Site Investigation Report for Miller Property

Mach IV Project No. 0315-01-10 WDNR BRRTS No. 03-31-544904 WDSPS PECFA No. 54216-9651-92

N2892 Church Road Town of West Kewaunee Kewaunee County, Wisconsin

# January 15, 2014





Engineering & Surveying LLC

Prepared by Chad M. Fradette 211 N. Broadway, Suite 114 Green Bay, Wisconsin 54303 (920) 569-5765 <u>cfradette@mach-iv.com</u> Section 1: Introduction and Background

1.1 Responsible Party Information

Mr. Tom Miller N2892 Church Road Kewaunee, Wisconsin 54216 (920) 304-0114

# 1.2 Agent Information

Mr. Chad M. Fradette Mr. Robert A. Mach, P.E. Mach IV Engineering & Surveying, LLC (Mach IV) 211 N. Broadway, Suite 114 Green Bay, Wisconsin 54303 (920) 569-5765 <u>cfradette@mach-iv.com</u> <u>rmach@mach-iv.com</u>

## 1.3 Site Location

N2892 Church Road Town of West Kewaunee, Kewaunee County, Wisconsin Part of NW ¼ of the NE ¼, Section 31, Township 23N, Range 24E Wisconsin Department of Natural Resources BRRTS No. 03-31-544904 Wisconsin Department of Safety and Professional Services PECFA No. 54216-9651-92

1.4 Site History

One underground storage tank (UST) system, a 150-gallon and a 550-gallon UST each containing leaded gasoline, according to local residents, was possibly utilized until the 1940s for the retail sale of leaded gasoline at the local general store, subject property. The former location of the USTs is located on the site map. The 150-gallon UST was removed and the 550-gallon UST was abandoned in place on February 7, 2006 by Arnie Koller of American Remediation. Chad M. Fradette, certified site assessor, performed a site assessment during UST removal activities.

Obvious soil contamination was observed by Mr. Fradette during the removal process. Mr. Fradette collected two soil samples from the 550-gallon UST through holes cut in the bottom of the tank and one sample was collected beneath the 150-gallon UST. The samples were submitted for laboratory analysis of gasoline range organics (GRO) to Pace Analytical of Green Bay, Wisconsin. The soil sample results reported a detections of GRO, T150 4' (7,400 ppm), T550 North (280 ppm), and T550 South (300 ppm).

Mach IV worked with Mr. Miller to enter into an agency agreement and prepare a deductible waiver through the PECFA program. After approval of the agency agreement and the deductible waiver by the PECFA program, Mach IV prepared a Site Investigation Work Plan, dated November 15, 2010.

Section 2: Geology and Receptors

#### 2.1 Regional and Local Geology and Hydrogeology

Subsurface conditions on-site have been gleaned from well drilling logs of potable wells from neighboring properties and field work. The soils on-site consist of clay to 8.5 to 44 feet below ground surface (bgs). Dolomite or limestone bedrock in the immediate vicinity was encountered at depths varying from 8.5 to 56 ft bgs. The deepest boring on-site was 44 feet beneath the source area, however, less than 10 feet north of the source area, bedrock was encountered at 10 ft bgs.

It is likely that the site is located at the end of a limestone ridge. The topography of the site drops off steeply towards the east to the East Twin River, whereas the topography on the adjacent farmstead to the west is flat for a distance.

Groundwater on-site has been encountered at 1.25 to 4 feet below ground surface and it flows east towards the East Twin River.

#### 2.2 Receptors

#### Groundwater

Groundwater on-site has been impacted by petroleum contamination. The groundwater contaminant plume is likely located within portions of bedrock on-site.

#### Buildings

Mach IV performed a vapor intrusion survey. The results of the survey are located in section 3.2.2. The building was not impacted by petroleum contamination.

#### Cultural Features

The cemetery located adjacent to the site was not impacted by groundwater and is located hundreds of feet side-gradient to the north of the groundwater contaminant plume.

#### Water Supply Wells

The site and adjacent potable wells have not been impacted by petroleum contamination and the petroleum contamination plume does not extend to the vicinity of the potable wells. The site potable well is located within 100 feet of the groundwater contaminant plume and soil contamination.

#### Wetlands

There are wetlands located approximately 1,500 feet east of the site and they have not been impacted by petroleum contamination.

Section 3: Site Investigation Results, Risk Criteria

# 3.1 Methods of Investigation

# 3.1.1 Soil Borings and Soil Sampling

Mach IV directed the installation of ten Geoprobe soil borings by Geiss Soil and Samples to determine the degree and extent of soil contamination. Soil borings GP-1 through GP-9 were installed on November 18, 2010. Due to site constraints, soil boring GP-10 was installed on December 21, 2010.

Soil was continuously screened utilizing a photo-ionization detector (PID), with the exception of GP-1 which was blind drilled from 20 to 44 feet below ground surface (ft bgs) to determine the depth to bedrock and GP-10 which was blind drilled to 12 feet to obtain soil samples from the 12 to 16 ft bgs.

## 3.1.2 Groundwater Monitoring Wells and Groundwater Sampling

Mach IV directed the installation of five groundwater monitoring wells by Geiss Soil and Samples. The groundwater monitoring wells were developed on March 2, 2011 after an extended wait to allow LNAPL to appear. Based on soil data results, LNAPL was suspected to be present. On March 21, 2011, Mach IV sampled the wells. Groundwater was also sampled on August 9, 2011, January 31, 2013 and March 14, 2014.

## 3.1.3 Vapor Intrusion Analysis

The vapor intrusion pathway was evaluated and investigation of the pathway determined to be necessary.

## 3.2 Data Discussion

## 3.2.1 Water Supply Well Analyses

Groundwater from the potable wells located at N2982 Church Road (site well), E2695 Krok Road, and E2711 Krok Road were sampled. The site potable well is located within 100 feet of the source area. Groundwater from the site potable well was sampled on March 21, 2011. The sample was analyzed at Pace for VOCs. The site potable well was again sampled on March 30, 2011 with the sample submitted to Pace for lead analysis. The potable well located at E2695 Krok Road is upgradient of the contaminant plume. A groundwater sample was collected from the well on March 30, 2011. The sample was submitted to Pace for VOC analysis. The potable well located at E2711 Krok Road is downgradient of the contaminant plume. Groundwater samples were collected from the well on April 19, 2011. The samples were submitted to Pace for VOC and lead analysis.

Sample analysis reported no detections of analyzed compounds above laboratory detection limits with the exception of a detection of lead (7.0 ppb) in the potable well located at E2711 Krok Road.

# 3.2.2 Field Measurements and Observations

Soil was continuously screened utilizing a PID, with the exception of GP-1 which was blind drilled from 20 to 44 feet below ground surface (ft bgs) to determine the depth to bedrock and GP-10 which was blind drilled to 12 feet to obtain soil samples from the 12 to 16 ft bgs. Positive PID readings were encountered in GP-1, GP-2, GP-6 and GP-8. Significant PID readings, those above 100 ppm, were all observed within 10 feet of the source area. PID readings in GP-1 ranged from 1,900 ppm at 6 feet bgs to 103 ppm at 20 feet bgs. PID readings in GP-2 ranged from 1,900 ppm at 6 feet bgs to 60 ppm at 12 feet bgs. PID readings in GP-6 ranged from 0.0 ppm at 8 feet bgs to 440 at 9 feet bgs. PID readings in GP-8 were not significant and ranged from 0.0 at 4 feet bgs to 15 ppm at 6 feet bgs.

## 3.2.3 Soil Boring Notes

Soil boring GP-1 was installed to examine the source area. Gravel and pea gravel was observed to four feet bgs with the highest PID reading registered at 64 ppm. Brown clay was observed to 10 feet bgs. High PID readings began just below the former UST registering at 1,000 ppm. A sand layer was encountered from 10 to 11 feet bgs containing a perched groundwater layer and registering a PID reading of 1,300 ppm. Brown clay was encountered to 20 feet bgs. PID readings dropped off below the perched groundwater layer registering from 200 ppm at 11 feet bgs to 103 ppm at 20 feet bgs. Drilling continued to 44 feet bgs and registered a PID reading of 1,900 ppm. Sample S-6 located at 10 to 11 feet bgs registered a PID reading of 1,300 ppm. Soil sample S-9 was collected at 16 to 18 feet bgs registered a PID reading of 541 ppm. Soil sample S-9 was collected at 19 to 20 feet bgs registered a PID reading of 103 ppm.

