required: — [x] See back of page for field readings during purge

Volume Purged: 5 gal

Could Well Bail Dry? [ ] Yes [x] No [x] Low Flow Technique

Purging - Time Start: 1322 Time Ended: 1410

Decon Method: Alconox & DI rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: —

Specific Conductivity: —

Water Temperature: —

Comments: —

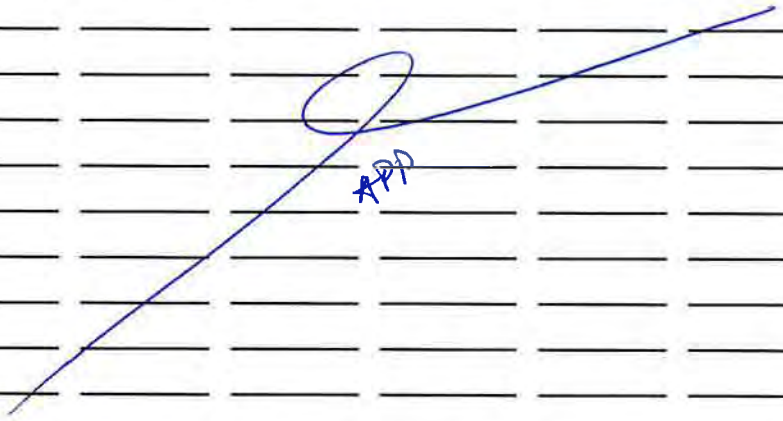
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-25B Date: 10/15/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1322	11.54	8.01	0.409	3.54	-142.6	9.73	200
1327	11.09	8.28	0.387	0.92	-179.4	10.45	200
1332	10.22	8.38	0.391	0.76	-169.7	13.20	200
1337	10.39	8.25	0.381	0.66	-162.0	15.32	200
1341	10.33	8.27	0.374	0.67	-145.6	17.10	200
1347	10.54	8.27	0.370	0.60	-142.4	18.71	200
1352	10.51	8.26	0.372	0.56	-143.6	19.95	200
1357	10.48	8.38	0.378	0.60	-160.0	22.45	200
1402	9.81	8.27	0.383	0.58	-167.7	24.01	200
1407	10.16	8.26	0.382	0.55	-175.3	24.46	200
1410	10.49	8.30	0.384	0.54	-183.4	24.77	200
1410	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: P2-25C Date Sampled: 10/15/15

Previous Well Sampled: WT-24

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[Y]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Protector Pipe:	[Y]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Well Cap:	[Y]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No

Ambient Temperature: 60 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 14.16 (from TPVC)

Depth to Bottom: 117.70 (from TPVC)

Length of Water: 103.54

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS submersible Sampling Device: Same

Volume Required: — [X] See back of page for field readings during purge

Volume Purged: 10 gallons

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1235 Time Ended: 1310

Decon Method: Alconox & DI Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: —

Specific Conductivity: —

Water Temperature: —

Comments: —

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-25C Date: 10/15/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1240	10.42	7.94	0.637	6.68	9.8	19.90	300
1245	9.60	7.59	1.193	1.73	-129.8	20.45	250
1250	9.67	7.76	0.894	1.31	-162.7	20.50	250
1255	9.76	7.74	0.792	1.07	-159.8	20.45	250
1300	9.70	7.67	0.545	0.89	-156.7	20.45	250
1305	9.55	7.61	0.540	0.82	-155.3	20.40	200
1310	9.46	7.60	0.533	0.87	-153.1	20.40	200

1310 - SAMPLE

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-25 Date Sampled: 10/15/15

Previous Well Sampled: PZ-25A

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No		
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No		
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No		

Ambient Temperature: 61 °F [X] Clear [ ] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 8.71 (from TPVC)

Depth to Bottom: 21.99 (from TPVC)

Length of Water: 13.28

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 4.5 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1516 Time Ended: 1543

Decon Method: Alconox + DI RINSE

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: WT-25 Date: 10/15/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1521	10.56	7.78	0.736	0.70	-99.4	8.77	200
1524	10.47	7.79	0.738	0.59	-106.5	8.77	200
1527	10.46	7.77	0.739	0.58	-109.2	8.77	200
1531	10.33	7.71	0.738	0.55	-111.9	8.77	200
1534	10.24	7.68	0.738	0.66	-113.1	8.77	200
1538	10.18	7.67	0.738	0.59	-114.3	8.77	200
1543	10.20	7.66	0.738	0.56	-117.4	8.77	200
1543	Sample						

APP

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. _____

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-26A Date Sampled: 10/12/15

Previous Well Sampled: PZ-26B

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Protector Pipe:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Well Cap:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No

Ambient Temperature: 64°F [ ] Clear [X] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 25.40 (from TPVC)

Depth to Bottom: 77.90 (from TPVC)

Length of Water: 52.50

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 8gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 12:12 Time Ended: 1240

Decon Method: Alconox + Rinse 3x

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-26A Date: 10/12/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1217	10.48	7.34	0.661	1.44	-26.7	26.32	300
1222	10.43	7.31	0.686	1.21	-39.7	26.22	300
1227	10.50	7.35	0.691	1.09	-47.2	26.36	300
1234	10.58	7.35	0.691	1.13	-48.9	26.44	300
1237	10.40	7.32	0.693	1.09	-47.5	26.47	300
1240	10.37	7.30	0.692	1.14	-45.0	26.50	300
1240	Sample						

APP

Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-26B Date Sampled: 10/12/15

Previous Well Sampled: PZ-26C

GENERAL CONDITIONS:

					If Missing Replaced?
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No

Ambient Temperature: 63°F [ ] Clear [X] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 25.59 (from TPVC)

Depth to Bottom: 108.11 (from TPVC)

Length of Water: 82.52

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: [ ] See back of page for field readings during purge

Volume Purged: 6 gal.

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 1119 Time Ended: 1200

Decon Method: Alconox + 3x Rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH:

Specific Conductivity:

Water Temperature:

Comments:

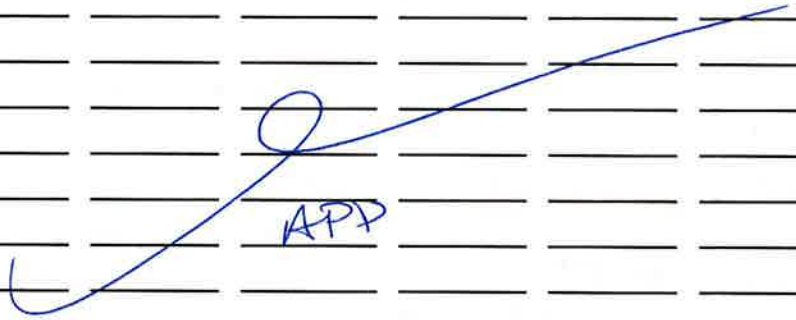
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-26B Date: 10/12/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
11:22	11.00	7.32	0.984	1.84	-31.5	27.35	200
11:28	11.41	7.49	0.994	2.50	-64.6	28.36	200
11:32	10.37	7.33	0.984	1.52	-59.6	30.24	200
11:35	10.48	7.28	0.960	1.42	-62.5	31.19	200
11:39	10.43	7.38	0.923	1.41	-69.1	32.15	200
11:44	10.60	7.40	0.867	1.45	-72.9	32.62	200
11:47	10.41	7.38	0.859	1.38	-72.5	33.33	200
11:50	10.42	7.28	0.827	1.44	-69.6	34.48	200
11:54	10.52	7.34	0.838	1.35	-73.7	34.66	200
11:57	10.44	7.33	0.829	1.33	-73.5	34.91	200
1200	10.50	7.34	0.828	1.32	-74.9	35.29	200
1200	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: PZ-26C Date Sampled: 10/12/15

Previous Well Sampled: First well of day

GENERAL CONDITIONS:

					If Missing Replaced?
Surface Seal:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Protector Pipe:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No
Well Cap:	[X] Ok	[ ] Damaged	[ ] Missing:	Yes	No

Ambient Temperature: 63 °F [ ] Clear [X] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 36.08 (from TPVC)

Depth to Bottom: 147.10 (from TPVC)

Length of Water: 111.02

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 7 gal

Could Well Bail Dry? [ ] Yes [X] No [X] Low Flow Technique

Purging - Time Start: 10:32 Time Ended: 1100

Decon Method: Alconox + 3x rinse

IN-SITU TESTING:

Turbidity: None

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: _____

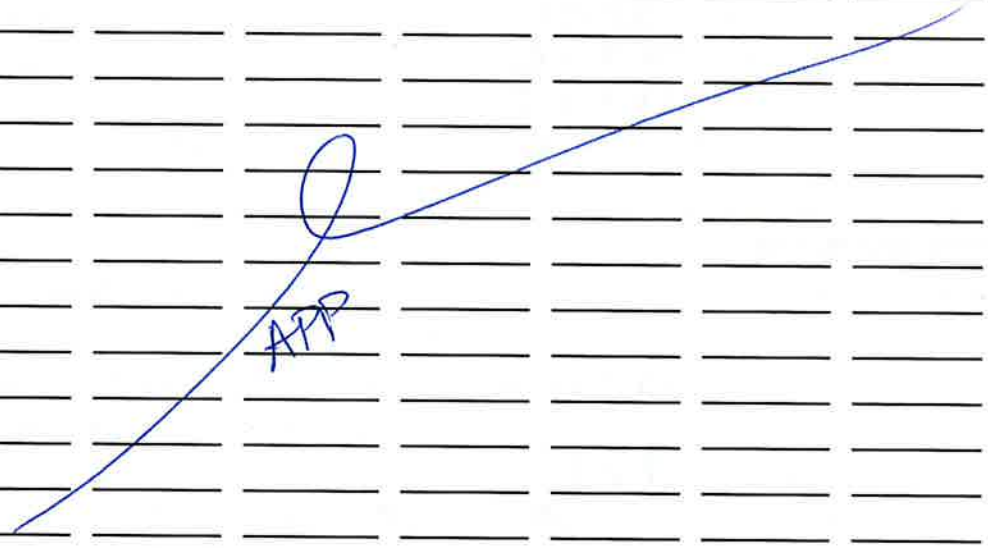
SAMPLES COLLECTED

VOCs -	X	Cyanide	
Metals -		Hexchrome	
SVOC		Alkalinity	
TOC		Chloride	
Sulfide		Ammonia	
Phenolics		PAHs	

Well Purging Log

Well: PZ-26C Date: 10/12/15

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1037	9.99	7.08	~~0.429~~ 0.602	2.58	0.8	38.11	300
1041	9.98	6.82	0.603	2.05	-18.9	38.54	300
1045	9.95	6.78	0.608	1.80	-36.7		300
1050	9.88	6.80	0.612	1.83	-51.9	39.30	300
1054	9.83	6.83	0.612	1.84	-57.7	39.51	300
1057	9.82	6.87	0.612	1.79	-61.6	39.57	300
1100	9.81	6.88	0.611	1.78	-63.0	39.63	300
1100	Sample						



Comments:

AECOM

Groundwater - Well Sampling Field Sheet

Fill out the entire form. If it does not apply, mark N/A.

Project Name: Newton Gravel Pit Job No. 60135471

Location: Manitowoc, WI Tester: JRJ/APP

Well Number: WT-26 Date Sampled: 10/12/15

Previous Well Sampled: PZ-26A

MS/MSD

GENERAL CONDITIONS:

						If Missing Replaced?	
Surface Seal:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Protector Pipe:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No
Well Cap:	[X]	Ok	[ ]	Damaged	[ ]	Missing: Yes	No

Ambient Temperature: 65°F [ ] Clear [X] Cloudy [ ] Rain

WELL DATA:

Measuring Device: Heron Dipper-T

Stick Up or Down: Stick up (from Ground Surface)

Depth to Water: 24.42 (from TPVC)

Depth to Bottom: 36.21 (from TPVC)

Length of Water: 11.79

Free Product Observed: [ ] Yes [X] No Thickness: —

PURGING/SAMPLING:

Well Purging Calculations: Amount to purge = 0.163 gallons/foot times height of water column in feet for one well volume in a 2-inch monitoring well.

Purging Device: SS Hurricane Sampling Device: SS Hurricane

Volume Required: _____ [ ] See back of page for field readings during purge

Volume Purged: 5gal.

Could Well Bail Dry? [X] Yes [ ] No [X] Low Flow Technique

Purging - Time Start: 1249 Time Ended: 1321

Decon Method: Alconox + 3x Rinse

IN-SITU TESTING:

Turbidity: Low

Odor: None

Color: Clear

pH: _____

Specific Conductivity: _____

Water Temperature: _____

Comments: Collect MS/MSD

SAMPLES COLLECTED

VOCs -	X	Cyanide	[ ]
Metals -	[ ]	Hexchrome	[ ]
SVOC	[ ]	Alkalinity	[ ]
TOC	[ ]	Chloride	[ ]
Sulfide	[ ]	Ammonia	[ ]
Phenolics	[ ]	PAHs	[ ]

Well Purging Log

Well: WT-26 Date: 10/12/15

MS/MSD

Time	Temp (°C)	pH (units)	Conductivity (ms/cm)	DO (mg/L)	ORP (units)	Depth to Water (ft. btoc)	Purging Rate (ml/min)
1254	10.46	7.15	1.070	1.22	-27.2	28.11	350
1300	11.19	7.13	1.069	1.19	-41.5	28.83	300
1305	11.38	7.18	1.055	1.48	-45.8	29.55	300
1310	11.46	7.14	1.050	1.39	-45.2	30.95	300
1314	11.55	7.14	1.048	1.26	-46.4	31.04	300
1318	11.66	7.15	1.050	1.30	-48.6	31.13	300
1321	11.47	7.14	1.053	1.26	-50.1	31.48	300
1321	Sample						

APP

Comments:

Attachment C:

Hydraulic Calculations

AECOM

CALCULATION SHEET

Client City of Manitowoc
Project Newton Gravel Pit
Subject Horizontal Hydraulic Gradient and Average Linear Velocity for Water Table

Project No. 60135471
Prepared By SAE **Date** 1/6/2016
Reviewed By DSH **Date**

Objective

Calculate the horizontal hydraulic gradient and average linear velocity of groundwater flow in the outwash sand and gravel aquifer at the Newton Gravel Pit.

Assumptions

1. Water elevations were measured on October 19, 2015.
2. The horizontal hydraulic gradient is estimated from Figure 3.
3. The geometric mean of the hydraulic conductivities of wells screened in the sand and gravel was calculated from 1996 and 2015 slug test results (3.9×10^{-3}cm/sec, 11.06 ft./day).
4. Assumed an effective porosity of 0.25 (Freeze and Cherry, 1979).

Calculations

Horizontal Hydraulic Gradient

$$I_h = \Delta h_h / \Delta l_h$$

Where:

I_h = Horizontal hydraulic gradient

Δh_h = Difference in water elevation along the flow line depicted on Figure 3 between the 688 and 683 contours.

Δl_h = Length (distance) between the 688 and 683 contours.

	Distance Along Flow line (feet)	Difference in Elevation (ft. MSL)	Horizontal Gradient (feet/foot)
Sand and Gravel	1132.6	688 - 683 = 5	0.00441

Average Linear Velocity

$$V = K I_h / n_e$$

Where:

K = Geometric mean of hydraulic conductivities of wells screened in the sand and gravel as calculated from slug test (11.06 ft./day)

I_h = Horizontal hydraulic gradient (0.00441 ft./foot)

n_e = Effective porosity (0.25)

The calculated average linear velocity for the outwash sand and gravel aquifer at the Newton Gravel Pit on October 19, 2015, is 0.20 ft./day.

AECOM

CALCULATION SHEET

Client City of Manitowoc
Project Newton Gravel Pit
Subject Horizontal Hydraulic Gradient and Average Linear Velocity for Water Table

Project No. 60135471
Prepared By SAE **Date** 1/6/2016
Reviewed By DSH **Date**

Conclusions

The calculated horizontal hydraulic gradient in the outwash sand and gravel is 0.00441 ft./ft.
The calculated average linear velocity in the outwash sand and gravel 0.20 ft./day (73 ft./yr.).