Soil boring GP-2 was installed to examine the second source area beneath the larger UST that is abandoned in place. Pea gravel was encountered to four feet bgs. Brown clay was observed to 12 feet bgs. High PID readings began just below the UST registering at 1,600 ppm. PID readings dropped registering at 400 ppm at 8 feet bgs and 60 ppm at 12 feet bgs. Drilling could not continue below 12 feet bgs due to pea gravel filling up the borehole between soil samples. Soil sample S-4 was collected at 6 to 8 feet bgs and registered a PID reading of 1,900 ppm. Soil sample S-6 was collected at 10 to 12 feet bgs and registered a PID reading of 60 ppm.

Soil boring GP-3 was installed to define the horizontal and vertical extent of petroleum soil contamination from the source area. Pea gravel was observed to 2 feet bgs registering a PID reading of 0.0 ppm. Brown clay was observed to 10 feet bgs with the highest PID reading registering at 1.6 ppm indicating no contamination present. Sandy silt and clay and a perched groundwater layer were encountered from 10 to 14 feet bgs with PID readings registering at 0.0 ppm. Brown clay was again encountered to 16 feet bgs with a PID reading registering at 0.0 ppm. Soil sample S-7 was collected at 14 to 16 feet bgs and registered a PID reading of 0.0 ppm.

Soil boring GP-4 was installed to define the horizontal and vertical extent of petroleum soil contamination from the source area. Below the pavement and road base, brown clay was encountered until limestone bedrock ended drilling at 8.5 feet bgs. All PID readings taken from the soils registered at 0.0 ppm indicating no soil contamination. However, due to the shallow end to the boring, soil boring GP-

5 was installed to complete up-gradient definition. No soil samples were collected for laboratory analysis.

Soil boring GP-5 was installed to define the horizontal and vertical extent of petroleum soil contamination from the source area. Below the pavement and road base, brown clay was observed to 20 feet bgs. A sandy clay layer was observed from 14 to 16 feet bgs. All PID reading taken from the soils registered at 0.0 ppm. Soil sample S-8 was collected at 14 to 16 feet bgs from the sandy clay layer and registered a PID reading of 0.0 ppm.

Soil boring GP-6 was installed to define the horizontal and vertical extent of petroleum soil contamination from the source area. Gravel was encountered to 1 foot bgs and registered a PID reading of 0.0 ppm. An organic layer was encountered to 2 feet bgs and registered a PID reading of 22 ppm. Brown clay was encountered to 6 feet bgs with a high PID reading registering at 22 ppm. Brown sandy clay was observed from 6 to 8 feet bgs registering a PID reading of 7 ppm. Brown clay was again observed from 8 to 9 feet bgs registering a PID reading of 0.0 ppm. Gravel observed from 9 to 9.5 feet bgs registered a PID reading of 52 ppm. Dolomite bedrock was encountered at 10 feet bgs. Due to the PID reading at 52 ppm at the bedrock interface, contamination of the bedrock by petroleum compounds is confirmed. Due to encountering bedrock at 10 feet bgs GP-7 was installed to reach deeper soils. Soil sample S-5 was collected at 8 to 10 feet bgs and registered a PID reading of 52 to 440 ppm.

Soil boring GP-7 was installed to complete the definition of the vertical extent of contamination began in soil boring GP-6. Gravel was observed to 2 feet bgs. Brown clay was observed to 10 feet bgs. All PID reading taken from the soils registered at 0.0 ppm. Dolomite bedrock was encountered at 10 feet bgs. No soil samples were collected for laboratory analysis.

Soil boring GP-8 was installed to define the horizontal and vertical extent of petroleum soil contamination from the source area. Gravel and loam were observed to 4 feet bgs and registered PID readings of 0.0 ppm. Brown clay was observed from 4 to 14 feet bgs. PID readings registered at 0.0 ppm except from 6 to 8 feet bgs where it registered at 15 ppm. A perched groundwater layer was observed to 10 feet bgs. The brown clay observed from 10 to 14 feet bgs was dry and hard, confirming that the above groundwater is perched. Gray silt and a secondary groundwater layer were observed from 14 to 16 feet bgs and registered a PID reading of 0.0 ppm. Bedrock was not encountered. Soil sample S-5 was collected at 8 to 10 feet bgs at the perched groundwater layer and registered a PID reading of 0.0 ppm. Soil sample S-8 was collected at 14 to 16 feet bgs at the groundwater interface within the gray silt layer and registered a PID reading of 0.0 ppm.

Soil boring GP-9 was installed to further define the horizontal and vertical extent of petroleum soil contamination from the source area. Topsoil was observed to 2 feet bgs and brown clay was observed to 16 feet bgs. All PID readings registered at 0.0 ppm. Soil sample S-6 was collected at 10 to 12 feet bgs and registered a PID reading of 0.0 ppm. Soil sample S-8 was collected at 14 to 16 feet bgs and registered a PID reading of 0.0 ppm.

Soil boring GP-10 was installed to further define the horizontal and vertical extent of petroleum soil contamination from the source area. The boring was blind drilled to 12 feet bgs due to the distance from the source area. Hard dry brown clay was observed from 12 to 13 feet bgs and 14 to 16 feet bgs and registered a PID reading of 0.0 ppm. Wet sandy and gravelly clay was observed from 13 to 14 feet bgs

and indicates a perched groundwater layer. Soil sample S-7 was collected from the wet sandy and gravelly clay layer observed from 13 to 14 feet bgs and registered a PID reading of 0.0 ppm. *3.2.4* Soil Analytical Results

Soil sample GP-1, S-4 reported detections of gasoline range organics (GRO)(5,540 ppm), benzene (10,900 ppb), ethylbenzene (116,000 ppb), toluene (164,000 ppb), total xylenes (447,000 ppb), 1,2,4-trimethylbenzene (TMB)(200,000 ppb), 1,3,5-trimethylbenzene (73,600 ppb), and lead (57.4 ppm). Methyl-tert-butyl ether (MTBE) was not reported above laboratory detection limits. All detections exceed the WAC NR 720 Residual Contaminant Levels (RCLs) and WAC NR746 free product indicator value where applicable.

Soil sample GP-1, S-6 reported detections of GRO (1,420 ppm), ethylbenzene (3,460 ppb), toluene (443 ppb), total xylenes (11,330 ppb), 1,2,4-TMB (22,400 ppb), 1,3,5-TMB (15,600 ppb), and lead (6.0 ppm). Benzene and MTBE were not reported above laboratory detection limits. GRO, ethylbenzene, and xylenes detections exceed the WAC NR 720 RCLs and 1,3,5-TMB exceeds the WAC NR746 free product indicator value.

Soil sample GP-1, S-9 reported detections of GRO (19.1 ppm), ethylbenzene (298 ppb), toluene (319 ppb), total xylenes (1,114 ppb), 1,2,4-TMB (554 ppb), 1,3,5-TMB (219 ppb), and lead (8.8 ppm). Benzene and MTBE were not reported above laboratory detection limits.

Soil sample GP-2, S-4 reported detections of GRO (2,250 ppm), ethylbenzene (6,900 ppb), total xylenes (63,500 ppb), 1,2,4-TMB (33,700 ppb), 1,3,5-TMB (24,100 ppb), and lead (5.7 ppm). Benzene, toluene and MTBE were not reported above laboratory detection limits. GRO, ethylbenzene, and xylenes detections exceed the WAC NR 720 RCLs and ethylbenzene, xylenes and 1,3,5-TMB exceed the WAC NR746 free product indicator value.

Soil sample GP-2, S-6 reported a detection of lead (5.7 ppm). The remainder of soil samples reported no detection of analyzed compounds above laboratory detection limits.

Soil sample GP-3, S-7 reported detections of GRO (3.6 ppm), ethylbenzene (31 ppb), total xylenes (97.4 ppb), 1,2,4-TMB (92.3 ppb), 1,3,5-TMB (42.9 ppb), and lead (5.5 ppm). Benzene, toluene and MTBE were not reported above laboratory detection limits.

Soil sample GP-4, S-8 reported a detection of lead (4.1 ppm). The remainder of soil samples reported no detection of analyzed compounds above laboratory detection limits.