References

1. Freeze, R., Cherry, J., 1979. Groundwater. Prentice Hall, Englewood Cliffs, New Jersey.

AECOM

CALCULATION SHEET

Client City of Manitowoc
Project Newton Gravel Pit
Subject Horizontal Hydraulic Gradient and Average Linear Velocity for 630 Elevation (A-series)

Project No. 60135471
Prepared By SAE **Date** 1/6/2016
Reviewed By DSH **Date**

Objective

Calculate the horizontal hydraulic gradient and average linear velocity of groundwater flow in the deeper outwash sand and gravel, approximately 630 elevation (A-series), at the Newton Gravel Pit.

Assumptions

1. Water elevations were measured on October 19, 2015.
2. The horizontal hydraulic gradient is estimated from Figure 4.
3. The geometric mean of the hydraulic conductivities of wells screened in the sand and gravel was calculated from 1996 and 2015 slug test results (3.9×10^{-3} cm/sec, 11.06 ft./day).
4. Assumed an effective porosity of 0.25 (Freeze and Cherry, 1979).

Calculations

Horizontal Hydraulic Gradient

$$I_h = \Delta h_h / \Delta l_h$$

Where:

I_h = Horizontal hydraulic gradient

Δh_h = Difference in water elevations along the flow lines depicted on Figure 4 between the 688 and 680 contours.

Δl_h = Lengths (distance) between the 688 and 680 contours.

	Distance Along Flow line (feet)	Difference in Elevation (ft. MSL)	Horizontal Gradient (feet/foot)
630 Elevation	2695.1	688 - 680 = 8	0.00297

Average Linear Velocity

$$V = K I_h / n_e$$

Where:

K = Geometric mean of hydraulic conductivities of wells screened in the sand and gravel as calculated from slug test (11.06 ft./day)

I_h = Horizontal hydraulic gradient (0.00297 ft./foot)

n_e = Effective porosity (0.25)

The calculated average linear velocity for the deeper outwash sand and gravel, approximately 630 elevation (A-series) aquifer at the Newton Gravel Pit on October 19, 2015, is 0.13 ft./day.

AECOM

CALCULATION SHEET

Client City of Manitowoc
Project Newton Gravel Pit
Subject Horizontal Hydraulic Gradient and Average Linear Velocity for 630 Elevation (A-series)

Project No. 60135471
Prepared By SAE **Date** 1/6/2016
Reviewed By DSH **Date**

Conclusions

The calculated horizontal hydraulic gradient in the deeper outwash sand and gravel, approximately 630 elevation (A-series) is 0.00297 ft./ft.
The calculated average linear velocity in the deeper outwash sand and gravel, approximately 630 elevation (A-series) is 0.13 ft./day (47 ft./yr.).

References

1. Freeze, R., Cherry, J., 1979. Groundwater. Prentice Hall, Englewood Cliffs, New Jersey.

AECOM

CALCULATION SHEET

Client City of Manitowoc
Project Newton Gravel Pit
Subject Horizontal Hydraulic Gradient and Average Linear Velocity for 600 Elevation (B-series)

Project No. 60135471
Prepared By SAE **Date** 1/6/2016
Reviewed By DSH **Date**

Objective

Calculate the horizontal hydraulic gradient and average linear velocity of groundwater flow in the clay till above the bedrock, approximately 600 elevation (B-series), at the Newton Gravel Pit.

Assumptions

1. Water elevations were measured on October 19, 2015.
2. The horizontal hydraulic gradient is estimated from Figure 5.
3. The geometric mean of the hydraulic conductivities of wells screened in the sand and gravel was calculated from 1996 slug test results (1.0×10^{-5}cm/sec, 0.03 ft./day).
4. Assumed an effective porosity of 0.40 (Freeze and Cherry, 1979).

Calculations

Horizontal Hydraulic Gradient

$$I_h = \Delta h_h / \Delta l_h$$

Where:

I_h = Horizontal hydraulic gradient

Δh_h = Difference in water elevation along the flow line depicted on Figure 5 between the 680 and 678 contours.

Δl_h = Length (distance) between the 380 and 678 contours.

	Distance Along Flow line (feet)	Difference in Elevation (ft. MSL)	Horizontal Gradient (feet/foot)
600 Elevation	310.8	680 – 678 = 2	0.006444

Average Linear Velocity

$$V = K I_h / n_e$$

Where:

K = Geometric mean of hydraulic conductivities of wells screened in the clay till above the bedrock as calculated from slug test (0.03 ft./day)

I_h = Horizontal hydraulic gradient (0.00644 ft./foot)

n_e = Effective porosity (0.40)

The calculated average linear velocity for the clay till above the bedrock, approximately 600 elevation (B-series), at the Newton Gravel Pit on October 19, 2015, is 0.00046 ft./day.

AECOM

CALCULATION SHEET

Client City of Manitowoc
Project Newton Gravel Pit
Subject Horizontal Hydraulic Gradient and Average Linear Velocity for 600 Elevation (B-series)

Project No. 60135471
Prepared By SAE **Date** 1/6/2016
Reviewed By DSH **Date**

Conclusions

The calculated horizontal hydraulic gradient in the clay till above the bedrock, approximately 600 elevation (B-series), is 0.00644 ft./ft.
The calculated average linear velocity in the clay till above the bedrock, approximately 600 elevation (B-series), is 0.00046 ft./day (0.17 ft./yr.).

References

1. Freeze, R., Cherry, J., 1979. Groundwater. Prentice Hall, Englewood Cliffs, New Jersey.

AECOM

CALCULATION SHEET

Client City of Manitowoc
Project Newton Gravel Pit
Subject Horizontal Hydraulic Gradient and Average Linear Velocity for Bedrock (C-series)

Project No. 60135471
Prepared By SAE **Date** 1/6/2016
Reviewed By DSH **Date**

Objective

Calculate the horizontal hydraulic gradient and average linear velocity of groundwater flow in the bedrock (C-series), at the Newton Gravel Pit.

Assumptions

1. Water elevations were measured on October 19, 2015.
2. The horizontal hydraulic gradient is estimated from Figure 6.
3. The geometric mean of the hydraulic conductivities of wells screened in the sand and gravel was calculated from 1996 slug test results (1.0×10^{-4} cm/sec, 0.28 ft./day).
4. Assumed an effective porosity of 0.20 (Freeze and Cherry, 1979).

Calculations

Horizontal Hydraulic Gradient

$$I_h = \Delta h_h / \Delta l_h$$

Where:

I_h = Horizontal hydraulic gradient

Δh_h = Difference in water elevation along the flow line depicted on Figure 6 between the 680 and 675 contours.

Δl_h = Length (distance) between the 680 and 675 contours.

	Distance Along Flow line (feet)	Difference in Elevation (ft. MSL)	Horizontal Gradient (feet/foot)
Deep Bedrock	403.8	680 – 675 = 5	0.0124

Average Linear Velocity

$$V = K I_h / n_e$$

Where:

K = Geometric mean of hydraulic conductivities of wells screened in the sand and gravel as calculated from slug test (0.28 ft./day)

I_h = Horizontal hydraulic gradient (0.0124 ft./foot)

n_e = Effective porosity (0.20)

The calculated average linear velocity in the bedrock (C-series), at the Newton Gravel Pit, on October 19, 2015, is 0.18 ft./day.

AECOM

CALCULATION SHEET

Client City of Manitowoc
Project Newton Gravel Pit
Subject Horizontal Hydraulic Gradient and Average Linear Velocity for Bedrock (C-series)

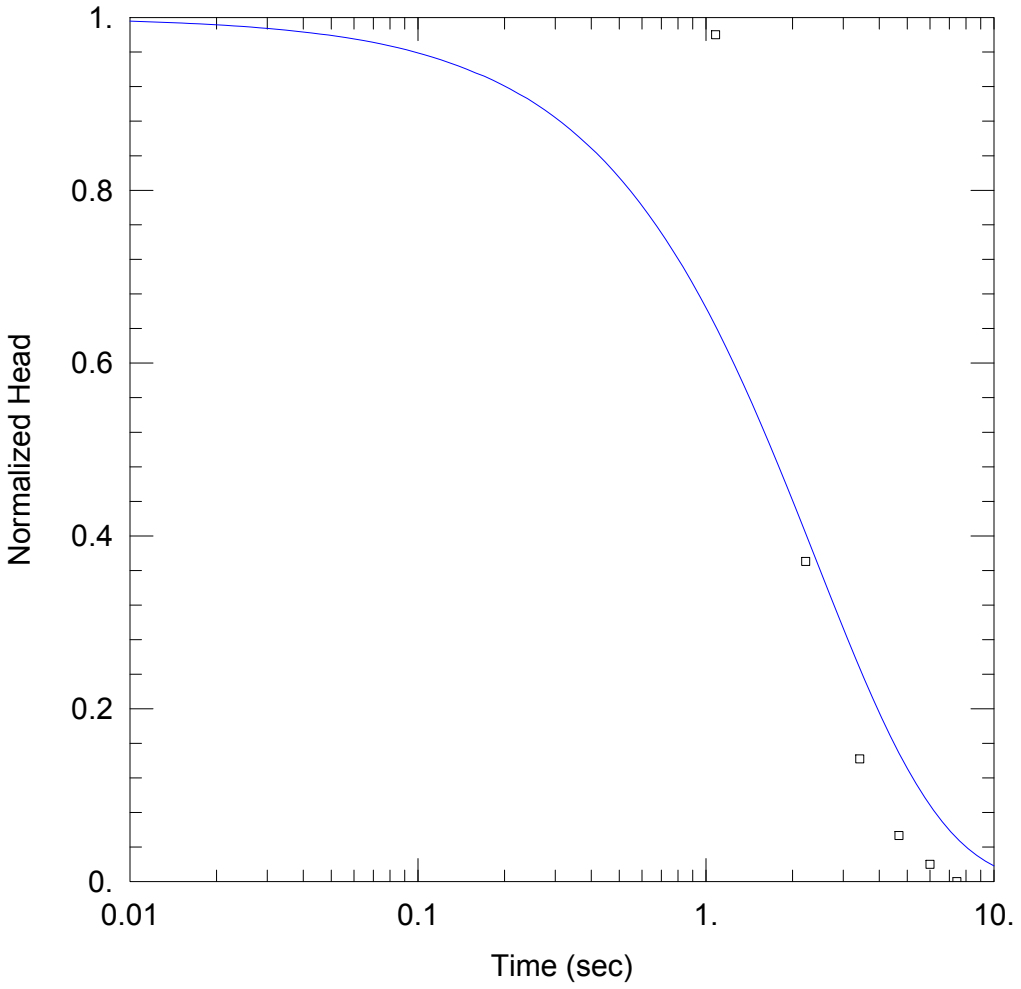
Project No. 60135471
Prepared By SAE **Date** 1/6/2016
Reviewed By DSH **Date**

Conclusions

The calculated horizontal hydraulic gradient in the bedrock (C-series) is 0.0124 ft./ft.
The calculated average linear velocity in the bedrock (C-series) is 0.18 ft./day (6.6 ft./yr.).

References

1. Freeze, R., Cherry, J., 1979. Groundwater. Prentice Hall, Englewood Cliffs, New Jersey.



P-1 RISING 2

Data Set: L:\...\P-1 Rising 2.aqt
Date: 11/17/15 Time: 13:22:32

PROJECT INFORMATION

Company: AECOM
Client: City of Manitowoc
Project: 60311767
Location: Newton Gravel Pit
Test Well: P-1
Test Date: 8/26/2015

AQUIFER DATA

Saturated Thickness: 200. ft

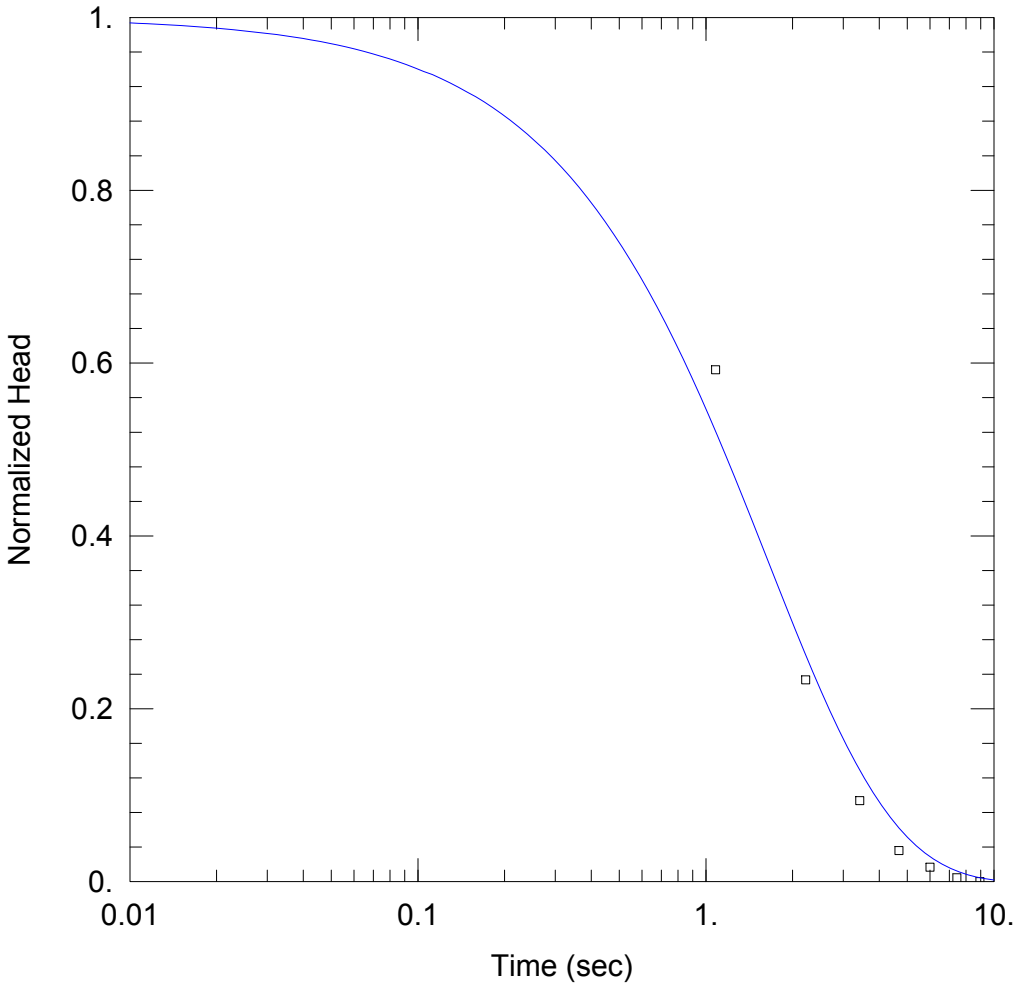
WELL DATA (P-1)

Initial Displacement: 1. ft
Total Well Penetration Depth: 12.85 ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.39 ft
Screen Length: 12.5 ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.01799 cm/sec
Kz/Kr = 0.1
Ss = 1.429E-12 ft^{-1}



P-1 RISING 3

Data Set: L:\...\P-1 Rising 3.aqt
Date: 11/17/15 Time: 13:26:35

PROJECT INFORMATION

Company: AECOM
Client: City of Manitowoc
Project: 60311767
Location: Newton Gravel Pit
Test Well: P-1
Test Date: 8/26/2015