Soil sample GP-6, S-5 reported detections of GRO (118 ppm), ethylbenzene (434 ppb), toluene (35,700 ppb), total xylenes (1,635 ppb), 1,3,5-TMB (188 ppb), and lead (5.4 ppm). Benzene, 1,2,4-TMB and MTBE were not reported above laboratory detection limits. GRO, and toluene detections exceed the WAC NR 720 RCLs.

Soil sample GP-8, S-5 reported detections of GRO (6.1 ppm), benzene (274 ppb), ethylbenzene (253 ppb), toluene (69.6 ppb), total xylenes (630 ppb), 1,2,4-TMB (320 ppb), 1,3,5-TMB (113 ppb), and lead (7.9 ppm). MTBE was not reported above laboratory detection limits. The detection of benzene exceeds the WAC NR 720 RCL.

Soil sample GP-8, S-8 reported a detection of lead (2.7 ppm). The remainder of soil samples reported no detection of analyzed compounds above laboratory detection limits.

Soil sample GP-9, S-6 reported a detection of lead (3.2 ppm). The remainder of soil samples reported no detection of analyzed compounds above laboratory detection limits.

Soil sample GP-9, S-8 reported a detection of lead (6.5 ppm). The remainder of soil samples reported no detection of analyzed compounds above laboratory detection limits.

Soil sample GP-10, S-7 reported a detection of lead (4.3 ppm). The remainder of soil samples reported no detection of analyzed compounds above laboratory detection limits.

# 3.2.5 Groundwater Analytical Results

The monitoring wells on-site were developed via weighted bailer by Mach IV on March 2, 2011. Soil sampling results from GP-1 reported that a free-product gasoline layer (LNAPL – light non-aqueous phase liquid) would possibly be determinable upon the groundwater surface in the source well at MW-1. All analyzed PVOCs, with the exception of MTBE, far exceeded the WAC NR746 free product indicator values. Initial monitoring well development was delayed to allow a possible LNAPL layer to materialize. No LNAPL layer was observed or measureable during monitoring well development or sampling of any wells.

## MW-1

Monitoring well MW-1, source well, was sampled on March 21, 2011 and analyzed for VOCs and lead. The results reported detections of benzene (81.5 ppb), ethylbenzene (134.0 ppb), toluene (546 ppb), xylenes (696 ppb), trimethylbenzenes (339 ppb), cumene (17.0 ppb), p-isopropyltoluene (13.7 ppb), naphthalene (32.1 ppb), n-propylbenzene (27.9 ppb), and lead (3.6 ppb). The detection of benzene exceeds the WAC NR 140 enforcement standards (ES). The detections of toluene, trimethylbenzenes, naphthalene, and lead exceed the WAC NR 140 preventive action limits (PAL).

August 9, 2011 was sampled and analyzed for VOCs and lead. The results reported detections of benzene (134 ppb), ethylbenzene (193 ppb), total TMBs (127.7 ppb), and naphthalene (33 ppb). The detections of benzene exceed the WAC NR 140 enforcement standards (ES). The detections of ethylbenzene, total TMBs and naphthalene exceed the WAC NR 140 preventive action limits (PAL).

January 31, 2013 was sampled and analyzed for VOCs and lead. The results reported detections of benzene (69 ppb), ethylbenzene (169 ppb), total TMBs (140.3 ppb) and naphthalene (44.7 ppb). The detections of benzene exceed the WAC NR 140 enforcement standards (ES). The detections of ethylbenzene, total TMBs and naphthalene exceed the WAC NR 140 preventive action limits (PAL).

March 14, 2014 was sampled and analyzed for VOCs and lead. The results reported detections of benzene (39.3 ppb), ethylbenzene (212 ppb), total xylenes (772 ppb), total TMBs (581 ppb), and naphthalene (42.3 ppb). The detections of benzene and total TMBs exceed the WAC NR 140 enforcement standards (ES). The detections of ethylbenzene, total xylenes and naphthalene exceed the WAC NR 140 preventive action limits (PAL).

## MW-2

Monitoring well MW-2, down-gradient well, was sampled on March 21, 2011, August 9, 2011, January 31, 2013 and March 14, 2014 and analyzed for VOCs. The results reported no detections of analyzed compounds above laboratory detection limits.

#### MW-3

Monitoring well MW-3, up-gradient well, was sampled on March 21, 2011, August 9, 2011, January 31, 2013 and March 14, 2014 and analyzed for VOCs. The results reported no detections of analyzed compounds above laboratory detection limits.

#### MW-4

Monitoring well MW-4, down-gradient well, was sampled on March 21, 2011, August 9, 2011, January 31, 2013 and March 14, 2014 and analyzed for VOCs. The results reported no detections of analyzed compounds above laboratory detection limits.

#### MW-5

Monitoring well MW-5, side-gradient well, was sampled on March 21, 2011, August 9, 2011, January 31, 2013 and March 14, 2014 and analyzed for VOCs. The results reported no detections of analyzed compounds above laboratory detection limits.

## 3.2.6 Vapor Intrusion Analysis

Mach IV's vapor intrusion screening and analysis combines groundwater and soil data collected during investigation activities with vapor data collected on-site. Vapor intrusion data was collected on-site on May 24, 2011.

Soil data indicated that the possibility of an LNAPL layer forming is present. Vapor intrusion of benzene and other petroleum constituents occurs most often when an LNAPL layer is located near building foundations. An LNAPL layer was not observed.

Vapor intrusion can also occur where contaminated groundwater has entered the building or is in contact within the building foundation. The Miller residence located on-site at N2892 Church Road contains a sump and drain system. It is possible that contaminated water has entered into the building through this system; however it appears that the groundwater contamination on-site is localized in the vicinity of MW-1 and may not have entered the building drain system.

The foundation of the building consists of block over stone. The basement was slightly damp and no water was observed coming through the foundation during either visit. The most toxic of the petroleum constituents, benzene, readily degrades in unsaturated, oxygenated soils, and readily evaporates from groundwater exposed to air inside a home. Vapor intrusion is often detected by smelling petroleum odor in the building. Mr. Miller was interviewed to determine if any occupants had experienced eye and

nasal passage irritation or complained of petroleum odors or mucus membrane irritation. None of these symptoms were noted.

Mach IV vapor intrusion screening evaluation:

- It does not appear that an LNAPL layer underlies the building or is within 30 feet of the building foundation.
- There does not appear to be petroleum contaminated soils with the potential for off-gassing vapors within 5-feet or less of the building foundation.
- The benzene concentration in groundwater underlying the building is not greater than 1,000 ppb.
- It is possible that groundwater contaminated with petroleum product above the WAC NR 140 PAL is intercepted by the building's foundation drain system and sump or is in contact with the building foundation.
- Although petroleum vapors are present in the vicinity of monitoring well MW-1, it does not appear that those petroleum vapors may migrate from the petroleum source and move through preferential pathways such as fractured bedrock and no sewer lines or other utilities exist in this area.

Since it is possible that groundwater contaminated with petroleum product above the WAC NR 140 PAL is intercepted by the building's foundation drain system and sump or is in contact with the building foundation, the vapor intrusion pathway screening indicates the potential for vapor intrusion.

The groundwater table at the site is very shallow measuring from 1.25 to 4 feet bgs. It is not possible to collect sub-slab soil vapor samples. Therefore vapor samples were taken from each of the groundwater monitoring wells, inside air in the basement, and within the sump.

On March 21, 2011 a sample of sump water was also proposed to be collected, however, at the time of the vapor intrusion analysis, only a very small amount of water was in the sump despite the saturated conditions outside and high groundwater table elevation and not enough was available for a sample. The sump was checked again on April 19, 2011 for water to sample from the sump, but again not enough was present. The sump was checked again on May 24, 2011 for water to sample from the sump, but again not enough was present.

On May 24, 2011 Mach IV collected PID readings from inside the basement of the home and all readings registered at 0.0 ppm. The sump was sealed and Tygon tubing was attached to the PID to observe the vapors just above the water in the sump. The sump PID readings registered at 0.0 ppm. Again Tygon tubing was attached to the PID and the vapor above the groundwater in each of the monitoring wells was observed. Each of the monitoring wells registered a PID reading of 0.0 ppm except MW-1 which registered a PID reading of 45.3 ppm.

## 3.3 Permeability and Hydraulic Conductivities

The majority of the site is dominated by low permeability fat and hard clay located over dolomite bedrock. The hydraulic conductivity of this type of clay would be on the order of  $1 \times 10^{-7}$  cm/s which is relatively impervious and leads to the formation of perched groundwater where layers of more permeable materials form a distinct layer. Perched groundwater was observed across most of the site contained in a layer of sandy clay with an estimated hydraulic conductivity of 0.1 cm/s.