AQUIFER DATA

Saturated Thickness: 200. ft

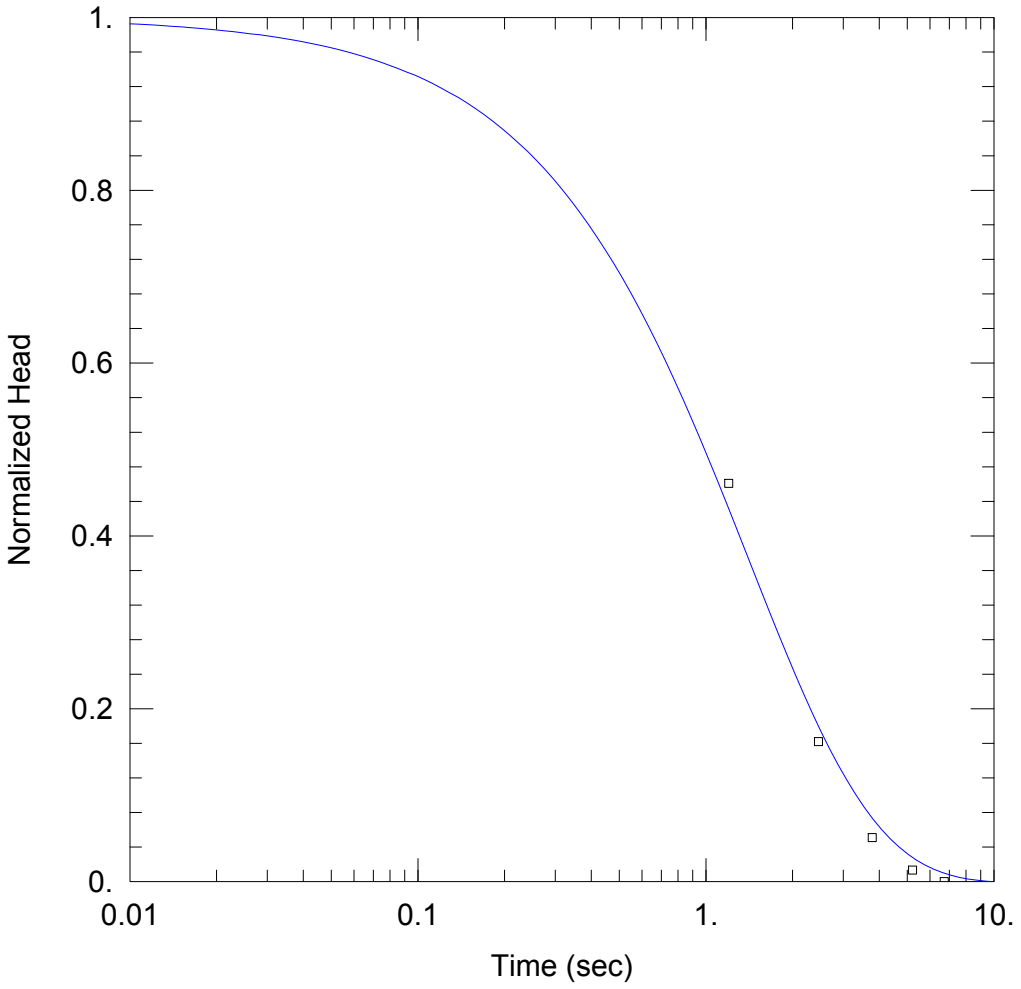
WELL DATA (P-1)

Initial Displacement: 1. ft
Total Well Penetration Depth: 12.85 ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.39 ft
Screen Length: 12.5 ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.02651 cm/sec
Kz/Kr = 0.1
Ss = 1.429E-12 ft^{-1}



P-1 RISING 4

Data Set: L:\...\P-1 Rising 4.aqt
Date: 11/17/15 Time: 13:29:05

PROJECT INFORMATION

Company: AECOM
Client: City of Manitowoc
Project: 60311767
Location: Newton Gravel Pit
Test Well: P-1
Test Date: 8/26/2015

AQUIFER DATA

Saturated Thickness: 200. ft

WELL DATA (P-1)

Initial Displacement: 1. ft
Total Well Penetration Depth: 12.85 ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.39 ft
Screen Length: 12.5 ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.03077 cm/sec
Kz/Kr = 0.1
Ss = 1.429E-12 ft^{-1}

AECOM

CALCULATION SHEET

Client	City of Manitowoc	**Subject**	Vertical Groundwater Gradient		
Project	Newton Gravel Pit			**Prepared By**	JRJ **Date** 12/18/15
				Reviewed By	dsh **Date** 12/18/15
				Approved By	**Date**

VERTICAL GROUNDWATER GRADIENT

Objective

Calculate the vertical groundwater gradient at piezometer nest locations.

Design Criteria and Assumptions

1. Piezometric elevations measured October 19, 2015.

2. Vertical distance between two piezometers at a location is the difference between the screen elevations for each piezometer.

3. For wells in which the piezometric elevation occurs within the screened interval (e.g. water table wells), the piezometric elevation is the screen elevation. For piezometers in which the piezometric elevation occurs above the screen interval, the midpoint elevation of the screen is the screen elevation.

Calculations

$$I_v = \Delta h_v / \left| \Delta L_v \right|$$

Where:

I_v	=	Vertical groundwater gradient
Δh_v	=	Difference in piezometric elevation between nested piezometers
ΔL_v	=	Difference in screen elevation between nested piezometers

Conclusions

Calculated vertical groundwater gradients:

Client City of Manitowoc **Subject** Vertical
Project Newton Gravel Pit Groundwater Gradient **Prepared By** JRJ **Date** 12/18/15
Reviewed By dsh **Date** 12/18/15
Approved By **Date**

October 19, 2015

Piezometer	Piezometric Elevation (feet MSL)	Screen Elevation (feet MSL)	Vertical Groundwater Gradient (feet/foot)	
WT-01	687.07	687.07		
PZ-01	688.08	624.60	0.0162	Up
WT-03	685.96	685.96		
PZ-03	686.17	621.80	0.00327	Up
WT-05	684.88	684.88		
PZ-05A	684.37	649.90	0.0146	Down
WT-05	684.88	684.88		
PZ-05B	684.87	629.60	0.000181	Flat/Down
PZ-05A	684.37	649.90		
PZ-05B	684.87	629.60	0.0246	Up
WT-12	683.59	683.59		
PZ-12	683.41	662.80	0.00866	Down
WT-15	683.48	683.48		
PZ-15A	683.77	661.60	0.0133	Up
WT-15	683.48	683.48		
PZ-15B	683.79	650.60	0.00943	Up
PZ-15A	683.77	661.60		
PZ-15B	683.79	650.60	0.00182	Flat/Up
WT-16	682.90	682.90		
PZ-16	682.99	664.00	0.00476	Up
WT-16	682.90	682.90		
PZ-16A	682.73	632.20	0.00353	Down
WT-16	682.90	682.90		
PZ-16B	681.41	605.13	0.0192	Down
WT-16	682.90	682.90		
PZ-16C	680.92	582.20	0.0197	Down
WT-24	681.28	681.28		
PZ-24A	681.38	634.30	0.00213	Up
WT-24	681.28	681.28		
PZ-24B	681.56	603.70	0.00361	Up
WT-24	681.28	681.28		
PZ-24C	680.99	567.40	0.00255	Down

AECOM

CALCULATION SHEET

Client City of Manitowoc **Subject** Vertical
Project Newton Gravel Pit Groundwater Gradient
Prepared By JRJ **Date** 12/18/15
Reviewed By dsh **Date** 12/18/15
Approved By **Date**

Piezometer	Piezometric Elevation (feet MSL)	Screen Elevation (feet MSL)	Vertical Groundwater Gradient (feet/foot)	
WT-25	680.11	680.11		
PZ-25A	678.46	623.70	0.0293	Down
WT-25	680.11	680.11		
PZ-25B	677.37	593.90	0.0318	Down
WT-25	680.11	680.11		
PZ-25C	670.63	573.40	0.0888	Down
WT-26	682.13	682.13		
PZ-26A	681.59	631.70	0.0107	Down
WT-26	682.13	682.13		
PZ-26B	681.55	601.60	0.00720	Down
WT-26	682.13	682.13		
PZ-26C	670.45	562.00	0.0972	Down

Attachment D:

Laboratory Sample Results

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVER CENTER DRIVE
MILWAUKEE, WI 53212

Report Date *04-Sep-15*

Project Name NEWTON GRAVEL PIT **Invoice #** E29560
Project #

Lab Code 5029560A
Sample ID P-1
Sample Matrix Water
Sample Date 8/26/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		8/28/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		8/28/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		8/28/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		8/28/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		8/28/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		8/28/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		8/28/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		8/28/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		8/28/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		8/28/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		8/28/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		8/28/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		8/28/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		8/28/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		8/28/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		8/28/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		8/28/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		8/28/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		8/28/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		8/28/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		8/28/2015	CJR	1
1,1-Dichloroethane	1.77 "J"	ug/l	1.1	3.6	1	8260B		8/28/2015	CJR	1
1,1-Dichloroethene	0.76 "J"	ug/l	0.65	2.1	1	8260B		8/28/2015	CJR	1
cis-1,2-Dichloroethene	880	ug/l	4.5	14	10	8260B		8/31/2015	CJR	1
trans-1,2-Dichloroethene	4.7	ug/l	0.54	1.7	1	8260B		8/28/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		8/28/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		8/28/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		8/28/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		8/28/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		8/28/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		8/28/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		8/28/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		8/28/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29560
Project #

Lab Code 5029560A
Sample ID P-1
Sample Matrix Water
Sample Date 8/26/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		8/28/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		8/28/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		8/28/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		8/28/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		8/28/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		8/28/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		8/28/2015	CJR	1
Tetrachloroethene	1.88	ug/l	0.49	1.5	1	8260B		8/28/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		8/28/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		8/28/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		8/28/2015	CJR	1
1,1,1-Trichloroethane	19.2	ug/l	0.84	2.7	1	8260B		8/28/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		8/28/2015	CJR	1
Trichloroethene (TCE)	105	ug/l	0.47	1.5	1	8260B		8/28/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		8/28/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		8/28/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		8/28/2015	CJR	1
Vinyl Chloride	0.60	ug/l	0.17	0.54	1	8260B		8/28/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		8/28/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		8/28/2015	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		8/28/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1	8260B		8/28/2015	CJR	1
SUR - 4-Bromofluorobenzene	105	REC %			1	8260B		8/28/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		8/28/2015	CJR	1

CHAIN OF STODY RECORD

Synergy Environmental Lab, Inc.

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Chain # N2 2931

Page 1 of 2

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : | Quote No.:

Project #:

Sampler: (signature) Jordan J

Project (Name / Location): Newton Gravel Pit / Manitowoc, WI

Reports To: Dave Henderson	Invoice To: DAVE Henderson
Company AECOM	Company SAME
Address 1555 N. RiverCenter Dr. STE214	Address
City State Zip Milwaukee, WI 53212	City State Zip
Phone 414-944-6190	Phone
FAX 414-944-6081	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
5029560A	P-1	8/26/15	900		X	N	3	GW	HCl													X		
B	P-2		940		X	N	3	GW	HCl													X		
C	P-3		1025		X	N	3	GW	HCl													X		
D	P-4		1230		X	N	3	GW	HCl													X		
E	P-5		1200		X	N	3	GW	HCl													X		
F	P-6		1150		X	N	3	GW	HCl													X		
G	P-7		1330		X	N	3	GW	HCl													X		
H	P-8		1405		X	N	3	GW	HCl													X		
I	P-9		1440		X	N	3	GW	HCl													X		
J	P-10		1515		X	N	3	GW	HCl													X		

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Analysis per Contract

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Runner
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Jordan J	0900	8/27/15			

Received in Laboratory By: [signature] Time: 8:00 Date: 8/28/15

CHAIN OF STODY RECORD

Synergy
Environmental Lab, Inc.

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Chain # N2 2930

Page 2 of 2

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : | **Quote No.:**

Project #:

Sampler: (signature) Jordan

Project (Name / Location): Former Newton Gravel Pit / Manitowoc, WI

Reports To: DAVE Henderson	Invoice To: Dave Henderson
Company AECOM	Company SAME
Address 1555 N. RiverCenter Dr. STE 214	Address
City State Zip Milwaukee, WI 53212	City State Zip
Phone 414-944-6190	Phone
FAX 414-944-6081	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
So295600k	P-11	8/26/15	1100		x	N	3	GW	HCl
L	P-1 DUP	↓	900		x	N	3	GW	HCl
M	Trip Blank	↓	800		x	N	3	GW	HCl

Analysis Requested | **Other Analysis**

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/FID
												X		
												X		
												X		

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Analysis per Contract

Sample Integrity - To be completed by receiving lab.

Method of Shipment: Driven

Temp. of Temp. Blank ____ °C On Ice: X

Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Jordan	0900	8/27/15			

Received in Laboratory By: Christopher J. Rom Time: 8:00 Date: 8/28/15

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVER CENTER DRIVE
MILWAUKEE, WI 53212

Report Date *22-Sep-15*

Project Name NEWTON PIT
Project # 60135471

Invoice # E29682

Lab Code 5029682A
Sample ID P-1
Sample Matrix Water
Sample Date 9/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 22	ug/l	22	70	50	8260B		9/18/2015	CJR	1
Bromobenzene	< 24	ug/l	24	75	50	8260B		9/18/2015	CJR	1
Bromodichloromethane	< 23	ug/l	23	75	50	8260B		9/18/2015	CJR	1
Bromoform	< 23	ug/l	23	75	50	8260B		9/18/2015	CJR	1
tert-Butylbenzene	< 55	ug/l	55	170	50	8260B		9/18/2015	CJR	1
sec-Butylbenzene	< 60	ug/l	60	190	50	8260B		9/18/2015	CJR	1
n-Butylbenzene	< 50	ug/l	50	165	50	8260B		9/18/2015	CJR	1
Carbon Tetrachloride	< 25.5	ug/l	25.5	80	50	8260B		9/18/2015	CJR	1
Chlorobenzene	< 23	ug/l	23	70	50	8260B		9/18/2015	CJR	1
Chloroethane	< 32.5	ug/l	32.5	105	50	8260B		9/18/2015	CJR	1
Chloroform	< 21.5	ug/l	21.5	70	50	8260B		9/18/2015	CJR	1
Chloromethane	< 95	ug/l	95	300	50	8260B		9/18/2015	CJR	1
2-Chlorotoluene	< 20	ug/l	20	65	50	8260B		9/18/2015	CJR	1
4-Chlorotoluene	< 31.5	ug/l	31.5	100	50	8260B		9/18/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 70	ug/l	70	225	50	8260B		9/18/2015	CJR	1
Dibromochloromethane	< 22.5	ug/l	22.5	70	50	8260B		9/18/2015	CJR	1
1,4-Dichlorobenzene	< 24.5	ug/l	24.5	80	50	8260B		9/18/2015	CJR	1
1,3-Dichlorobenzene	< 26	ug/l	26	80	50	8260B		9/18/2015	CJR	1
1,2-Dichlorobenzene	< 23	ug/l	23	75	50	8260B		9/18/2015	CJR	1
Dichlorodifluoromethane	< 43.5	ug/l	43.5	140	50	8260B		9/18/2015	CJR	1
1,2-Dichloroethane	< 24	ug/l	24	75	50	8260B		9/18/2015	CJR	1
1,1-Dichloroethane	< 55	ug/l	55	180	50	8260B		9/18/2015	CJR	1
1,1-Dichloroethene	< 32.5	ug/l	32.5	105	50	8260B		9/18/2015	CJR	1
cis-1,2-Dichloroethene	840	ug/l	22.5	70	50	8260B		9/18/2015	CJR	1
trans-1,2-Dichloroethene	< 27	ug/l	27	85	50	8260B		9/18/2015	CJR	1
1,2-Dichloropropane	< 21.5	ug/l	21.5	68.5	50	8260B		9/18/2015	CJR	1
2,2-Dichloropropane	< 155	ug/l	155	490	50	8260B		9/18/2015	CJR	1
1,3-Dichloropropane	< 21	ug/l	21	65	50	8260B		9/18/2015	CJR	1
Di-isopropyl ether	< 22	ug/l	22	70	50	8260B		9/18/2015	CJR	1
EDB (1,2-Dibromoethane)	< 31.5	ug/l	31.5	100	50	8260B		9/18/2015	CJR	1
Ethylbenzene	< 35.5	ug/l	35.5	115	50	8260B		9/18/2015	CJR	1
Hexachlorobutadiene	< 110	ug/l	110	355	50	8260B		9/18/2015	CJR	1
Isopropylbenzene	< 41	ug/l	41	130	50	8260B		9/18/2015	CJR	1

Project Name NEWTON PIT **Invoice #** E29682
Project # 60135471

Lab Code 5029682A
Sample ID P-1
Sample Matrix Water
Sample Date 9/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
p-Isopropyltoluene	< 55	ug/l	55	175	50	8260B		9/18/2015	CJR	1
Methylene chloride	< 65	ug/l	65	210	50	8260B		9/18/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 55	ug/l	55	185	50	8260B		9/18/2015	CJR	1
Naphthalene	< 80	ug/l	80	260	50	8260B		9/18/2015	CJR	1
n-Propylbenzene	< 38.5	ug/l	38.5	120	50	8260B		9/18/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 26	ug/l	26	85	50	8260B		9/18/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 24	ug/l	24	75	50	8260B		9/18/2015	CJR	1
Tetrachloroethene	< 24.5	ug/l	24.5	75	50	8260B		9/18/2015	CJR	1
Toluene	< 22	ug/l	22	70	50	8260B		9/18/2015	CJR	1
1,2,4-Trichlorobenzene	< 85	ug/l	85	280	50	8260B		9/18/2015	CJR	1
1,2,3-Trichlorobenzene	< 135	ug/l	135	430	50	8260B		9/18/2015	CJR	1
1,1,1-Trichloroethane	< 42	ug/l	42	135	50	8260B		9/18/2015	CJR	1
1,1,2-Trichloroethane	< 24	ug/l	24	76	50	8260B		9/18/2015	CJR	1
Trichloroethene (TCE)	90	ug/l	23.5	75	50	8260B		9/18/2015	CJR	1
Trichlorofluoromethane	< 43.5	ug/l	43.5	140	50	8260B		9/18/2015	CJR	1
1,2,4-Trimethylbenzene	< 80	ug/l	80	250	50	8260B		9/18/2015	CJR	1
1,3,5-Trimethylbenzene	< 75	ug/l	75	240	50	8260B		9/18/2015	CJR	1
Vinyl Chloride	< 8.5	ug/l	8.5	27	50	8260B		9/18/2015	CJR	1
m&p-Xylene	< 110	ug/l	110	345	50	8260B		9/18/2015	CJR	1
o-Xylene	< 45	ug/l	45	145	50	8260B		9/18/2015	CJR	1
SUR - Toluene-d8	108	REC %			50	8260B		9/18/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	95	REC %			50	8260B		9/18/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			50	8260B		9/18/2015	CJR	1
SUR - Dibromofluoromethane	102	REC %			50	8260B		9/18/2015	CJR	1

CHAIN OF STODY RECORD

Synergy Environmental Lab, Inc.

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Chain # № 2820

Page 1 of 1

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : | **Quote No.:**

Project #: 6013547.1

Sampler: (signature) DSH

Project (Name / Location): Newton Pit

Reports To: DAVID Henderson	Invoice To: SAME
Company AECOM	Company
Address 1555 N Rivercenter	Address
City State Zip Milw WI 53212	City State Zip
Phone 414 429 8304	Phone
FAX	FAX

Analysis Requested | **Other Analysis**

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
5029682A	P-1	9/15	2:15		X	N	3	GW	HCL		X											X		
B	P-2	"	2:35		"	"	"	"	"													X		
C	P-2 Dup	"	2:35		"	"	"	"	"													X		
D	P-3	"	2:44		"	"	"	"	"													X		

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

VOC's only

Sample Integrity - To be completed by receiving lab.

Method of Shipment: Driven

Temp. of Temp. Blank ___ °C On Ice: X

Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
DS. Henderson		9/16/15			

Received in Laboratory By: [signature] Time: 8-00 Date: 9/17/15

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVER CENTER DRIVE
MILWAUKEE, WI 53212

Report Date *20-Oct-15*

Project Name NEWTON GRAVEL PIT **Invoice #** E29881
Project # 60135471

Lab Code 5029881A
Sample ID PZ-26C
Sample Matrix Water
Sample Date 10/12/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/16/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/16/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/16/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/16/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/16/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/16/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/16/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/16/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/16/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/16/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/16/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/16/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/16/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/16/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/16/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/16/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/16/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/16/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29881
Project # 60135471

Lab Code 5029881A
Sample ID PZ-26C
Sample Matrix Water
Sample Date 10/12/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/16/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/16/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/16/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/16/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/16/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/16/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/16/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/16/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/16/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/16/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/16/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/16/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/16/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/16/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/16/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/16/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/16/2015	CJR	1
SUR - Toluene-d8	108	REC %			1	8260B		10/16/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		10/16/2015	CJR	1
SUR - 4-Bromofluorobenzene	116	REC %			1	8260B		10/16/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	96	REC %			1	8260B		10/16/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29881
Project # 60135471

Lab Code 5029881B
Sample ID PZ-26B
Sample Matrix Water
Sample Date 10/12/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/16/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/16/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/16/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/16/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/16/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/16/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/16/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/16/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/16/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/16/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/16/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/16/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/16/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/16/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/16/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/16/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/16/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/16/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/16/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/16/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/16/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/16/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/16/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/16/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/16/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/16/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/16/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/16/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/16/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/16/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/16/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/16/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/16/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/16/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/16/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			1	8260B		10/16/2015	CJR	1
SUR - 4-Bromofluorobenzene	114	REC %			1	8260B		10/16/2015	CJR	1
SUR - Dibromofluoromethane	103	REC %			1	8260B		10/16/2015	CJR	1
SUR - Toluene-d8	107	REC %			1	8260B		10/16/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29881
Project # 60135471

Lab Code 5029881C
Sample ID PZ-26A
Sample Matrix Water
Sample Date 10/12/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/16/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/16/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/16/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/16/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/16/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/16/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/16/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/16/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/16/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/16/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/16/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/16/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/16/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/16/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/16/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/16/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/16/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/16/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/16/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/16/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/16/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/16/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/16/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/16/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/16/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/16/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/16/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/16/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/16/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/16/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/16/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/16/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/16/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/16/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/16/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	95	REC %			1	8260B		10/16/2015	CJR	1
SUR - Toluene-d8	106	REC %			1	8260B		10/16/2015	CJR	1
SUR - 4-Bromofluorobenzene	115	REC %			1	8260B		10/16/2015	CJR	1
SUR - Dibromofluoromethane	103	REC %			1	8260B		10/16/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29881
Project # 60135471

Lab Code 5029881D
Sample ID WT-26
Sample Matrix Water
Sample Date 10/12/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/16/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/16/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/16/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/16/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/16/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/16/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/16/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/16/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/16/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/16/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/16/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/16/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/16/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/16/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/16/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/16/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/16/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/16/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/16/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/16/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/16/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/16/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/16/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/16/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/16/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/16/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/16/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/16/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/16/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/16/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/16/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/16/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/16/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/16/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/16/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	95	REC %			1	8260B		10/16/2015	CJR	1
SUR - 4-Bromofluorobenzene	116	REC %			1	8260B		10/16/2015	CJR	1
SUR - Dibromofluoromethane	104	REC %			1	8260B		10/16/2015	CJR	1
SUR - Toluene-d8	107	REC %			1	8260B		10/16/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29881
Project # 60135471

Lab Code 5029881E
Sample ID PZ-01
Sample Matrix Water
Sample Date 10/12/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/16/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/16/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/16/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/16/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/16/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/16/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/16/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/16/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/16/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/16/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/16/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/16/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/16/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/16/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/16/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/16/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/16/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/16/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/16/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/16/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/16/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/16/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/16/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/16/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/16/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/16/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/16/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/16/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/16/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/16/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/16/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/16/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/16/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/16/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/16/2015	CJR	1
SUR - Dibromofluoromethane	100	REC %			1	8260B		10/16/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	97	REC %			1	8260B		10/16/2015	CJR	1
SUR - 4-Bromofluorobenzene	115	REC %			1	8260B		10/16/2015	CJR	1
SUR - Toluene-d8	107	REC %			1	8260B		10/16/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29881
Project # 60135471

Lab Code 5029881F
Sample ID WT-01
Sample Matrix Water
Sample Date 10/12/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/16/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/16/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/16/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/16/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/16/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/16/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/16/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/16/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/16/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/16/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/16/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/16/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/16/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/16/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/16/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/16/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/16/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/16/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/16/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/16/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/16/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/16/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/16/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/16/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/16/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/16/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/16/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/16/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/16/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/16/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/16/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/16/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/16/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/16/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/16/2015	CJR	1
SUR - Toluene-d8	106	REC %			1	8260B		10/16/2015	CJR	1
SUR - Dibromofluoromethane	106	REC %			1	8260B		10/16/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			1	8260B		10/16/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	93	REC %			1	8260B		10/16/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29881
Project # 60135471

Lab Code 5029881G
Sample ID PZ-03
Sample Matrix Water
Sample Date 10/12/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/16/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/16/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/16/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/16/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/16/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/16/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/16/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/16/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/16/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/16/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/16/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/16/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/16/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/16/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/16/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/16/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/16/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/16/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/16/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/16/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/16/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/16/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/16/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/16/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/16/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/16/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/16/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/16/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/16/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/16/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/16/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/16/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/16/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/16/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/16/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	106	REC %			1	8260B		10/16/2015	CJR	1
SUR - 4-Bromofluorobenzene	112	REC %			1	8260B		10/16/2015	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		10/16/2015	CJR	1
SUR - Toluene-d8	105	REC %			1	8260B		10/16/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29881
Project # 60135471

Lab Code 5029881H
Sample ID WT-03
Sample Matrix Water
Sample Date 10/12/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/17/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/17/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/17/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/17/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/17/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/17/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/17/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/17/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/17/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/17/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/17/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/17/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/17/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/17/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/17/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/17/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/17/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/17/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/17/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/17/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/17/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/17/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/17/2015	CJR	1
cis-1,2-Dichloroethene	58	ug/l	0.45	1.4	1	8260B		10/17/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/17/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/17/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/17/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/17/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/17/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/17/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/17/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/17/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/17/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/17/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/17/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/17/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/17/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/17/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/17/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/17/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/17/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/17/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/17/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/17/2015	CJR	1
1,1,1-Trichloroethane	5.2	ug/l	0.84	2.7	1	8260B		10/17/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/17/2015	CJR	1
Trichloroethene (TCE)	53	ug/l	0.47	1.5	1	8260B		10/17/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/17/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/17/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/17/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/17/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/17/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/17/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		10/17/2015	CJR	1
SUR - Toluene-d8	107	REC %			1	8260B		10/17/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			1	8260B		10/17/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		10/17/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29881
Project # 60135471

Lab Code 5029881I
Sample ID WT-03 DUP
Sample Matrix Water
Sample Date 10/12/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/17/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/17/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/17/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/17/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/17/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/17/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/17/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/17/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/17/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/17/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/17/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/17/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/17/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/17/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/17/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/17/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/17/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/17/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/17/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/17/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/17/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/17/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/17/2015	CJR	1
cis-1,2-Dichloroethene	57	ug/l	0.45	1.4	1	8260B		10/17/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/17/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/17/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/17/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/17/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/17/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/17/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/17/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/17/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/17/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/17/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/17/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/17/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/17/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/17/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/17/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/17/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/17/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/17/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/17/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/17/2015	CJR	1
1,1,1-Trichloroethane	5.1	ug/l	0.84	2.7	1	8260B		10/17/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/17/2015	CJR	1
Trichloroethene (TCE)	53	ug/l	0.47	1.5	1	8260B		10/17/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/17/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/17/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/17/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/17/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/17/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/17/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			1	8260B		10/17/2015	CJR	1
SUR - 4-Bromofluorobenzene	110	REC %			1	8260B		10/17/2015	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		10/17/2015	CJR	1
SUR - Toluene-d8	105	REC %			1	8260B		10/17/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29881
Project # 60135471

Lab Code 5029881J
Sample ID WP-07
Sample Matrix Water
Sample Date 10/12/2015

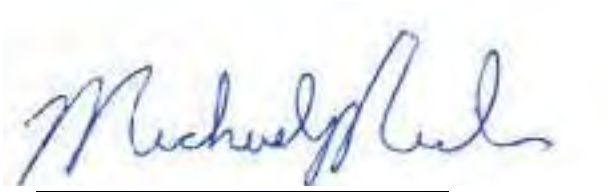
	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/16/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/16/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/16/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/16/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/16/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/16/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/16/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/16/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/16/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/16/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/16/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/16/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/16/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/16/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/16/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/16/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/16/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/16/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/16/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/16/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/16/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/16/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/16/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/16/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/16/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/16/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/16/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/16/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/16/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/16/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/16/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/16/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/16/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/16/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/16/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/16/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/16/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/16/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/16/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/16/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/16/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/16/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/16/2015	CJR	1
SUR - Toluene-d8	104	REC %			1	8260B		10/16/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	100	REC %			1	8260B		10/16/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			1	8260B		10/16/2015	CJR	1
SUR - Dibromofluoromethane	104	REC %			1	8260B		10/16/2015	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



CHAIN OF STODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 2920

Page 1 of 1

Sample Handling Request
_____ Rush Analysis Date Required _____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : | **Quote No.:**

Project #: 60135471

Sampler: (signature) Jordan J

Project (Name / Location): Newton Gravel Pit / Manitowoc, WI

Reports To: DAVE HENDERSON	Invoice To: DAVE HENDERSON
Company AECOM	Company AECOM
Address 1555 N. RiverCenter Dr. STE 314	Address SAME
City State Zip Milwaukee, WI 53212	City State Zip
Phone 414-944-6190	Phone
FAX 414-944-6081	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/FID
502988 1 A	PZ-26C	10/12/15	1100		X	N	3	GW	VOC													X		
B	PZ-26B	10/12/15	1200		X	N	3	GW	VOC													X		
C	PZ-26A	10/12/15	1240		X	N	3	GW	VOC													X		
D	WT-26	10/12/15	1321		X	N	9	GW	VOC													X		
E	PZ-01	10/12/15	1411		X	N	3	GW	VOC													X		
F	WT-01	10/12/15	1451		X	N	3	GW	VOC													X		
G	PZ-03	10/12/15	1539		X	N	3	GW	VOC													X		
H	WT-03	10/12/15	1620		X	N	3	GW	VOC													X		
I	WT-03 DUP	10/12/15	1620		X	N	3	GW	VOC													X		
J	WP-07	10/12/15	1730		X	N	3	GW	VOC													X		

Other Analysis

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Analysis per contract

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Driven
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Jordan J	0800	10/15/15			

Received in Laboratory By: [signature] Time: 8:00 Date: 10/16/15

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVER CENTER DRIVE
MILWAUKEE, WI 53212