The groundwater plume is contained within low permeable clay that extends into a sandy clay layer with a higher permeability located over a nearly impermeable clay layer located over dolomite bedrock.

# 3.4 Discussion of Results

# 3.4.1 Sequence of Investigation Activities

Mach IV commenced soil sampling activities on November 18, 2011. Groundwater monitoring wells were installed on December 20, 2011. Access to sample potable wells was obtained in February, 2011. Monitoring wells were developed on March 2, 2011. Potable well sampling and groundwater sampling was conducted on March 21, 2011. Additional potable well sampling was conducted on March 30, 2011 and April 19, 2011. Vapor intrusion sampling was conducted on May 24, 2011. Investigative waste removal was conducted on May 25, 2011.

# 3.4.2 Flagged Data

All samples collected for laboratory analysis were submitted to Pace Analytical in Green Bay, Wisconsin. No data was flagged for any reason.

# 3.4.3 Inconsistencies in Data

Field observations collected via visual, olfactory, and photo-ionization detector correlate well with the laboratory analyses. Mach IV has no recommendation for re-sampling and no change in quality control measures.

# 3.4.4 Degree and Extent of Contamination

Soil contamination of the site is largely concentrated within 10 feet of the former UST locations. Contamination that has moved off to the east from the source location appears to have followed the path of the perched groundwater some of which is located in higher permeability soils consisting of sandy clay located at depths varying from 8 to 14 feet bgs. The degree of soil contamination is significant with all petroleum compounds exceeding the WAC NR 746 LNAPL indicator, however it has remained concentrated in the vicinity of the source location.

Groundwater contamination on-site is concentrated in the vicinity of groundwater monitoring well MW-1, the source well. The contamination of this site is historic, originating from use of the site as a general store in the early part of the 20<sup>th</sup> century, and the contaminant plume is likely more than 70 years old. Due to the hard clay soils dominating the site, the groundwater contaminant plume has not migrated far from the source location, approximately 20 to 30 feet.

## 3.4.5 Depth to Groundwater

The depth to groundwater on-site varies from 1.25 to 4 feet bgs.

# 3.4.6 Impacts and Risks to Receptors

Groundwater – Groundwater in the vicinity of the contamination source has been impacted by petroleum contamination. The groundwater contaminant plume is likely located within portions of bedrock on-site. In groundwater monitoring well MW-1, source well, the detection of benzene exceeds the WAC NR 140 enforcement standards (ES) and the detections of toluene, trimethylbenzenes, naphthalene, and lead exceed the WAC NR 140 preventive action limits (PAL). Monitoring wells MW-2 through MW-5 have not been impacted by petroleum contamination.

Buildings – Mach IV performed a vapor intrusion survey. It appears that at this time, the building has not been impacted by petroleum contamination through direct contamination or through vapor intrusion.

Cultural Features – The cemetery located adjacent to the site was not impacted by groundwater and is located hundreds of feet side-gradient to the north of the groundwater contaminant plume.

Water Supply Wells – The site and adjacent potable wells have not been impacted by petroleum contamination and the petroleum contamination plume does not extend to the vicinity of the potable wells. The site potable well is located within 100 feet of the groundwater contaminant plume and soil contamination.

Wetlands – There are wetlands located approximately 1,500 feet east of the site and they have not been impacted by petroleum contamination.

Direct Contact – Based on screening conducted during collection of soil samples, no PID reading registered more than 64 ppm within the direct contact zone. Major contamination begins at 4 feet bgs in the source area. It is Mach IV's opinion that no direct contact concerns exist on-site.

## 3.5 Contaminant Migration

There are no utilities that intersect the contaminant plume. It is possible that contaminants could migrate into the building via drain tile and the sump. Mach IV initiated vapor intrusion testing due to this concern. Vapor intrusion or other contaminant migration does not appear to be an issue at this time. It is assumed that the groundwater plume margin is expanding, albeit slowly, due to the fact that the groundwater plume is contained within low permeability materials and the current release is about 70 years old.

#### 3.6 Risk Screening Criteria

#### 3.6.1 Environmental Factors

- Expansion of Plume Margin At this time there is no evidence that there is an expansion of the plume margin. The groundwater monitoring well network is small and the only well contaminated is the source well.
- Private Potable Wells There has been a detection of a contaminant concentration in a private potable well great than the NR 140 PAL. The detection was for lead (7.0 ppm) in the potable well located at E2711 Krok Road. The source well also had a detection of lead (3.6 ppm). Lead is a

common contaminant in the area and may not be associated with the release in the source area. Typically benzene would be a leading edge contaminant and the concentration in the source well is higher than the potable well.

- Contamination in Bedrock Soil and contamination has been found in contact with bedrock.
- LNAPL LNAPL has not been found on-site.
- Discharge to Surface Water or Wetland A discharge to a surface water or wetland has not occurred.

## 3.6.2 Risk Criteria

- Soil Screening Soil contamination that exceeds the soil screening levels found in WAC NR 746.06 Table 1 has been found on-site within the source area.
- Direct Contact Soil contamination within 4 feet of the surface that exceeds the direct contact concentrations in WAC NR 746.06 Table 2 has not been found.
- There are no contaminants identified by the State as contaminants of concern on-site.
- There is no contamination from a release less than ten years old.
- There is evidence of contaminant migration within a permeable soil layer and no utility corridors intersecting the contaminant plume.
- There is the potential for contaminant migration into drain tile, sumps or other points of entry into the building. No contaminant migration has been detected at this time.
- There are no wells operated by a public utility within 1,000 feet of the contaminant plume.
- The WAC NR 140 ES for benzene has been exceeded within 100 feet of a well used for human consumption.

## 3.7 Agency Jurisdiction

## High Risk Criteria Evaluation

- There is contamination in a private well that exceeds the WAC NR 140 PAL, although it may not be related to the site.
- There has not been an observed LNAPL layer with a thickness of 0.01 feet or more.
- There is not a public well operated within 1,000 feet of the contaminant plume.
- A WAC NR 140 ES has been exceeded for benzene within 100 feet of a private well.
- A WAC NR 140 ES has not been observed within bedrock but the situation is possible.

Because there has been a detection of a contaminant that exceeds the WAC NR 140 PAL within a private potable well and there has been a detection of a contaminant the exceeds the WAC NR 140 ES within 100 feet of a private potable well, the site meets the risk criteria of a high risk site. High risk sites remain within the jurisdiction of the Wisconsin Department of Natural Resources.

Section 4: Conclusions

#### 4.1 Summary of Results and Recommendations

Based on the soils data collected it appears that the vertical and horizontal extent of the soil contamination has been identified. The soil contamination on-site is concentrated within approximately 40 feet of the source area with significant soil contamination located entirely within 10 feet of the source area. Less significant soil contaminant concentrations have moved a bit to the east via the action of a perched groundwater layer contained within a narrow band of medium permeable sandy clay located between layers of low permeability clay. The prevalence of low permeability clay has kept the soil contamination area to a minimal extent.

Based on the location of groundwater monitoring wells and data collected from them it appears that the horizontal extent of the groundwater contamination has been identified. Soil data collected indicates that the groundwater is perched on top of low permeability clay. The groundwater contamination is concentrated in the vicinity of groundwater monitoring well MW-1. No contaminants have been found in the other monitoring wells. LNAPL has not been observed on-site.

Vapor intrusion has not been detected and no occupants of the building report any symptoms related to petroleum impacts of the building.

Mach IV recommends that one or two more rounds of groundwater sampling be conducted to verify the stability of the groundwater plume. The groundwater should also be checked to verify the absence of LNAPL due to the high contaminant concentrations within the soils. A sample of water from the sump in the basement should be tested for PVOCs if enough water enters the sump for that purpose. The site potable well and the potable well located at E2711 Krok Road should be re-sampled.

Since this is an agency site with Mach IV Engineering & Surveying LLC designated as the agent, Mach IV recommends that the additional work and closure be conducted by Mach IV.

#### 4.2 Site Closure Decisions

At this time, Mach IV recommends against closure due to the proximity of the plume to two private potable wells, the possibility of vapor intrusion into the site residence, and the detection of lead exceeding the WAC NR 140 PAL within a private potable well adjacent and down-gradient of the contaminant plume.