Report Date *28-Oct-15*

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911A
Sample ID PZ-24C
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	0.60 "J"	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911A
Sample ID PZ-24C
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	112	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911B
Sample ID PZ-24B
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 4.4	ug/l	4.4	14	10	8260B		10/22/2015	CJR	1
Bromobenzene	< 4.8	ug/l	4.8	15	10	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 4.6	ug/l	4.6	15	10	8260B		10/22/2015	CJR	1
Bromoform	< 4.6	ug/l	4.6	15	10	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 11	ug/l	11	34	10	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 12	ug/l	12	38	10	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 10	ug/l	10	33	10	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 5.1	ug/l	5.1	16	10	8260B		10/22/2015	CJR	1
Chlorobenzene	< 4.6	ug/l	4.6	14	10	8260B		10/22/2015	CJR	1
Chloroethane	< 6.5	ug/l	6.5	21	10	8260B		10/22/2015	CJR	1
Chloroform	< 4.3	ug/l	4.3	14	10	8260B		10/22/2015	CJR	1
Chloromethane	< 19	ug/l	19	60	10	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 4	ug/l	4	13	10	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 6.3	ug/l	6.3	20	10	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 14	ug/l	14	45	10	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 4.5	ug/l	4.5	14	10	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 4.9	ug/l	4.9	16	10	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 5.2	ug/l	5.2	16	10	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 4.6	ug/l	4.6	15	10	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 11	ug/l	11	36	10	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 6.5	ug/l	6.5	21	10	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	330	ug/l	4.5	14	10	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 5.4	ug/l	5.4	17	10	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 4.3	ug/l	4.3	13.7	10	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 31	ug/l	31	98	10	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 4.2	ug/l	4.2	13	10	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 4.4	ug/l	4.4	14	10	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 6.3	ug/l	6.3	20	10	8260B		10/22/2015	CJR	1
Ethylbenzene	< 7.1	ug/l	7.1	23	10	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 22	ug/l	22	71	10	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 8.2	ug/l	8.2	26	10	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 11	ug/l	11	35	10	8260B		10/22/2015	CJR	1
Methylene chloride	< 13	ug/l	13	42	10	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 11	ug/l	11	37	10	8260B		10/22/2015	CJR	1
Naphthalene	< 16	ug/l	16	52	10	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 7.7	ug/l	7.7	24	10	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 5.2	ug/l	5.2	17	10	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 4.9	ug/l	4.9	15	10	8260B		10/22/2015	CJR	1
Toluene	< 4.4	ug/l	4.4	14	10	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 17	ug/l	17	56	10	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 27	ug/l	27	86	10	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 8.4	ug/l	8.4	27	10	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 4.8	ug/l	4.8	15.2	10	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 4.7	ug/l	4.7	15	10	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 16	ug/l	16	50	10	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 15	ug/l	15	48	10	8260B		10/22/2015	CJR	1
Vinyl Chloride	98	ug/l	1.7	5.4	10	8260B		10/22/2015	CJR	1
m&p-Xylene	< 22	ug/l	22	69	10	8260B		10/22/2015	CJR	1
o-Xylene	< 9	ug/l	9	29	10	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			10	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	103	REC %			10	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	110	REC %			10	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			10	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911C
Sample ID PZ-24B DUP
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 4.4	ug/l	4.4	14	10	8260B		10/22/2015	CJR	1
Bromobenzene	< 4.8	ug/l	4.8	15	10	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 4.6	ug/l	4.6	15	10	8260B		10/22/2015	CJR	1
Bromoform	< 4.6	ug/l	4.6	15	10	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 11	ug/l	11	34	10	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 12	ug/l	12	38	10	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 10	ug/l	10	33	10	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 5.1	ug/l	5.1	16	10	8260B		10/22/2015	CJR	1
Chlorobenzene	< 4.6	ug/l	4.6	14	10	8260B		10/22/2015	CJR	1
Chloroethane	< 6.5	ug/l	6.5	21	10	8260B		10/22/2015	CJR	1
Chloroform	< 4.3	ug/l	4.3	14	10	8260B		10/22/2015	CJR	1
Chloromethane	< 19	ug/l	19	60	10	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 4	ug/l	4	13	10	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 6.3	ug/l	6.3	20	10	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 14	ug/l	14	45	10	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 4.5	ug/l	4.5	14	10	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 4.9	ug/l	4.9	16	10	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 5.2	ug/l	5.2	16	10	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 4.6	ug/l	4.6	15	10	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 11	ug/l	11	36	10	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 6.5	ug/l	6.5	21	10	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	340	ug/l	4.5	14	10	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 5.4	ug/l	5.4	17	10	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 4.3	ug/l	4.3	13.7	10	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 31	ug/l	31	98	10	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 4.2	ug/l	4.2	13	10	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 4.4	ug/l	4.4	14	10	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 6.3	ug/l	6.3	20	10	8260B		10/22/2015	CJR	1
Ethylbenzene	< 7.1	ug/l	7.1	23	10	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 22	ug/l	22	71	10	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 8.2	ug/l	8.2	26	10	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 11	ug/l	11	35	10	8260B		10/22/2015	CJR	1
Methylene chloride	< 13	ug/l	13	42	10	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 11	ug/l	11	37	10	8260B		10/22/2015	CJR	1
Naphthalene	< 16	ug/l	16	52	10	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 7.7	ug/l	7.7	24	10	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 5.2	ug/l	5.2	17	10	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 4.9	ug/l	4.9	15	10	8260B		10/22/2015	CJR	1
Toluene	< 4.4	ug/l	4.4	14	10	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 17	ug/l	17	56	10	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 27	ug/l	27	86	10	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 8.4	ug/l	8.4	27	10	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 4.8	ug/l	4.8	15.2	10	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 4.7	ug/l	4.7	15	10	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 16	ug/l	16	50	10	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 15	ug/l	15	48	10	8260B		10/22/2015	CJR	1
Vinyl Chloride	94	ug/l	1.7	5.4	10	8260B		10/22/2015	CJR	1
m&p-Xylene	< 22	ug/l	22	69	10	8260B		10/22/2015	CJR	1
o-Xylene	< 9	ug/l	9	29	10	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			10	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	107	REC %			10	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	101	REC %			10	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	103	REC %			10	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911D
Sample ID PZ-24A
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 4.4	ug/l	4.4	14	10	8260B		10/23/2015	CJR	1
Bromobenzene	< 4.8	ug/l	4.8	15	10	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 4.6	ug/l	4.6	15	10	8260B		10/23/2015	CJR	1
Bromoform	< 4.6	ug/l	4.6	15	10	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 11	ug/l	11	34	10	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 12	ug/l	12	38	10	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 10	ug/l	10	33	10	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 5.1	ug/l	5.1	16	10	8260B		10/23/2015	CJR	1
Chlorobenzene	< 4.6	ug/l	4.6	14	10	8260B		10/23/2015	CJR	1
Chloroethane	< 6.5	ug/l	6.5	21	10	8260B		10/23/2015	CJR	1
Chloroform	< 4.3	ug/l	4.3	14	10	8260B		10/23/2015	CJR	1
Chloromethane	< 19	ug/l	19	60	10	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 4	ug/l	4	13	10	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 6.3	ug/l	6.3	20	10	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 14	ug/l	14	45	10	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 4.5	ug/l	4.5	14	10	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 4.9	ug/l	4.9	16	10	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 5.2	ug/l	5.2	16	10	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 4.6	ug/l	4.6	15	10	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 11	ug/l	11	36	10	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 6.5	ug/l	6.5	21	10	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	870	ug/l	4.5	14	10	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	7.4 "J"	ug/l	5.4	17	10	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 4.3	ug/l	4.3	13.7	10	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 31	ug/l	31	98	10	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 4.2	ug/l	4.2	13	10	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 4.4	ug/l	4.4	14	10	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 6.3	ug/l	6.3	20	10	8260B		10/23/2015	CJR	1
Ethylbenzene	< 7.1	ug/l	7.1	23	10	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 22	ug/l	22	71	10	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 8.2	ug/l	8.2	26	10	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 11	ug/l	11	35	10	8260B		10/23/2015	CJR	1
Methylene chloride	< 13	ug/l	13	42	10	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 11	ug/l	11	37	10	8260B		10/23/2015	CJR	1
Naphthalene	< 16	ug/l	16	52	10	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 7.7	ug/l	7.7	24	10	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 5.2	ug/l	5.2	17	10	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 4.9	ug/l	4.9	15	10	8260B		10/23/2015	CJR	1
Toluene	< 4.4	ug/l	4.4	14	10	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 17	ug/l	17	56	10	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 27	ug/l	27	86	10	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 8.4	ug/l	8.4	27	10	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 4.8	ug/l	4.8	15.2	10	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 4.7	ug/l	4.7	15	10	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 16	ug/l	16	50	10	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 15	ug/l	15	48	10	8260B		10/23/2015	CJR	1
Vinyl Chloride	251	ug/l	1.7	5.4	10	8260B		10/23/2015	CJR	1
m&p-Xylene	< 22	ug/l	22	69	10	8260B		10/23/2015	CJR	1
o-Xylene	< 9	ug/l	9	29	10	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	103	REC %			10	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	105	REC %			10	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	108	REC %			10	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	100	REC %			10	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911E
Sample ID WT-24
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	110	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	100	REC %			1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911F
Sample ID PZ-25C
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	0.59 "J"	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	97	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911G
Sample ID PZ-25B
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	104	REC %			1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	109	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	100	REC %			1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911H
Sample ID PZ-25A
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	0.79 "J"	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	100	REC %			1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	110	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911I
Sample ID WT-25
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	0.91 "J"	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	67	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	5.3	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	109	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911J
Sample ID WT-13
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	105	REC %			1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	102	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911K
Sample ID WP-04
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	5.1	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	3.9	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	96	REC %			1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	113	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	100	REC %			1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	106	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911L
Sample ID WP-06
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	141	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	1.58 "J"	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	6.1	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	104	REC %			1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	106	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911M
Sample ID PZ-12
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	48 "J"	ug/l	22	70	50	8260B		10/23/2015	CJR	1
Bromobenzene	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
Bromoform	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 55	ug/l	55	170	50	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 60	ug/l	60	190	50	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 50	ug/l	50	165	50	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 25.5	ug/l	25.5	80	50	8260B		10/23/2015	CJR	1
Chlorobenzene	< 23	ug/l	23	70	50	8260B		10/23/2015	CJR	1
Chloroethane	< 32.5	ug/l	32.5	105	50	8260B		10/23/2015	CJR	1
Chloroform	< 21.5	ug/l	21.5	70	50	8260B		10/23/2015	CJR	1
Chloromethane	< 95	ug/l	95	300	50	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 20	ug/l	20	65	50	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 31.5	ug/l	31.5	100	50	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 70	ug/l	70	225	50	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 22.5	ug/l	22.5	70	50	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 24.5	ug/l	24.5	80	50	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 26	ug/l	26	80	50	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 55	ug/l	55	180	50	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 32.5	ug/l	32.5	105	50	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	3500	ug/l	22.5	70	50	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 27	ug/l	27	85	50	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 21.5	ug/l	21.5	68.5	50	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 155	ug/l	155	490	50	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 21	ug/l	21	65	50	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 22	ug/l	22	70	50	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 31.5	ug/l	31.5	100	50	8260B		10/23/2015	CJR	1
Ethylbenzene	< 35.5	ug/l	35.5	115	50	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 110	ug/l	110	355	50	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 41	ug/l	41	130	50	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 55	ug/l	55	175	50	8260B		10/23/2015	CJR	1
Methylene chloride	< 65	ug/l	65	210	50	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 55	ug/l	55	185	50	8260B		10/23/2015	CJR	1
Naphthalene	< 80	ug/l	80	260	50	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 38.5	ug/l	38.5	120	50	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 26	ug/l	26	85	50	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 24.5	ug/l	24.5	75	50	8260B		10/23/2015	CJR	1
Toluene	< 22	ug/l	22	70	50	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 85	ug/l	85	280	50	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 135	ug/l	135	430	50	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 42	ug/l	42	135	50	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 24	ug/l	24	76	50	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 23.5	ug/l	23.5	75	50	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 80	ug/l	80	250	50	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 75	ug/l	75	240	50	8260B		10/23/2015	CJR	1
Vinyl Chloride	2000	ug/l	8.5	27	50	8260B		10/23/2015	CJR	1
m&p-Xylene	< 110	ug/l	110	345	50	8260B		10/23/2015	CJR	1
o-Xylene	< 45	ug/l	45	145	50	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	108	REC %			50	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	101	REC %			50	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	103	REC %			50	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			50	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911N
Sample ID WT-12
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 22	ug/l	22	70	50	8260B		10/23/2015	CJR	1
Bromobenzene	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
Bromoform	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 55	ug/l	55	170	50	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 60	ug/l	60	190	50	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 50	ug/l	50	165	50	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 25.5	ug/l	25.5	80	50	8260B		10/23/2015	CJR	1
Chlorobenzene	< 23	ug/l	23	70	50	8260B		10/23/2015	CJR	1
Chloroethane	< 32.5	ug/l	32.5	105	50	8260B		10/23/2015	CJR	1
Chloroform	< 21.5	ug/l	21.5	70	50	8260B		10/23/2015	CJR	1
Chloromethane	< 95	ug/l	95	300	50	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 20	ug/l	20	65	50	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 31.5	ug/l	31.5	100	50	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 70	ug/l	70	225	50	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 22.5	ug/l	22.5	70	50	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 24.5	ug/l	24.5	80	50	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 26	ug/l	26	80	50	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 55	ug/l	55	180	50	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 32.5	ug/l	32.5	105	50	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	820	ug/l	22.5	70	50	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 27	ug/l	27	85	50	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 21.5	ug/l	21.5	68.5	50	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 155	ug/l	155	490	50	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 21	ug/l	21	65	50	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 22	ug/l	22	70	50	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 31.5	ug/l	31.5	100	50	8260B		10/23/2015	CJR	1
Ethylbenzene	< 35.5	ug/l	35.5	115	50	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 110	ug/l	110	355	50	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 41	ug/l	41	130	50	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 55	ug/l	55	175	50	8260B		10/23/2015	CJR	1
Methylene chloride	< 65	ug/l	65	210	50	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 55	ug/l	55	185	50	8260B		10/23/2015	CJR	1
Naphthalene	< 80	ug/l	80	260	50	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 38.5	ug/l	38.5	120	50	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 26	ug/l	26	85	50	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 24.5	ug/l	24.5	75	50	8260B		10/23/2015	CJR	1
Toluene	< 22	ug/l	22	70	50	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 85	ug/l	85	280	50	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 135	ug/l	135	430	50	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 42	ug/l	42	135	50	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 24	ug/l	24	76	50	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 23.5	ug/l	23.5	75	50	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 80	ug/l	80	250	50	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 75	ug/l	75	240	50	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 8.5	ug/l	8.5	27	50	8260B		10/23/2015	CJR	1
m&p-Xylene	< 110	ug/l	110	345	50	8260B		10/23/2015	CJR	1
o-Xylene	< 45	ug/l	45	145	50	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	98	REC %			50	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			50	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	105	REC %			50	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	96	REC %			50	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911O
Sample ID WT-12 DUP
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 22	ug/l	22	70	50	8260B		10/23/2015	CJR	1
Bromobenzene	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
Bromoform	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 55	ug/l	55	170	50	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 60	ug/l	60	190	50	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 50	ug/l	50	165	50	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 25.5	ug/l	25.5	80	50	8260B		10/23/2015	CJR	1
Chlorobenzene	< 23	ug/l	23	70	50	8260B		10/23/2015	CJR	1
Chloroethane	< 32.5	ug/l	32.5	105	50	8260B		10/23/2015	CJR	1
Chloroform	< 21.5	ug/l	21.5	70	50	8260B		10/23/2015	CJR	1
Chloromethane	< 95	ug/l	95	300	50	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 20	ug/l	20	65	50	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 31.5	ug/l	31.5	100	50	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 70	ug/l	70	225	50	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 22.5	ug/l	22.5	70	50	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 24.5	ug/l	24.5	80	50	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 26	ug/l	26	80	50	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 55	ug/l	55	180	50	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 32.5	ug/l	32.5	105	50	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	870	ug/l	22.5	70	50	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 27	ug/l	27	85	50	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 21.5	ug/l	21.5	68.5	50	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 155	ug/l	155	490	50	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 21	ug/l	21	65	50	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 22	ug/l	22	70	50	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 31.5	ug/l	31.5	100	50	8260B		10/23/2015	CJR	1
Ethylbenzene	< 35.5	ug/l	35.5	115	50	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 110	ug/l	110	355	50	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 41	ug/l	41	130	50	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 55	ug/l	55	175	50	8260B		10/23/2015	CJR	1
Methylene chloride	< 65	ug/l	65	210	50	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 55	ug/l	55	185	50	8260B		10/23/2015	CJR	1
Naphthalene	< 80	ug/l	80	260	50	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 38.5	ug/l	38.5	120	50	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 26	ug/l	26	85	50	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 24.5	ug/l	24.5	75	50	8260B		10/23/2015	CJR	1
Toluene	< 22	ug/l	22	70	50	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 85	ug/l	85	280	50	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 135	ug/l	135	430	50	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 42	ug/l	42	135	50	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 24	ug/l	24	76	50	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 23.5	ug/l	23.5	75	50	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 80	ug/l	80	250	50	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 75	ug/l	75	240	50	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 8.5	ug/l	8.5	27	50	8260B		10/23/2015	CJR	1
m&p-Xylene	< 110	ug/l	110	345	50	8260B		10/23/2015	CJR	1
o-Xylene	< 45	ug/l	45	145	50	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	100	REC %			50	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			50	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			50	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	103	REC %			50	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911P
Sample ID PZ-15B
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	94	REC %			1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	108	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	101	REC %			1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911Q
Sample ID PZ-15A
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	112	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	105	REC %			1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	100	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911R
Sample ID WT-15
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/22/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/22/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/22/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/22/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/22/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/22/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/22/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/22/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/22/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/22/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/22/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/22/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/22/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/22/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/22/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/22/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/22/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/22/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/22/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/22/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/22/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/22/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/22/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/22/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/22/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/22/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/22/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/22/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/22/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/22/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/22/2015	CJR	1
Toluene	1.35 "J"	ug/l	0.44	1.4	1	8260B		10/22/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/22/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/22/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/22/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/22/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/22/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/22/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/22/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/22/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/22/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/22/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/22/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B		10/22/2015	CJR	1
SUR - 4-Bromofluorobenzene	110	REC %			1	8260B		10/22/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		10/22/2015	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		10/22/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911S
Sample ID WT-11
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 4.4	ug/l	4.4	14	10	8260B		10/23/2015	CJR	1
Bromobenzene	< 4.8	ug/l	4.8	15	10	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 4.6	ug/l	4.6	15	10	8260B		10/23/2015	CJR	1
Bromoform	< 4.6	ug/l	4.6	15	10	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 11	ug/l	11	34	10	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 12	ug/l	12	38	10	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 10	ug/l	10	33	10	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 5.1	ug/l	5.1	16	10	8260B		10/23/2015	CJR	1
Chlorobenzene	< 4.6	ug/l	4.6	14	10	8260B		10/23/2015	CJR	1
Chloroethane	< 6.5	ug/l	6.5	21	10	8260B		10/23/2015	CJR	1
Chloroform	< 4.3	ug/l	4.3	14	10	8260B		10/23/2015	CJR	1
Chloromethane	< 19	ug/l	19	60	10	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 4	ug/l	4	13	10	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 6.3	ug/l	6.3	20	10	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 14	ug/l	14	45	10	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 4.5	ug/l	4.5	14	10	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 4.9	ug/l	4.9	16	10	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 5.2	ug/l	5.2	16	10	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 4.6	ug/l	4.6	15	10	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 11	ug/l	11	36	10	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 6.5	ug/l	6.5	21	10	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	360	ug/l	4.5	14	10	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 5.4	ug/l	5.4	17	10	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 4.3	ug/l	4.3	13.7	10	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 31	ug/l	31	98	10	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 4.2	ug/l	4.2	13	10	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 4.4	ug/l	4.4	14	10	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 6.3	ug/l	6.3	20	10	8260B		10/23/2015	CJR	1
Ethylbenzene	< 7.1	ug/l	7.1	23	10	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 22	ug/l	22	71	10	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 8.2	ug/l	8.2	26	10	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 11	ug/l	11	35	10	8260B		10/23/2015	CJR	1
Methylene chloride	< 13	ug/l	13	42	10	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 11	ug/l	11	37	10	8260B		10/23/2015	CJR	1
Naphthalene	< 16	ug/l	16	52	10	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 7.7	ug/l	7.7	24	10	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 5.2	ug/l	5.2	17	10	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 4.9	ug/l	4.9	15	10	8260B		10/23/2015	CJR	1
Toluene	< 4.4	ug/l	4.4	14	10	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 17	ug/l	17	56	10	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 27	ug/l	27	86	10	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 8.4	ug/l	8.4	27	10	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 4.8	ug/l	4.8	15.2	10	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	9.0 "J"	ug/l	4.7	15	10	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 16	ug/l	16	50	10	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 15	ug/l	15	48	10	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 1.7	ug/l	1.7	5.4	10	8260B		10/23/2015	CJR	1
m&p-Xylene	< 22	ug/l	22	69	10	8260B		10/23/2015	CJR	1
o-Xylene	< 9	ug/l	9	29	10	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	103	REC %			10	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	98	REC %			10	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	110	REC %			10	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			10	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911T
Sample ID PZ-05B
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	100	REC %			1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	108	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	101	REC %			1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911U
Sample ID PZ-05A
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911V
Sample ID WT-05
Sample Matrix Water
Sample Date 10/15/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	42	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	1.46 "J"	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	0.85	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	107	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911W
Sample ID PZ-16C
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	99	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911X
Sample ID PZ-16B
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	0.46 "J"	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	2.57	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	99	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	96	REC %			1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	109	REC %			1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911Y
Sample ID PZ-16A
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	5.4	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	107	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 5029911Z
Sample ID PZ-16A DUP
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	5.5	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	109	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911AA
Sample ID PZ-16
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	5.2 "J"	ug/l	4.4	14	10	8260B		10/23/2015	CJR	1
Bromobenzene	< 4.8	ug/l	4.8	15	10	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 4.6	ug/l	4.6	15	10	8260B		10/23/2015	CJR	1
Bromoform	< 4.6	ug/l	4.6	15	10	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 11	ug/l	11	34	10	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 12	ug/l	12	38	10	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 10	ug/l	10	33	10	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 5.1	ug/l	5.1	16	10	8260B		10/23/2015	CJR	1
Chlorobenzene	< 4.6	ug/l	4.6	14	10	8260B		10/23/2015	CJR	1
Chloroethane	< 6.5	ug/l	6.5	21	10	8260B		10/23/2015	CJR	1
Chloroform	< 4.3	ug/l	4.3	14	10	8260B		10/23/2015	CJR	1
Chloromethane	< 19	ug/l	19	60	10	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 4	ug/l	4	13	10	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 6.3	ug/l	6.3	20	10	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 14	ug/l	14	45	10	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 4.5	ug/l	4.5	14	10	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 4.9	ug/l	4.9	16	10	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 5.2	ug/l	5.2	16	10	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 4.6	ug/l	4.6	15	10	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 11	ug/l	11	36	10	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 6.5	ug/l	6.5	21	10	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	420	ug/l	4.5	14	10	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	16.9 "J"	ug/l	5.4	17	10	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 4.3	ug/l	4.3	13.7	10	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 31	ug/l	31	98	10	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 4.2	ug/l	4.2	13	10	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 4.4	ug/l	4.4	14	10	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 6.3	ug/l	6.3	20	10	8260B		10/23/2015	CJR	1
Ethylbenzene	< 7.1	ug/l	7.1	23	10	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 22	ug/l	22	71	10	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 8.2	ug/l	8.2	26	10	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 11	ug/l	11	35	10	8260B		10/23/2015	CJR	1
Methylene chloride	< 13	ug/l	13	42	10	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 11	ug/l	11	37	10	8260B		10/23/2015	CJR	1
Naphthalene	< 16	ug/l	16	52	10	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 7.7	ug/l	7.7	24	10	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 5.2	ug/l	5.2	17	10	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 4.9	ug/l	4.9	15	10	8260B		10/23/2015	CJR	1
Toluene	< 4.4	ug/l	4.4	14	10	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 17	ug/l	17	56	10	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 27	ug/l	27	86	10	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 8.4	ug/l	8.4	27	10	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 4.8	ug/l	4.8	15.2	10	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 4.7	ug/l	4.7	15	10	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 16	ug/l	16	50	10	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 15	ug/l	15	48	10	8260B		10/23/2015	CJR	1
Vinyl Chloride	96	ug/l	1.7	5.4	10	8260B		10/23/2015	CJR	1
m&p-Xylene	< 22	ug/l	22	69	10	8260B		10/23/2015	CJR	1
o-Xylene	< 9	ug/l	9	29	10	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	101	REC %			10	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			10	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	110	REC %			10	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			10	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911BB
Sample ID WT-16
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	44 "J"	ug/l	22	70	50	8260B		10/23/2015	CJR	1
Bromobenzene	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
Bromoform	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 55	ug/l	55	170	50	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 60	ug/l	60	190	50	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 50	ug/l	50	165	50	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 25.5	ug/l	25.5	80	50	8260B		10/23/2015	CJR	1
Chlorobenzene	< 23	ug/l	23	70	50	8260B		10/23/2015	CJR	1
Chloroethane	< 32.5	ug/l	32.5	105	50	8260B		10/23/2015	CJR	1
Chloroform	< 21.5	ug/l	21.5	70	50	8260B		10/23/2015	CJR	1
Chloromethane	< 95	ug/l	95	300	50	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 20	ug/l	20	65	50	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 31.5	ug/l	31.5	100	50	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 70	ug/l	70	225	50	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 22.5	ug/l	22.5	70	50	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 24.5	ug/l	24.5	80	50	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 26	ug/l	26	80	50	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 23	ug/l	23	75	50	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 55	ug/l	55	180	50	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 32.5	ug/l	32.5	105	50	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	1600	ug/l	22.5	70	50	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 27	ug/l	27	85	50	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 21.5	ug/l	21.5	68.5	50	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 155	ug/l	155	490	50	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 21	ug/l	21	65	50	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 22	ug/l	22	70	50	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 31.5	ug/l	31.5	100	50	8260B		10/23/2015	CJR	1
Ethylbenzene	< 35.5	ug/l	35.5	115	50	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 110	ug/l	110	355	50	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 41	ug/l	41	130	50	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 55	ug/l	55	175	50	8260B		10/23/2015	CJR	1
Methylene chloride	< 65	ug/l	65	210	50	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 55	ug/l	55	185	50	8260B		10/23/2015	CJR	1
Naphthalene	< 80	ug/l	80	260	50	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 38.5	ug/l	38.5	120	50	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 26	ug/l	26	85	50	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 24	ug/l	24	75	50	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 24.5	ug/l	24.5	75	50	8260B		10/23/2015	CJR	1
Toluene	< 22	ug/l	22	70	50	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 85	ug/l	85	280	50	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 135	ug/l	135	430	50	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 42	ug/l	42	135	50	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 24	ug/l	24	76	50	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 23.5	ug/l	23.5	75	50	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 80	ug/l	80	250	50	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 75	ug/l	75	240	50	8260B		10/23/2015	CJR	1
Vinyl Chloride	1510	ug/l	8.5	27	50	8260B		10/23/2015	CJR	1
m&p-Xylene	< 110	ug/l	110	345	50	8260B		10/23/2015	CJR	1
o-Xylene	< 45	ug/l	45	145	50	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			50	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	109	REC %			50	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	96	REC %			50	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	102	REC %			50	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911CC
Sample ID WT-20
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	0.62 "J"	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	0.38 "J"	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	104	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911DD
Sample ID WT-21
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	108	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	97	REC %			1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911EE
Sample ID WT-22
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	107	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	110	REC %			1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911FF
Sample ID WT-23
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	97	REC %			1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	105	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911GG
Sample ID SG-01
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	13.2	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	6.0	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	110	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	95	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911HH
Sample ID SG-02
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/24/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/24/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/24/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/24/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/24/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/24/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/24/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/24/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/24/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/24/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/24/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/24/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/24/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/24/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/24/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/24/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/24/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/24/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/24/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/24/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/24/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/24/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/24/2015	CJR	1
cis-1,2-Dichloroethene	9.9	ug/l	0.45	1.4	1	8260B		10/24/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/24/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/24/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/24/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/24/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/24/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/24/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/24/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/24/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/24/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/24/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/24/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/24/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/24/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/24/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/24/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/24/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/24/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/24/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/24/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/24/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/24/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/24/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/24/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/24/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/24/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/24/2015	CJR	1
Vinyl Chloride	6.1	ug/l	0.17	0.54	1	8260B		10/24/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/24/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/24/2015	CJR	1