After the recommended work is complete, if the situation remains unchanged Mach IV will submit a closure request.

APPENDIX A

Site Figures













**APPENDIX B** 

**Data Tables** 

# Groundwater Analytical Table Groundwater Sample Laboratory Analytical Results Miller Property N2892 Church Road, Kewaunee, Wisconsin

	Sample		Ethyl-		Total	Total		n-Butyl	sec-Butyl				p-Isopropyl		n-Propyl	
Well	Date	Benzene	Benzene	Toluene	Xylenes	TMB's	MTBE	Benzene	Benzene	EDB	Cumene	1,2-DCA	Toluene	Naphthalene	Benzene	Lead
MW-1	3/21/2011	81.5	134.0	546	696	339	<3.0	<4.6	<4.4	<2.8	17.0	<1.8	13.7	32.1	27.9	3.6
	8/9/2012	134	193	134	105	127.7	1.5J	NA	NA	NA	NA	NA	NA	33.0	NA	<1.4
	1/31/2013	69	169	63.4	84.8	140.3	2.1	NA	NA	NA	NA	NA	NA	44.7	NA	NA
	3/14/2014	39.3	212	177	772	581	<0.99	<0.80	4.3J	<0.76	13.6	<0.95	11.1	42.3	29	NA
MW-2	3/21/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
	8/9/2012	<0.39	<0.41	0.81J	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	<1.4
	1/31/2013	4.3	10.4	3.3	5.2	13.2	<0.38	NA	NA	NA	NA	NA	NA	2.7	NA	NA
	3/14/2014	<0.50	<0.50	<0.44	<1.32	<1.00	<0.49	<0.40	<0.60	<0.38	<0.34	<0.48	<0.40	<2.5	<0.50	NA
MW-3	3/21/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
	8/9/2012	<0.39	<0.41	1.9	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	<1.4
	1/31/2013	<0.39	<0.41	<0.42	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	NA
	3/14/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	3/21/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
	8/9/2012	<0.39	<0.41	0.70J	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	<1.4
	1/31/2013	<0.39	<0.41	<0.42	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	NA
	3/14/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	3/21/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
	8/9/2012	<0.39	<0.41	0.61J	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	<1.4
	1/31/2013	<0.39	<0.41	<0.42	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	NA
	3/14/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N2982 Church	3/21/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
	3/30/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.7
E2695 Krok	3/30/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
E2711 Krok	4/19/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	7.0
	8/9/2012	<0.41	<0.54	<0.67	<1.01	<1.71	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	<1.4
	7/1/2013	<0.34	<0.34	<0.34	<1.0	<0.69	<0.37	NA	NA	NA	NA	NA	<0.34	<0.37	NA	NA
NR 140 ES		5	700	1,000	2,000	480	60	NS	NS	0.05	NS	5	NS	100	NS	15
NR 140 PAL		0.5	140	200	400	96	12	NS	NS	0.005	NS	0.5	NS	10	NS	1.5

Note:

All concentrations reported in parts per billion

Bold value represents exceedence of NR 140 enforcement standard

Italicized values represent exceedence of NR 140 preventive action limits

trimethylbenzene TMB: MTBE: methyl tert-butyl ether not analyzed/not applicable NA: Cumene Isopropylbenzene NS: no standard 1,2-DCA 1,2-Dichloroethane ES: Enforcement Standard EDB 1,2-Dibromoethane PAL: Preventive Action Limit

# Pre-remedial Soil Analytical Table

Soil Sample Laboratory Analytical Results

Miller Property

# N2892 Church Road, Kewaunee, Wisconsin

	Sample	Sample Interval	PID			Ethyl-		Total	1,2,4-	1,3,5-		
Sample ID	Date	(ft bgs)	(ppm eq)	GRO	Benzene	benzene	Toluene	Xylenes	TMB	TMB	MTBE	Lead
SITE INVES	STIGATION SA	AMPLES										
GP-1, S-4	11/18/2010	6.0 - 8.0	1,900	5,540	10,900	116,000	164,000	447,000	200,000	73,600	<2,000	57.4
GP-1, S-6	11/18/2010	10.0 - 11.0	1,300	1,420	<312	3,460	443	11,330	22,400	15,600	<312	6.0
GP-1, S-9	11/18/2010	19.0 - 20.0	103	19.1	<25	298	319	1,114	554	219	<25	8.8
GP-2, S-4	11/18/2010	6.0 - 8.0	1,900	2,250	<500	6,900	<500	63,500	33,700	24,100	<500	5.7
GP-2, S-6	11/18/2010	10.0 - 12.0	60	<2.9	<25	<25	<25	<75	<25	<25	<25	5.7
GP-3, S-7	11/18/2010	12.0 - 14.0	0.0	3.6	<25	31.0	<25	97.4	92.3	42.9	<25	5.5
GP-5, S-8	11/18/2010	14.0 - 16.0	0.0	<2.9	<25	<25	<25	<75	<25	<25	<25	4.1
GP-6, S-5	11/18/2010	8.0 - 10.0	440	118	<125	434	35,700	1,635	<125	188	<125	5.4
GP-8, S-5	11/18/2010	8.0 - 10.0	0.0	6.1	274	253	69.6	630	320	113	<25	7.9
GP-8, S-8	11/18/2010	14.0 - 16.0	0.0	<3.0	<25	<25	<25	<75	<25	<25	<25	2.7
GP-9, S-6	11/18/2010	10.0 - 12.0	0.0	<2.8	<25	<25	<25	<75	<25	<25	<25	3.2
GP-9, S-8	11/18/2010	14.0 - 16.0	0.0	<3.0	<25	<25	<25	<75	<25	<25	<25	6.5
GP-10, S-2	12/21/2010	2.0-4.0		<3.0	<25	<25	<25	<75	<25	<25	<25	4.3
Groundwater	RCLs			NS	5.1	1,570	1,107	3,940	1,382	1,382	27	27
Non Industria	al Direct Conta	act		NS	1,490	7,470	818,000	258,000	89,800	182,000	59,400	400

.

Bold value represents an exceedence of the WDNR NR720 Generic Soil Standard

Italic value represents an exceedence of the WDNR NR746 Free product indicator value

- bgs: below ground surface
- ppm eq: part per million equivalent
- GRO: gasoline range organics
- TMB: trimethylbenzene
- MTBE: methyl tert-butyl ether
- NS: no standard
- WDNR: Wisconsin Department of Natural Resources

# Vapor Analytical Table Vapor Intrusion Analytical Results Miller Property Town of West Kewaunee, Wisconsin

Sample	Sample	Vapor
Point	Date	Results (PPM)
MW-1	5/24/2011	45.3
MW-2	5/24/2011	0.0
MW-3	5/24/2011	0.0
MW-4	5/24/2011	0.0
MW-5	5/24/2011	0.0
Basement air	5/24/2011	0.0
Sump	5/24/2011	0.0

Water Level Elevations Groundwater Sample Laboratory Analytical Results Miller Property N2892 Church Road, Kewaunee, Wisconsin

	Sample	Groundwater
Well	Date	Elevation
MW-1	3/21/2011	99.52
	3/14/2014	96.94
MW-2	3/21/2011	97.16
	3/14/2014	96.61
MW-3	3/21/2011	100.75**
	3/14/2014	96.65
MW-4	3/21/2011	94.98
	3/14/2014	95.21
MW-5	3/21/2011	96.92
	3/14/2014	96.04
N2982 Church	3/21/2011	
	3/30/2011	
E2695 Krok	3/30/2011	
E2711 Krok	4/19/2011	