SUR - 4-Bromofluorobenzene	106	REC %			1	8260B		10/24/2015	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		10/24/2015	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		10/24/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			1	8260B		10/24/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911II
Sample ID SG-03
Sample Matrix Water
Sample Date 10/19/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	104	REC %			1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	109	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	95	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911JJ
Sample ID PZ-02
Sample Matrix Water
Sample Date 10/20/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/23/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/23/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/23/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/23/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/23/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/23/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/23/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/23/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/23/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/23/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/23/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/23/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/23/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/23/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/23/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/23/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/23/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/23/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/23/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/23/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/23/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/23/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/23/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/23/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/23/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/23/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/23/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/23/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/23/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/23/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/23/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/23/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/23/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/23/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/23/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/23/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/23/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/23/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/23/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/23/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/23/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/23/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/23/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		10/23/2015	CJR	1
SUR - 4-Bromofluorobenzene	108	REC %			1	8260B		10/23/2015	CJR	1
SUR - Dibromofluoromethane	95	REC %			1	8260B		10/23/2015	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		10/23/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911KK
Sample ID WT-18
Sample Matrix Water
Sample Date 10/20/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	70	ug/l	4.4	14	10	8260B		10/24/2015	CJR	1
Bromobenzene	< 4.8	ug/l	4.8	15	10	8260B		10/24/2015	CJR	1
Bromodichloromethane	< 4.6	ug/l	4.6	15	10	8260B		10/24/2015	CJR	1
Bromoform	< 4.6	ug/l	4.6	15	10	8260B		10/24/2015	CJR	1
tert-Butylbenzene	< 11	ug/l	11	34	10	8260B		10/24/2015	CJR	1
sec-Butylbenzene	< 12	ug/l	12	38	10	8260B		10/24/2015	CJR	1
n-Butylbenzene	< 10	ug/l	10	33	10	8260B		10/24/2015	CJR	1
Carbon Tetrachloride	< 5.1	ug/l	5.1	16	10	8260B		10/24/2015	CJR	1
Chlorobenzene	< 4.6	ug/l	4.6	14	10	8260B		10/24/2015	CJR	1
Chloroethane	< 6.5	ug/l	6.5	21	10	8260B		10/24/2015	CJR	1
Chloroform	< 4.3	ug/l	4.3	14	10	8260B		10/24/2015	CJR	1
Chloromethane	< 19	ug/l	19	60	10	8260B		10/24/2015	CJR	1
2-Chlorotoluene	< 4	ug/l	4	13	10	8260B		10/24/2015	CJR	1
4-Chlorotoluene	< 6.3	ug/l	6.3	20	10	8260B		10/24/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 14	ug/l	14	45	10	8260B		10/24/2015	CJR	1
Dibromochloromethane	< 4.5	ug/l	4.5	14	10	8260B		10/24/2015	CJR	1
1,4-Dichlorobenzene	< 4.9	ug/l	4.9	16	10	8260B		10/24/2015	CJR	1
1,3-Dichlorobenzene	< 5.2	ug/l	5.2	16	10	8260B		10/24/2015	CJR	1
1,2-Dichlorobenzene	< 4.6	ug/l	4.6	15	10	8260B		10/24/2015	CJR	1
Dichlorodifluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/24/2015	CJR	1
1,2-Dichloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/24/2015	CJR	1
1,1-Dichloroethane	39	ug/l	11	36	10	8260B		10/24/2015	CJR	1
1,1-Dichloroethene	< 6.5	ug/l	6.5	21	10	8260B		10/24/2015	CJR	1
cis-1,2-Dichloroethene	6.9 "J"	ug/l	4.5	14	10	8260B		10/24/2015	CJR	1
trans-1,2-Dichloroethene	< 5.4	ug/l	5.4	17	10	8260B		10/24/2015	CJR	1
1,2-Dichloropropane	< 4.3	ug/l	4.3	13.7	10	8260B		10/24/2015	CJR	1
2,2-Dichloropropane	< 31	ug/l	31	98	10	8260B		10/24/2015	CJR	1
1,3-Dichloropropane	< 4.2	ug/l	4.2	13	10	8260B		10/24/2015	CJR	1
Di-isopropyl ether	< 4.4	ug/l	4.4	14	10	8260B		10/24/2015	CJR	1
EDB (1,2-Dibromoethane)	< 6.3	ug/l	6.3	20	10	8260B		10/24/2015	CJR	1
Ethylbenzene	36	ug/l	7.1	23	10	8260B		10/24/2015	CJR	1
Hexachlorobutadiene	< 22	ug/l	22	71	10	8260B		10/24/2015	CJR	1
Isopropylbenzene	< 8.2	ug/l	8.2	26	10	8260B		10/24/2015	CJR	1
p-Isopropyltoluene	< 11	ug/l	11	35	10	8260B		10/24/2015	CJR	1
Methylene chloride	< 13	ug/l	13	42	10	8260B		10/24/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 11	ug/l	11	37	10	8260B		10/24/2015	CJR	1
Naphthalene	36 "J"	ug/l	16	52	10	8260B		10/24/2015	CJR	1
n-Propylbenzene	< 7.7	ug/l	7.7	24	10	8260B		10/24/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 5.2	ug/l	5.2	17	10	8260B		10/24/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 4.8	ug/l	4.8	15	10	8260B		10/24/2015	CJR	1
Tetrachloroethene	< 4.9	ug/l	4.9	15	10	8260B		10/24/2015	CJR	1
Toluene	221	ug/l	4.4	14	10	8260B		10/24/2015	CJR	1
1,2,4-Trichlorobenzene	< 17	ug/l	17	56	10	8260B		10/24/2015	CJR	1
1,2,3-Trichlorobenzene	< 27	ug/l	27	86	10	8260B		10/24/2015	CJR	1
1,1,1-Trichloroethane	< 8.4	ug/l	8.4	27	10	8260B		10/24/2015	CJR	1
1,1,2-Trichloroethane	15.2	ug/l	4.8	15.2	10	8260B		10/24/2015	CJR	1
Trichloroethene (TCE)	< 4.7	ug/l	4.7	15	10	8260B		10/24/2015	CJR	1
Trichlorofluoromethane	< 8.7	ug/l	8.7	28	10	8260B		10/24/2015	CJR	1
1,2,4-Trimethylbenzene	20.7 "J"	ug/l	16	50	10	8260B		10/24/2015	CJR	1
1,3,5-Trimethylbenzene	< 15	ug/l	15	48	10	8260B		10/24/2015	CJR	1
Vinyl Chloride	410	ug/l	1.7	5.4	10	8260B		10/24/2015	CJR	1
m&p-Xylene	54 "J"	ug/l	22	69	10	8260B		10/24/2015	CJR	1
o-Xylene	41	ug/l	9	29	10	8260B		10/24/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			10	8260B		10/24/2015	CJR	1
SUR - Toluene-d8	104	REC %			10	8260B		10/24/2015	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			10	8260B		10/24/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			10	8260B		10/24/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911LL
Sample ID WT-02A
Sample Matrix Water
Sample Date 10/20/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	28.5 "J"	ug/l	22	70	50	8260B		10/24/2015	CJR	1
Bromobenzene	< 24	ug/l	24	75	50	8260B		10/24/2015	CJR	1
Bromodichloromethane	< 23	ug/l	23	75	50	8260B		10/24/2015	CJR	1
Bromoform	< 23	ug/l	23	75	50	8260B		10/24/2015	CJR	1
tert-Butylbenzene	< 55	ug/l	55	170	50	8260B		10/24/2015	CJR	1
sec-Butylbenzene	< 60	ug/l	60	190	50	8260B		10/24/2015	CJR	1
n-Butylbenzene	< 50	ug/l	50	165	50	8260B		10/24/2015	CJR	1
Carbon Tetrachloride	< 25.5	ug/l	25.5	80	50	8260B		10/24/2015	CJR	1
Chlorobenzene	< 23	ug/l	23	70	50	8260B		10/24/2015	CJR	1
Chloroethane	< 32.5	ug/l	32.5	105	50	8260B		10/24/2015	CJR	1
Chloroform	< 21.5	ug/l	21.5	70	50	8260B		10/24/2015	CJR	1
Chloromethane	< 95	ug/l	95	300	50	8260B		10/24/2015	CJR	1
2-Chlorotoluene	< 20	ug/l	20	65	50	8260B		10/24/2015	CJR	1
4-Chlorotoluene	< 31.5	ug/l	31.5	100	50	8260B		10/24/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 70	ug/l	70	225	50	8260B		10/24/2015	CJR	1
Dibromochloromethane	< 22.5	ug/l	22.5	70	50	8260B		10/24/2015	CJR	1
1,4-Dichlorobenzene	< 24.5	ug/l	24.5	80	50	8260B		10/24/2015	CJR	1
1,3-Dichlorobenzene	< 26	ug/l	26	80	50	8260B		10/24/2015	CJR	1
1,2-Dichlorobenzene	< 23	ug/l	23	75	50	8260B		10/24/2015	CJR	1
Dichlorodifluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/24/2015	CJR	1
1,2-Dichloroethane	< 24	ug/l	24	75	50	8260B		10/24/2015	CJR	1
1,1-Dichloroethane	61 "J"	ug/l	55	180	50	8260B		10/24/2015	CJR	1
1,1-Dichloroethene	< 32.5	ug/l	32.5	105	50	8260B		10/24/2015	CJR	1
cis-1,2-Dichloroethene	3400	ug/l	22.5	70	50	8260B		10/24/2015	CJR	1
trans-1,2-Dichloroethene	< 27	ug/l	27	85	50	8260B		10/24/2015	CJR	1
1,2-Dichloropropane	< 21.5	ug/l	21.5	68.5	50	8260B		10/24/2015	CJR	1
2,2-Dichloropropane	< 155	ug/l	155	490	50	8260B		10/24/2015	CJR	1
1,3-Dichloropropane	< 21	ug/l	21	65	50	8260B		10/24/2015	CJR	1
Di-isopropyl ether	< 22	ug/l	22	70	50	8260B		10/24/2015	CJR	1
EDB (1,2-Dibromoethane)	< 31.5	ug/l	31.5	100	50	8260B		10/24/2015	CJR	1
Ethylbenzene	89 "J"	ug/l	35.5	115	50	8260B		10/24/2015	CJR	1
Hexachlorobutadiene	< 110	ug/l	110	355	50	8260B		10/24/2015	CJR	1
Isopropylbenzene	< 41	ug/l	41	130	50	8260B		10/24/2015	CJR	1
p-Isopropyltoluene	< 55	ug/l	55	175	50	8260B		10/24/2015	CJR	1
Methylene chloride	< 65	ug/l	65	210	50	8260B		10/24/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 55	ug/l	55	185	50	8260B		10/24/2015	CJR	1
Naphthalene	94 "J"	ug/l	80	260	50	8260B		10/24/2015	CJR	1
n-Propylbenzene	< 38.5	ug/l	38.5	120	50	8260B		10/24/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 26	ug/l	26	85	50	8260B		10/24/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 24	ug/l	24	75	50	8260B		10/24/2015	CJR	1
Tetrachloroethene	< 24.5	ug/l	24.5	75	50	8260B		10/24/2015	CJR	1
Toluene	390	ug/l	22	70	50	8260B		10/24/2015	CJR	1
1,2,4-Trichlorobenzene	< 85	ug/l	85	280	50	8260B		10/24/2015	CJR	1
1,2,3-Trichlorobenzene	< 135	ug/l	135	430	50	8260B		10/24/2015	CJR	1
1,1,1-Trichloroethane	< 42	ug/l	42	135	50	8260B		10/24/2015	CJR	1
1,1,2-Trichloroethane	< 24	ug/l	24	76	50	8260B		10/24/2015	CJR	1
Trichloroethene (TCE)	43 "J"	ug/l	23.5	75	50	8260B		10/24/2015	CJR	1
Trichlorofluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/24/2015	CJR	1
1,2,4-Trimethylbenzene	< 80	ug/l	80	250	50	8260B		10/24/2015	CJR	1
1,3,5-Trimethylbenzene	< 75	ug/l	75	240	50	8260B		10/24/2015	CJR	1
Vinyl Chloride	700	ug/l	8.5	27	50	8260B		10/24/2015	CJR	1
m&p-Xylene	238 "J"	ug/l	110	345	50	8260B		10/24/2015	CJR	1
o-Xylene	121 "J"	ug/l	45	145	50	8260B		10/24/2015	CJR	1
SUR - 4-Bromofluorobenzene	109	REC %			50	8260B		10/24/2015	CJR	1
SUR - Dibromofluoromethane	95	REC %			50	8260B		10/24/2015	CJR	1
SUR - Toluene-d8	103	REC %			50	8260B		10/24/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	97	REC %			50	8260B		10/24/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911MM
Sample ID WT-10
Sample Matrix Water
Sample Date 10/20/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	37 "J"	ug/l	22	70	50	8260B		10/27/2015	CJR	1
Bromobenzene	< 24	ug/l	24	75	50	8260B		10/27/2015	CJR	1
Bromodichloromethane	< 23	ug/l	23	75	50	8260B		10/27/2015	CJR	1
Bromoform	< 23	ug/l	23	75	50	8260B		10/27/2015	CJR	1
tert-Butylbenzene	< 55	ug/l	55	170	50	8260B		10/27/2015	CJR	1
sec-Butylbenzene	< 60	ug/l	60	190	50	8260B		10/27/2015	CJR	1
n-Butylbenzene	< 50	ug/l	50	165	50	8260B		10/27/2015	CJR	1
Carbon Tetrachloride	< 25.5	ug/l	25.5	80	50	8260B		10/27/2015	CJR	1
Chlorobenzene	< 23	ug/l	23	70	50	8260B		10/27/2015	CJR	1
Chloroethane	< 32.5	ug/l	32.5	105	50	8260B		10/27/2015	CJR	1
Chloroform	< 21.5	ug/l	21.5	70	50	8260B		10/27/2015	CJR	1
Chloromethane	< 95	ug/l	95	300	50	8260B		10/27/2015	CJR	1
2-Chlorotoluene	< 20	ug/l	20	65	50	8260B		10/27/2015	CJR	1
4-Chlorotoluene	< 31.5	ug/l	31.5	100	50	8260B		10/27/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 70	ug/l	70	225	50	8260B		10/27/2015	CJR	1
Dibromochloromethane	< 22.5	ug/l	22.5	70	50	8260B		10/27/2015	CJR	1
1,4-Dichlorobenzene	< 24.5	ug/l	24.5	80	50	8260B		10/27/2015	CJR	1
1,3-Dichlorobenzene	< 26	ug/l	26	80	50	8260B		10/27/2015	CJR	1
1,2-Dichlorobenzene	< 23	ug/l	23	75	50	8260B		10/27/2015	CJR	1
Dichlorodifluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/27/2015	CJR	1
1,2-Dichloroethane	< 24	ug/l	24	75	50	8260B		10/27/2015	CJR	1
1,1-Dichloroethane	< 55	ug/l	55	180	50	8260B		10/27/2015	CJR	1
1,1-Dichloroethene	< 32.5	ug/l	32.5	105	50	8260B		10/27/2015	CJR	1
cis-1,2-Dichloroethene	9200	ug/l	22.5	70	50	8260B		10/27/2015	CJR	1
trans-1,2-Dichloroethene	< 27	ug/l	27	85	50	8260B		10/27/2015	CJR	1
1,2-Dichloropropane	< 21.5	ug/l	21.5	68.5	50	8260B		10/27/2015	CJR	1
2,2-Dichloropropane	< 155	ug/l	155	490	50	8260B		10/27/2015	CJR	1
1,3-Dichloropropane	< 21	ug/l	21	65	50	8260B		10/27/2015	CJR	1
Di-isopropyl ether	< 22	ug/l	22	70	50	8260B		10/27/2015	CJR	1
EDB (1,2-Dibromoethane)	< 31.5	ug/l	31.5	100	50	8260B		10/27/2015	CJR	1
Ethylbenzene	< 35.5	ug/l	35.5	115	50	8260B		10/27/2015	CJR	1
Hexachlorobutadiene	< 110	ug/l	110	355	50	8260B		10/27/2015	CJR	1
Isopropylbenzene	< 41	ug/l	41	130	50	8260B		10/27/2015	CJR	1
p-Isopropyltoluene	< 55	ug/l	55	175	50	8260B		10/27/2015	CJR	1
Methylene chloride	< 65	ug/l	65	210	50	8260B		10/27/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 55	ug/l	55	185	50	8260B		10/27/2015	CJR	1
Naphthalene	< 80	ug/l	80	260	50	8260B		10/27/2015	CJR	1
n-Propylbenzene	< 38.5	ug/l	38.5	120	50	8260B		10/27/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 26	ug/l	26	85	50	8260B		10/27/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 24	ug/l	24	75	50	8260B		10/27/2015	CJR	1
Tetrachloroethene	< 24.5	ug/l	24.5	75	50	8260B		10/27/2015	CJR	1
Toluene	274	ug/l	22	70	50	8260B		10/27/2015	CJR	1
1,2,4-Trichlorobenzene	< 85	ug/l	85	280	50	8260B		10/27/2015	CJR	1
1,2,3-Trichlorobenzene	< 135	ug/l	135	430	50	8260B		10/27/2015	CJR	1
1,1,1-Trichloroethane	< 42	ug/l	42	135	50	8260B		10/27/2015	CJR	1
1,1,2-Trichloroethane	< 24	ug/l	24	76	50	8260B		10/27/2015	CJR	1
Trichloroethene (TCE)	< 23.5	ug/l	23.5	75	50	8260B		10/27/2015	CJR	1
Trichlorofluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/27/2015	CJR	1
1,2,4-Trimethylbenzene	< 80	ug/l	80	250	50	8260B		10/27/2015	CJR	1
1,3,5-Trimethylbenzene	< 75	ug/l	75	240	50	8260B		10/27/2015	CJR	1
Vinyl Chloride	4400	ug/l	8.5	27	50	8260B		10/27/2015	CJR	1
m&p-Xylene	< 110	ug/l	110	345	50	8260B		10/27/2015	CJR	1
o-Xylene	< 45	ug/l	45	145	50	8260B		10/27/2015	CJR	1
SUR - Dibromofluoromethane	95	REC %			50	8260B		10/27/2015	CJR	1
SUR - Toluene-d8	106	REC %			50	8260B		10/27/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			50	8260B		10/27/2015	CJR	1
SUR - 4-Bromofluorobenzene	120	REC %			50	8260B		10/27/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911NN
Sample ID WT-10 DUP
Sample Matrix Water
Sample Date 10/20/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	39 "J"	ug/l	22	70	50	8260B		10/27/2015	CJR	1
Bromobenzene	< 24	ug/l	24	75	50	8260B		10/27/2015	CJR	1
Bromodichloromethane	< 23	ug/l	23	75	50	8260B		10/27/2015	CJR	1
Bromoform	< 23	ug/l	23	75	50	8260B		10/27/2015	CJR	1
tert-Butylbenzene	< 55	ug/l	55	170	50	8260B		10/27/2015	CJR	1
sec-Butylbenzene	< 60	ug/l	60	190	50	8260B		10/27/2015	CJR	1
n-Butylbenzene	< 50	ug/l	50	165	50	8260B		10/27/2015	CJR	1
Carbon Tetrachloride	< 25.5	ug/l	25.5	80	50	8260B		10/27/2015	CJR	1
Chlorobenzene	< 23	ug/l	23	70	50	8260B		10/27/2015	CJR	1
Chloroethane	< 32.5	ug/l	32.5	105	50	8260B		10/27/2015	CJR	1
Chloroform	< 21.5	ug/l	21.5	70	50	8260B		10/27/2015	CJR	1
Chloromethane	< 95	ug/l	95	300	50	8260B		10/27/2015	CJR	1
2-Chlorotoluene	< 20	ug/l	20	65	50	8260B		10/27/2015	CJR	1
4-Chlorotoluene	< 31.5	ug/l	31.5	100	50	8260B		10/27/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 70	ug/l	70	225	50	8260B		10/27/2015	CJR	1
Dibromochloromethane	< 22.5	ug/l	22.5	70	50	8260B		10/27/2015	CJR	1
1,4-Dichlorobenzene	< 24.5	ug/l	24.5	80	50	8260B		10/27/2015	CJR	1
1,3-Dichlorobenzene	< 26	ug/l	26	80	50	8260B		10/27/2015	CJR	1
1,2-Dichlorobenzene	< 23	ug/l	23	75	50	8260B		10/27/2015	CJR	1
Dichlorodifluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/27/2015	CJR	1
1,2-Dichloroethane	< 24	ug/l	24	75	50	8260B		10/27/2015	CJR	1
1,1-Dichloroethane	< 55	ug/l	55	180	50	8260B		10/27/2015	CJR	1
1,1-Dichloroethene	< 32.5	ug/l	32.5	105	50	8260B		10/27/2015	CJR	1
cis-1,2-Dichloroethene	9600	ug/l	22.5	70	50	8260B		10/27/2015	CJR	1
trans-1,2-Dichloroethene	< 27	ug/l	27	85	50	8260B		10/27/2015	CJR	1
1,2-Dichloropropane	< 21.5	ug/l	21.5	68.5	50	8260B		10/27/2015	CJR	1
2,2-Dichloropropane	< 155	ug/l	155	490	50	8260B		10/27/2015	CJR	1
1,3-Dichloropropane	< 21	ug/l	21	65	50	8260B		10/27/2015	CJR	1
Di-isopropyl ether	< 22	ug/l	22	70	50	8260B		10/27/2015	CJR	1
EDB (1,2-Dibromoethane)	< 31.5	ug/l	31.5	100	50	8260B		10/27/2015	CJR	1
Ethylbenzene	< 35.5	ug/l	35.5	115	50	8260B		10/27/2015	CJR	1
Hexachlorobutadiene	< 110	ug/l	110	355	50	8260B		10/27/2015	CJR	1
Isopropylbenzene	< 41	ug/l	41	130	50	8260B		10/27/2015	CJR	1
p-Isopropyltoluene	< 55	ug/l	55	175	50	8260B		10/27/2015	CJR	1
Methylene chloride	< 65	ug/l	65	210	50	8260B		10/27/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 55	ug/l	55	185	50	8260B		10/27/2015	CJR	1
Naphthalene	< 80	ug/l	80	260	50	8260B		10/27/2015	CJR	1
n-Propylbenzene	< 38.5	ug/l	38.5	120	50	8260B		10/27/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 26	ug/l	26	85	50	8260B		10/27/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 24	ug/l	24	75	50	8260B		10/27/2015	CJR	1
Tetrachloroethene	< 24.5	ug/l	24.5	75	50	8260B		10/27/2015	CJR	1
Toluene	288	ug/l	22	70	50	8260B		10/27/2015	CJR	1
1,2,4-Trichlorobenzene	< 85	ug/l	85	280	50	8260B		10/27/2015	CJR	1
1,2,3-Trichlorobenzene	< 135	ug/l	135	430	50	8260B		10/27/2015	CJR	1
1,1,1-Trichloroethane	< 42	ug/l	42	135	50	8260B		10/27/2015	CJR	1
1,1,2-Trichloroethane	< 24	ug/l	24	76	50	8260B		10/27/2015	CJR	1
Trichloroethene (TCE)	< 23.5	ug/l	23.5	75	50	8260B		10/27/2015	CJR	1
Trichlorofluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/27/2015	CJR	1
1,2,4-Trimethylbenzene	< 80	ug/l	80	250	50	8260B		10/27/2015	CJR	1
1,3,5-Trimethylbenzene	< 75	ug/l	75	240	50	8260B		10/27/2015	CJR	1
Vinyl Chloride	4700	ug/l	8.5	27	50	8260B		10/27/2015	CJR	1
m&p-Xylene	< 110	ug/l	110	345	50	8260B		10/27/2015	CJR	1
o-Xylene	< 45	ug/l	45	145	50	8260B		10/27/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	96	REC %			50	8260B		10/27/2015	CJR	1
SUR - 4-Bromofluorobenzene	116	REC %			50	8260B		10/27/2015	CJR	1
SUR - Dibromofluoromethane	99	REC %			50	8260B		10/27/2015	CJR	1
SUR - Toluene-d8	111	REC %			50	8260B		10/27/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911OO
Sample ID WT-17
Sample Matrix Water
Sample Date 10/20/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/27/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/27/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/27/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/27/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/27/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/27/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/27/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/27/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/27/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/27/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/27/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/27/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/27/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/27/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/27/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/27/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/27/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/27/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/27/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/27/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/27/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/27/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/27/2015	CJR	1
cis-1,2-Dichloroethene	75	ug/l	0.45	1.4	1	8260B		10/27/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/27/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/27/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/27/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/27/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/27/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/27/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/27/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/27/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/27/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/27/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/27/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/27/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/27/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/27/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/27/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/27/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/27/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/27/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/27/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/27/2015	CJR	1
1,1,1-Trichloroethane	2.93	ug/l	0.84	2.7	1	8260B		10/27/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/27/2015	CJR	1
Trichloroethene (TCE)	10	ug/l	0.47	1.5	1	8260B		10/27/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/27/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/27/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/27/2015	CJR	1
Vinyl Chloride	0.58	ug/l	0.17	0.54	1	8260B		10/27/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/27/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/27/2015	CJR	1
SUR - Dibromofluoromethane	100	REC %			1	8260B		10/27/2015	CJR	1
SUR - Toluene-d8	113	REC %			1	8260B		10/27/2015	CJR	1
SUR - 4-Bromofluorobenzene	119	REC %			1	8260B		10/27/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		10/27/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911PP
Sample ID WT-19
Sample Matrix Water
Sample Date 10/20/2015

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/27/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/27/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/27/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/27/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/27/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/27/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/27/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/27/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/27/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/27/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/27/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/27/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/27/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/27/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/27/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/27/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/27/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/27/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/27/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/27/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/27/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/27/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/27/2015	CJR	1
cis-1,2-Dichloroethene	0.56 "J"	ug/l	0.45	1.4	1	8260B		10/27/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/27/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/27/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/27/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/27/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/27/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/27/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/27/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/27/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/27/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/27/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/27/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/27/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/27/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/27/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/27/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/27/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/27/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/27/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/27/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/27/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/27/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/27/2015	CJR	1
Trichloroethene (TCE)	0.78 "J"	ug/l	0.47	1.5	1	8260B		10/27/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/27/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/27/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/27/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/27/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/27/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/27/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			1	8260B		10/27/2015	CJR	1
SUR - 4-Bromofluorobenzene	119	REC %			1	8260B		10/27/2015	CJR	1
SUR - Dibromofluoromethane	100	REC %			1	8260B		10/27/2015	CJR	1
SUR - Toluene-d8	115	REC %			1	8260B		10/27/2015	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E29911
Project # 60135471

Lab Code 529911QQ
Sample ID TRIP BLANK
Sample Matrix Water
Sample Date 10/20/2015

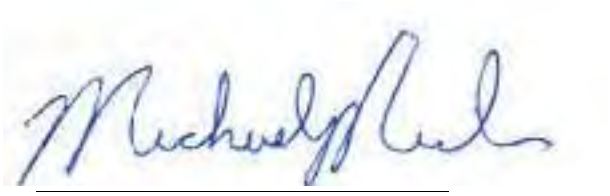
	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		10/27/2015	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		10/27/2015	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		10/27/2015	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		10/27/2015	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		10/27/2015	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		10/27/2015	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		10/27/2015	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		10/27/2015	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		10/27/2015	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		10/27/2015	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		10/27/2015	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		10/27/2015	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		10/27/2015	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		10/27/2015	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		10/27/2015	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/27/2015	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		10/27/2015	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		10/27/2015	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		10/27/2015	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/27/2015	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/27/2015	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		10/27/2015	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		10/27/2015	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		10/27/2015	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		10/27/2015	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		10/27/2015	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		10/27/2015	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		10/27/2015	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		10/27/2015	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		10/27/2015	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		10/27/2015	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		10/27/2015	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		10/27/2015	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		10/27/2015	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		10/27/2015	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		10/27/2015	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		10/27/2015	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		10/27/2015	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		10/27/2015	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		10/27/2015	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		10/27/2015	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		10/27/2015	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		10/27/2015	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		10/27/2015	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		10/27/2015	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		10/27/2015	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		10/27/2015	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		10/27/2015	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		10/27/2015	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		10/27/2015	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		10/27/2015	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		10/27/2015	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		10/27/2015	CJR	1
SUR - Toluene-d8	115	REC %			1	8260B		10/27/2015	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		10/27/2015	CJR	1
SUR - 4-Bromofluorobenzene	120	REC %			1	8260B		10/27/2015	CJR	1
SUR - Dibromofluoromethane	96	REC %			1	8260B		10/27/2015	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



CHAIN OF CUSTODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 292

Page 1 of 5

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #: 60235471	
Sampler: (signature) Jordan J	
Project (Name / Location): Newton Gravel Pit	
Reports To: DAVE HENDERSON	Invoice To: DAVE Henderson
Company AECOM	Company AECOM
Address 1555 N. RiverCenter Dr. STE 214	Address SAME
City State Zip Milwaukee, WI 53212	City State Zip
Phone 414-944-6190	Phone
FAX 414-944-6081	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/FID
502991 A	PZ-24C	10/15/15	0941		X	N	3	GW	HCl													X		
B	PZ-24B	10/15/15	1031		X	N	3	GW	HCl													X		
C	PZ-24B DUP	10/15/15	1031		X	N	3	GW	HCl													X		
D	PZ-24A	10/15/15	1120		X	N	3	GW	HCl													X		
E	WT-24	10/15/15	1149		X	N	3	GW	HCl													X		
F	PZ-25C	10/15/15	1310		X	N	3	GW	HCl													X		
G	PZ-25B	10/15/15	1410		X	N	3	GW	HCl													X		
H	PZ-25A	10/15/15	1503		X	N	3	GW	HCl													X		
I	WT-25	10/15/15	1543		X	N	3	GW	HCl													X		
J	WT-13	10/15/15	1631		X	N	9	GW	HCl													X		

Analysis Requested | **Other Analysis**

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Analysis per Contract

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Fedex
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Jordan J	0800	10/21/15			

Received in Laboratory By: [signature] Time: 8:00 Date: 10/22/15

CHAIN OF STODY RECORD

Synergy Environmental Lab, Inc.

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920-830-2455 • FAX 920-733-0631

Chain # N2 292

Page 2 of 5

Sample Handling Request
_____ Rush Analysis Date Required _____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : | Quote No.:

Project #: 60135471

Sampler: (signature) Jordan J

Project (Name / Location): Newton Gravel Pit / Manitowoc, WI

Reports To: DAVE Henderson	Invoice To: DAVE Henderson
Company AECOM	Company SAME
Address 1555 N. RiverCenter Dr. STE 214	Address
City State Zip Milwaukee, WI 53212	City State Zip
Phone 414-944-6180	Phone
FAX 414-944-6081	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/FID
502911 k	WP-04	10/15/15	1711		x	N	3	GW	HCl													X		
L	WP-06	10/15/15	1743		x	N	3	GW	HCl													X		
M	PZ-12	10/15/15	0818		x	N	3	GW	HCl													X		
N	WT-12	10/15/15	0850		x	N	3	GW	HCl													X		
O	WT-12 DUP	10/15/15	0850		x	N	3	GW	HCl													X		
P	PZ-15B	10/15/15	0930		x	N	3	GW	HCl													X		
Q	PZ-15A	10/15/15	1007		x	N	3	GW	HCl													X		
R	WT-15	10/15/15	1040		x	N	3	GW	HCl													X		
S	WT-11	10/15/15	1120		x	N	3	GW	HCl													X		
T	PZ-05B	10/15/15	1200		x	N	3	GW	HCl													X		

Analysis Requested | Other Analysis

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Analysis per Contract

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Courier
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Jordan J	0800	10/21/15			

Received in Laboratory By: [signature] Time: 8:00 Date: 10/22/15

CHAIN OF STODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # № 292

Page 3 of 5

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : | **Quote No.:**

Project #:

Sampler: (signature) Jordan Union / Jordan

Project (Name / Location): Newton Gravel Pit / Manitowoc, WI

Reports To: DAVE Henderson	Invoice To: DAVE Henderson
Company AECOM	Company AECOM
Address 1555 N. River Center Dr. STE 214	Address SAME
City State Zip Milwaukee, WI 53212	City State Zip
Phone 414-944-6190	Phone
FAX 414-944-6081	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/FID
SOZ5911 U	PZ-05A	10/15/15	1236		X	N	3	GW	HCl													X		
V	WT-05	10/15/15	1315		X	N	3	GW	HCl													X		
W	PZ-16C	10/19/15	0956		X	N	3	GW	HCl													X		
X	PZ-16B	10/19/15	1050		X	N	3	GW	HCl													X		
Y	PZ-16A	10/19/15	1138		X	N	3	GW	HCl													X		
Z	PZ-16A DUP	10/19/15	1138		X	N	3	GW	HCl													X		
AA	PZ-16	10/19/15	1220		X	N	3	GW	HCl													X		
BB	WT-16	10/19/15	1300		X	N	3	GW	HCl													X		
CC	WT-20	10/19/15	1350		X	N	3	GW	HCl													X		
DD	WT-21	10/19/15	1431		X	N	3	GW	HCl													X		

Analysis Requested | **Other Analysis**

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Analysis per Contract

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Courier
Temp. of Temp. Blank ___ °C On Ice: X
Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Jordan	0800	10/21/15			

Received in Laboratory By: [signature] Time: 8:00 Date: 10/22/15

CHAIN OF STODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 2921

Page 4 of 5

Sample Handling Request
_____ Rush Analysis Date Required _____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #
Account No. : Quote No.:
Project #: 60135471
Sampler: (signature)
Project (Name / Location): Newton Gravel Pit

Reports To: DAVE Henderson	Invoice To: DAVE Henderson
Company AECOM	Company SAME
Address 1555 N. RiverCenter Dr. STE 214	Address
City State Zip Milwaukee, WI 53212	City State Zip
Phone 414-944-6190	Phone
FAX 414-944-6081	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
529911 EE	WT-22	10/19/15	1522		X	N	3	GW	HCl													X		
FF	WT-23	10/19/15	1616		X	N	3	GW	HCl													X		
GG	SG-01	10/19/15	1655		X	N	3	GW	HCl													X		
HH	SG-02	10/19/15	1700		X	N	3	GW	HCl													X		
II	SG-03	10/19/15	1705		X	N	3	GW	HCl													X		
JJ	PZ-02	10/20/15	0916		X	N	9	GW	HCl													X		
KK	WT-18	10/20/15	1015		X	N	3	GW	HCl													X		
LL	WT-02A	10/20/15	1105		X	N	3	GW	HCl													X		
MM	WT-10	10/20/15	1154		X	N	3	GW	HCl													X		
NN	WT-10 DUP	10/20/15	1154		X	N	3	GW	HCl													X		

Analysis Requested **Other Analysis**

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Analysis per Contract

Sample Integrity - To be completed by receiving lab.
Method of Shipment:
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
	0800	10/21/15			

Received in Laboratory By: Time: 8:00 Date: 10/22/15

CHAIN OF STODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 2790

Page 5 of 5

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #: 60135471	
Sampler: (signature)	
Project (Name / Location): Newton Gravel Pit	

Reports To: Dave Henderson	Invoice To: DAVE Henderson
Company AECOM	Company AECOM
Address 1555 N. RiverCenter Dr. STE 214	Address SAME
City State Zip Milwaukee, WI 53212	City State Zip
Phone 414-944-6190	Phone
FAX 414-944-6081	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/FID
52991100	WT-17	10/20/15	1230		X	N	3	GW	HCl													X		
PP	WT-19	10/20/15	1317		X	N	3	GW	HCl													X		
QA QC	Trip Blank	10/15/15	0800		X	N	2	GW	HCl													X		

Analysis Requested | Other Analysis

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Analysis per Contract

Sample Integrity - To be completed by receiving lab.
Method of Shipment:
Temp. of Temp. Blank ___ °C On Ice: X
Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
	0800	10/21/15			

Received in Laboratory By: Time: 8:00 Date: 10/22/15