APPENDIX C

Field Notes and Borehole Documentation

State of Wisconsin Department of Natural Resources

#### SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Route To:

Watershed/Wastewater 🗋 Waste Management 🗋 Remediation/Revelopment 🖾 Other

ng Drilled By: Name of crew chief (first, last) and Firm IName: Landon Last Name: Malzahn a: Geiss Soil & Samples Drique Well No. DNR Well ID No. Well Name 	Date Drill 11 1 m m d Final Stat Lat Long Dunty Code 3 1 SOS Final CL	ing Sta B 2 (C d y y c Wate Feet O O Civ Civ Civ Civ Civ Civ Civ Civ	tried 111 y y z r Leve MSL ' ' ' ' ' ' ' ' ' ' ' ' '	Date 11 mmm Swrfa mcCcal mcCcal mcCity/o of W United and Content McCity/o of W United and Content McCity/o Of W	Ouring the second secon	g Com 20: 20: y y y valion Feet C Soil Soil Soil Provide the set of	MSL m Waur Prope	Drillin Ge Boreh 2 1000 rties	Peop ale Di Feel 007	
Juique Well No.     DNR Well ID No.     Well Name       11 Grid Origin     I (estimated: ) or Boring Location     E       Plane     N.    E      I4 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u> I14 of <u>NE</u> 1/4 of Section <u>31</u> . T <u>23</u> N. R <u>24E</u>	Final Stat	C Water o o CTT onderso	Il Town	I Surfa Local Local n/City/c of W Until Until Until Cocal N/City/c	Conid I Free Villa Vest	Woistume Woistume Workshift Workshif	MSL m N S Waur Prope	Plasticity Index	_ Fccl	inneter inches DE tDW NO
I Grid Origin     (estimated: ) or Boring Location       Plane     N,      N     E      N    E      N    E      N    E      N    E      N    E      N    E      N    E      N    E      N    E      N    E      N    N      N    E      N    N      N    E      N    N      N    N      N    N      N    N      N    N      N    N      N    N      N    N      N    N      N    N      N    N      N    N      N    N      N    N      N    N      N    N	Lat_ Long_ Dunity Code 3 1 S OS D F/ F/ CL	Graphic H 20 0	MSL il Town Nown	The second secon	Compressive Strength Strength	Woisture Woisture Key Soil	MSL m N N N N N N N N N N N N N N N N N N	Plasticity 1900	_ Fcc	Inches
Plane N, E <u>1/4 of NE 1/4 of Section 31 T 23 N, R 24E</u> ity ID County Kewaunee Cc <u>nple</u> Soil/Rock Description And Geologic Origin For Each Major Unit 10 2 gravel 2 pea gravel	Lat_ Long_ punty Code 3 1 so so so Fr	Graphic H	il Town		Compressive Length	Moisture Content IIOS	waur Prope	Plasticity and a B	_ Fee	QD/ C C C C C C C C C C C C C C C C C C C
1/4 of <u>MD</u> 1/4 of Section <u>ST</u> , <u>T</u> <u>ZS</u> , <u>N</u> , <u>R</u> <u>ZTD</u> ity ID     County Kewaunee       nple     Soil/Rock Description And Geologic Origin For Each Major Unit       1/0     2       1/0     2       1/0     2       1/0     2       1/0     2	ILong_ punty Code 3_1 so so so so so so fill f	Graphic 1.0	Nell Town	nregram of M htp/EID	Compressive Level	Moisture Content Content	Waur Prope	Plasticity sait	_ Fcc	QD/
nple     Soil/Rock Description       ** ::     100 - 100		Graphic H	Mell Mell	of ND/EID	Compressive Strength	Moisture Ke	Prope piniti Prope	Plasticity side	200	QD/ omments
nple     formula       10     2       10     2       10     2       10     2       10     2       10     2       10     2       10     2       10     2       10     2       10     2		Graphic	Well	PID/FID	Compressive Strength	Moisture Content	Limit Limit	Plasticity sait	200	QD/ omments
**     **     **     **     Soil/Rock Description       **     **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **       **     **     **     **	D H H USCS	Graphic	Well	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	200	QD/ omments
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in a ciny of grower	KL	VI	/	1						
12 6 br-clay	1	1//	/	1000						
12 8		1//		1,900						sany
24 10 Service solvershed		1	1	800						
17 12 bridge water	C	11/	1	1,300						Sang
0 14		-1//	1	200						
4 16	1.1	11	2	50						
0 18		1	/							5
12 20		1	/	10-						map
22		17	/							
24		11	/							
26		11					6.1.9			
28		11	1							
30	1.0	11	1							
32		1/1								
34		11								
36		11								
38		4								
40		11								
42		11								
44		1/1								
bed rock Q 44 ft lagso.		111	1							
by certify that the information on this form is true and correc	t to the be	st of n	ny kno	wledge			_	_		

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in 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 this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wis., Dept. of Natural Resources dnr.wi.gov

#### Well / Drillhole / Borehole Filling & Sealing Form 3300-005 (R 4/08)

Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill	and Seal	Route to:	ent	Watershed/ Other:	Wastewater	Reme	diation/Redevelopment			
1. Well Location Information		an Marian Anglan Sangan Sangan Sangar Sangan Sangan Sangan Sangan Sangan Sangan	2. Facilit	/ Owner li	nformation					
County WI Unio Kewaunee Remove	ue Well # of ed Well	Hicap #	Facility Nan Mille	ne r Prope	erty	en sansarsisata	and the standard start of the			
Lattitude / Longitude (Degrees and	Minutos) Moth	d Code (see instructions	Facility ID (	ID or PWS)						
·	'N		03-31	-544904	; 54216-9	651-92				
`	w _		License/Per	mit/Monitorir	GP-/					
%/% NW % NE	Section To	wnship Range XIE	Original We	I Owner	(h					
or Gov't Lot #	31	23 N 24 W	Thoma	s Mille	er					
Well Street Address N2892 Church Rd			-Present Well Owner same							
Well City, Village or Town Town of West Kewa	unee	Well ZIP Code 54216	Mailing Add N2892	Church	ent Owner Rd					
Subdivision Name		Lot #	City of Prese Kewaun	ent Owner ee		State WI	ZIP Code 54216			
Reason For Removal From Service	WI Unique We	II # of Replacement Well	4. Pump,	liner, Scre	en, Casing & S	ealing Mate	rial			
Temporary Boring	in onique re		Pump an	t nining remo	oved?		Ves DNo XINIA			
3. Well / Drillhole / Borehole Ir	formation		Liner(s) r	moved?	, in the second s					
Monitoring Well	tion Date (mm/dd/yyyy)	Screen re	moved?							
Water Well	f a Well Construct	tion Report is available,	Was casi	ng cut off bel	ow surface?					
Construction Type: Drilled Driven (Sa X Other (specify):Geopro	andpoint) be	Dug	Did sealin Did mater If yes, If bentonit with water	g material ris ial settle afte was hole re chips were from a know	se to surface? er 24 hours? topped? used, were they h n safe source?	nydrated	Yes □No □N/A Yes □No □N/A Yes □No ☑N/A Yes □No ☑N/A			
Formation Type:	Bedr	ock	Required Me	thod of Placin ctor Pipe-Gra	ng Sealing Materia	al tor Pipe-Pum	ped			
Total Well Depth From Ground Surf	ace (ft.) Casing	Diameter (in.)	Sealing Mate	ed & Poured nite Chips)	Other (E	xplain):				
Lower Drillhole Diameter (in.) 2 inches	Casing	Depth (ft.)	Neat C	ement Grout	crete) Grout	Clay-San	d Slurry (11 lb./gal. wt.) -Sand Slurry " "			
Was well annular space grouted?	Yes		Concre	te a Wells and	Monitoring Well B	Bentonite	Chips			
If yes, to what depth (feet)?	Depth to Wat	ter (feet)	Benton	ite Chips		ntonite - Cem	ent Grout			
5. Material Used To Fill Well / Dri		Charles and the part of the state	From (A)		No. Yards, Sad	cks Sealant	Mix Ratio or			
3/8" Bentonite	a elle sed en recht	A Capture public line of Francis	Curference		or Volume (c	ircle one)	Mud Weight			
576 Bencontice			Surface	44	Sacks C	1.7	100% Benconit			
6. Comments	19783763		, CA STREAM	enender.						

7. Supervision of Work			DNR Use Only
Name of Person or Firm Doing Filling & Sealing Chad M Fradette	License # 892926	Date of Filling & Sealing (mm/dd/yyyy) 11/18/2010	Date Received Noted By
Street or Route 211 N. Broadway, Suite 11	4	Telephone Number (920) 569-5765	Comments
City S Green Bay	WI 54303	Signature of Person Doing	Nork Date Signed 12/21/2010

State of Wisconsin Department of Natural Resources

#### SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

.

Route To:

Watershed/Wastewater Waste Management Remediation/Revelopment Other

Facil	ity/Pro	r F	rope	erty	License/Permit/Monitoring Number GP-7											
Borin First	ng Drill Name: I	and	ion s Sc	e of crew chief (first, last) and Firm Last Nume: Malzahn Dil & Samples	Date 1	Drillin 1 18 m d d	20: 20:	ed 11 yy	Date 1 11		8 Com 20: / y y	pleted 11 y y	Drillin		thod robe	
WIU	nique	Well I	No.	DNR Well ID No. Well Name	Fina	Final Static		Level	Surfac	e Elev	vation		Boreh	ole D	iameter	
Local	Grid	Tigin	(es	timated: . or Boring Location	_		_Feet 1	MSL	local	Grid I	_Feet	MSL	2		inches	
State	Plane_	NF	-	N,E		Lat_				ondi	C	IN			DE	
Facili	1/4 of	1415	_ 1/4 of	Section JL . T ZJ N. R Z4E	IL.	ong	IChar	-		F	eet E	IS _	_	Fce		
				Kewaunee	3	1	To	wn	of W	est	Ke	wau	nee	e		
Sarr	ple		(ace)		-						Soil	Prope	rties			
Number and Type	Length Att. 8 Recovered (in	Blow Counts	Depth in Feet (Below ground seri	Soil/Rock Description And Geologic Origin For Each Major Unit		USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments	
-1	6		2			FI			1					1		
-2	6		4	pea granel		-			1,600							
- 3	12		6	brclay					1.900							
- 4	12	h	8				1/		1100						sangpl	
5	12		10			13			400							
-6	12		12	EOB Aug to			11		60						sampl	
			14	pea gravel												
			16	periodenia												
			18													
			20													
-	_		22		2.											
hereby	certif	y tha	t the in	formation on this form is true and co	rrect to th	he best	of my	know	ledge.	1						

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in 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 this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wis., Dept. of Natural Resources dnr.wi.gov

#### Well / Drillhole / Borehole Filling & Sealing Form 3300-005 (R 4/08) Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfailure of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fi	ll and Seal	Route to:	ent	] Watershed	Wastewater	X Reme	ediation/Redevelopment				
1. Well Location Informatio	n	$= \sum_{i=1}^{n} (i + i) - \sum_{i=1}^{n} (i + i) + \sum_{i=1}^{n} (i + i$	2. Facilit	y / Owner I	nformation	Marchard					
County WI Un Kewaunee Remo	nique Well # of wed Well	licap #	Facility Name Miller Property								
Lattitude / Longitude (Degrees a	nd Minutes) Method	Code (see instructions	Facility ID (FID or PWS) 03-31-544904; 54216-9651-92								
	'N 'W		License/Pe	rmit/Monitori	GP- 2						
X/X NW X NE	Section Town	ship Range X E	Original Well Owner Thomas Miller								
Well Street Address	31 2	3 N 24 W	Present Well Owner Same								
Well City, Village or Town Town of West Kew	aunee	Well ZIP Code 54216	Mailing Add N2892	ress of Press Church	ent Owner Rd		A				
Subdivision Name		Lot #	City of Pres Kewaur	ent Owner Lee		State WI	ZIP Code 54216				
Reason For Removal From Servi	ce WI Unique Well #	of Replacement Well	4. Pump,	Liner, Scre	en, Casing & Sea	ling Mate	erial				
Temporary Boring		9 Million and Academic Contraction Constants	Pump an	d piping rem	oved?	Ę					
3. Well / Drillhole / Borehole	Liner(s) r	emoved?		F							
	11/18/201	Casing left in place?									
X Borehole / Drillhole	If a Well Construction please attach.	n Report is available,	Was casi	ng cut off bel	low surface?						
Construction Type:	Sandpoint) [ obe	Dug	Did seam Did mater If yes If bentonit with water	ial settle afte , was hole re e chips were	er 24 hours? topped? used, were they hyd	rated					
Formation Type:			Required Me	thod of Placin	ng Sealing Material		Tres INO EN/A				
X Unconsolidated Formation	Bedrock	<b>K</b>		ctor Pipe-Gra	vity Conductor	Pipe-Pum	ped				
Total Well Depth From Ground Su	rface (ft.) Casing Dia	ameter (in.)	(Benton Sealing Mate	nite Chips)	C Other (Expl	ain):					
Lower Drillhole Diameter (in.) 2 inches	Casing De	pth (fl.)	Neat C	ement Grout	crete) Grout	Clay-San Bentonite	d Slurry (11 lb./gal. wt.) e-Sand Slurry " "				
Was well annular space grouted?	Yes [		Concre	te a Wells and i	Monitoring Well Bore	Bentonite	Chips				
f yes, to what depth (feet)?	Depth to Water	(feet)	Benton Granula	ite Chips ar Bentonite	Benton	nite - Cem nite - Sand	ent Grout I Slurry				
5. Material Used To Fill Well / D	rillhole	and the second second second	From (ft.)	To (ft.)	No. Yards, Sacks	Sealant	Mix Ratio or				
3/8" Bentonite	aparterit in the pro-		Surface	12	Sacks /, 2		100% Bentonit				
. Comments											

7. Supervision of Work	DNR Use Only			
Name of Person or Firm Doing Filling & Sealing Chad M Fradette	License # 892926	Date of Filling & Sealing (mm/dd/yyyy) 11/18/2010	Date Received	Noted By
Street or Route 211 N. Broadway, Suite 114	4	Telephone Number (920) 569-5765	Comments	
City St. Green Bay	ate ZIP Code VI 54303	Signature of Person Doing I	Work	Date Signed - 12/21/2010

State of Wisconsin Department of Natural Resources

#### SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Route To:

Watershed/Wastewater Waste Management Remediation/Revelopment Other

Facil	ity/Proj	r P	rope	erty	License/Permit/Monitoring Number Boring Number GP-3											
Boris First	ng Drill Name: L G	and eis	Nam on s So	e of crew chief (first, last) and Firm Last Name: Malzahn Dil & Samples	Date 11 mm		201	ed 11 yyy	Date 11 mm	Drillin 18 / d d	8 Com 20: / y y	pleted 11 yyy	Drilliu Ge	ng Me	nhod robe	
WIU	nique	Well N	lo.	DNR Well ID No. Well Name	Final Static Water Level Surface Elev Feet MSL					ation Feet	MSL	ole D	Diameter			
Local State NW	Grid C Plane	NE	1/4 of	timated: □) or Boring Location □ N,E Section 31, T, 23, N, R, 24E		Lat	0		Local	Grid I	cocatio	m 1 N 1 S _		Fee		
Kewaunee						1 1	Civil Tor	wn c	City/o	r Villa lest	Ke	wauı	nee			
Number and Type	Length Au. & G Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit		USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity ait	P 200	RQD/ Comments	
-(	24		2	pea grovel		FI	1//		0							
-2	24		4	br clay		CL	//		1.6							
3	18		6						1.6							
4	18		8				1	217	1.5							
5	24		10	sandy sitt		ML			1.2							
Ь	24		12	brilan 1 w - sam &		CL	1/1	$\nabla$	1.5						same	
7	24		14	breing		SP			0						1	
8	24		16	EOB			11		0							
			18													
			20													
			22													

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State of Wis., Dept. of Natural Resources dnr.wi.gov

#### Well / Drillhole / Borehole Filling & Sealing Form 3300-005 (R 4/08) Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal	Route to: Drinking Water Waste Managem	ent	] Watershed/ ] Other:	Wastewater	X Reme	diation/Redevelopment
1. Well Location Information	en e	2. Facili	ty / Owner I	nformation	- 4 ×	
County WI Unique Well # of Hi Kewaunee Removed Well	icap #	Facility Na Mille	me er Prope	erty	VI	din ing
Lattitude / Longitude (Degrees and Minutes) Method (	Code (see instructions	Facility ID	(FID or PWS) L - 544904	1; 54216-96	51-92	
*		License/Pe	rmit/Monitoria	<sup>ng #</sup> GP- 3		
1/1/2 NW 1/2 NE Section Towns	ship Range X E	Original We Thoma	ellOwner as Mille	er		
Well Street Address	3 N 24 🗌 W	Present We same	ell Owner			
Well City, Village or Town Town of West Kewaunee	Well ZIP Code	Mailing Add N2892	lress of Prese Church	ent Owner Rd		
Subdivision Name	Lot #	City of Pres Kewaur	ent Owner 1ee		State WI	ZIP Code 54216
Reason For Removal From Service WI Unique Well #	of Replacement Well	4. Pump,	Liner, Scre	en, Casing & Sea	ling Mate	rial
Temporary Boring         3. Well / Drillhole / Borehole Information         Monitoring Well         Water Well         Borehole / Drillhole         Construction Type:	Date (mm/dd/yyyy)	Pump an Liner(s) r Screen re <u>Casing le</u> Was casi Did sealin Did mate	d piping remo removed? amoved? aft in place? ng cut off bel ng material ris rial settle afte	oved? ow surface? se to surface? or 24 hours?		Yes     No     N/A       Yes     No     N/A
Other (specify): <u>Geoprobe</u>	7 pnð	If yes If bentoni with wate Required Me	, was hole re te chips were r from a know	topped? used, were they hyd n safe source?	rated	Yes ∐No ⊠N/A Yes □No ⊠N/A
Image: Total Well Depth From Ground Surface (ft.)         Casing Diagonal	meter (in.)	Condu Condu Screer (Bento Sealing Mate	ctor Pipe-Gra ned & Poured nite Chips)	vity Conductor	Pipe-Pump ain):	bed
ower Drillhole Diameter (in.) Casing Dep 2 inches	oth (fl.)	Neat C	ement Grout	rrete) Grout	Clay-San Bentonite	d Slurry (11 lb./gal. wt.) -Sand Slurry " "
Vas well annular space grouted? Yes yes, to what depth (feet)? Depth to Water (f	No Unknown feet)	For Monitorin Benton	ete ng Wells and I ite Chips ar Bentonite	Monitoring Well Bore Bento Bento	Bentonite holes Only nite - Ceme nite - Sand	Chips c: ent Grout Slurry
5. Material Used To Fill Well / Drillhole	an a	From (ft.)	To (ft.)	No. Yards, Sacks	Sealant	Mix Ratio or
3/8" Bentonite		Surface	16	Sacks /	6	100% Bentonit
. Comments						- 15-4

7. Supervision of Work	DNR Use Only			
Name of Person or Firm Doing Filling & Sealing Chad M Fradette	License # 892926	Date of Filling & Sealing (mm/dd/yyyy) 11/18/2010	Date Received	Noted By
Street or Route 211 N. Broadway, Suite 11	.4	Telephone Number (920) 569-5765	Comments	
City S Green Bay	tate ZIP Cod WI 5430	e Signature of Person Doing 1	Work	Date Signed 12/21/2010

State of Wisconsin Department of Natural Resources

#### SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Route To:

Watershed/Wastewater 🗌 Waste Management 🗌 Remediation/Revelopment 🛛 Other 🔲

Facility/Project Name Miller Property Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Landon Last Name: Malzahn Fum: Geiss Soil & Samples					Lice	msc/Pe	mit/M	ng Nur	mber	Boring Number GP - 4						
					Date 11 m r	Date Drilling Started 11 18 2011 <u>m m 'd d 'y y y y</u>				Drillin 18 1	g Completed 2011 'y y y y y		Drilling Method Geoprobe			
WIU	nique	Well N	lo.	DNR Well ID No. W	ell Name	Fina	I Static	Water Feet M	Level MSL.	Surfa	ce Elev	Feet	MSI	Borehole Diameter		
Local State	Grid C	rigin		timated: D) or Boring	Location	1	1.4	0	1 1	Local	Grid L	ocatio	m		-	nches
NW	1/4 of	NE	1/4 of	Section 31 . T 23	N.R <sup>24E</sup>		ong	0	"		F		IN		Fee	E
Facili	ly ID			County Kewaunee		County 3	Code 1	Civil	Town/	City/o	T Villa	ge	waiii	nee	_100	
Sam	ple	1	3			1	T	10				Soil	Prope	rties		
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surf	Soil/Rock D And Geologic Each Ma	Description c Origin For jor Unit		uscs	Graphic	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
5-1	24		2	brclay			P4 CL	111		0						
-2	24		4							0						
-3	12		6							0						
-4	12		8					1/1		0						
			10	bedrockf	mesto	ne	BR	更								
			12													
			14													
			16													
			18													
			20													
			22													

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State of Wis., Dept. of Natural Resources dnr.wi.gov

#### Well / Drillhole / Borehole Filling & Sealing Form 3300-005 (R 4/08) Page 1 of 2

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Verification Only of Fil	ll and Seal	Route to: Drinking Water Waste Manageme	ent	]Watershed/ ]Other:	Wastewater	X Reme	diation/Redevelopment				
1. Well Location Information	n	the high of the second sector and the second sector second sector second	2. Facili	y / Owner I	nformation	a less ser					
County WI Un Kewaunee Remo	nique Well # of H ved Well	licap #	Facility Name Miller Property								
Lattitude / Longitude (Degrees ar	nd Minutes) Method	Code (see instructions	Facility ID (FID or PWS) 03-31-544904; 54216-9651-92								
·	'W		License/Pe	rmit/Monitorir	g# GP- 4						
X/X NW X NE	Section Town	ship Range X E	Original We Thoma	ell Owner as Mille	er						
Well Street Address	31 2.	3 N 24 UW	Present We same	ll Owner							
Well City, Village or Town Town of West Kew	aunee	Well ZIP Code 54216	Mailing Add N2892	ress of Prese Church	ent Owner Rd		100				
Subdivision Name		Lot #	City of Pres Kewaur	ent Owner 166		State WI	ZIP Code 54216				
Reason For Removal From Service	ce WI Unique Well #	of Replacement Well	4. Pump,	Liner, Scree	en, Casing & Sea	ling Mate	arial				
Temporary Boring 3. Well / Drillhole / Borehole Monitoring Well	Information	Date (mm/dd/yyyy)	Pump an Liner(s) r Screen re	d piping remo emoved? emoved?	oved?		IYes □No ⊠N/A IYes □No ⊠N/A IYes □No ⊠N/A				
Water Well S Borehole / Drillhole	If a Well Construction please attach.	a Well Construction Report is available, ease attach.			ow surface?						
Construction Type: Drilled Driven (S X Other (specify):Geopre	Sandpoint)	]Dug	Did sealir Did mater If yes	ng material ris rial settle afte , was hole rel e chips were from a know	se to surface? er 24 hours? topped? used, were they hyd n safe source?		Yes □No □N/A Yes □No □N/A Yes □No ☑N/A				
Formation Type:			Required Me	thod of Placin	ng Sealing Material						
Total Well Depth From Ground Su	rface (ft.) Casing Dia	ameter (in.)	X Screen (Bento	ed & Poured nite Chips)	Other (Expl	Pipe-Pump ain):	ped				
<i>F. S</i> Lower Drillhole Diameter (in.) 2 inches	Casing De	pth (ft.)	Sealing Materials           Sealing Materials         Clay-Sand Slurry (11 lb./gal, with the second struct)           Sand-Cement (Concrete) Grout         Bentonite-Sand Slurry * *								
Was well annular space grouted?	Yes			te		Bentonite	Chips				
f yes, to what depth (feet)?	Depth to Water (	(feet)	Benton	ite Chips ar Bentonite	Bento	nite - Cem nite - Sand	y: ent Grout I Slurry				
5. Material Used To Fill Well / Dr	rillhole		From (ft.)	To (ft.)	No. Yards, Sacks	Sealant	Mix Ratio or				
3/8" Bentonite	an en		Surface	8.5	Sacks 0,	8-5	100% Bentonit				
i. Comments					-						

7. Supervision of Work	DNR Use Only			
Name of Person or Firm Doing Filling & Sealing Chad M Fradette	License # 892926	Date of Filling & Sealing (mm/dd/yyyy) 11/18/2010	Date Received	Noted By
Street or Route 211 N. Broadway, Suite 11	4	Telephone Number (920) 569-5765	Comments	
City S Green Bay	ate ZIP Code NI 54303	e Signature of Person Doing	Work	Date Signed 12/21/2010

State of Wisconsin Department of Natural Resources

#### SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Route To:

Watershed/Wastewater Waste Management Remediation/Revelopment Other

Facili	Facility/Project Name						License/Permit/Monitoring Number							Boring Number				
Borin	g Drill	cd By	rope Name	of crew chief (first, last) and Firm		Date Drilli	ng Star	ted	Date	Drillin	g Com	GP-	Drillin	g Me	thod			
Fint Name: Landon Last Name: Malzahn						$\frac{11}{-12}$	20	11	11	18	201	11	Geoprobe					
WI U	uique V	Well N	10.	DNR Well ID No. Well Name		Final Stati	Surfa	ce Elev	vation	,,	Borehole Diameter							
			_						Feet	MSL								
State I	lane_	mgin		N,E		Lat_	0		Loca	Grid I	ocatio	n IN			T F			
NW	1/4 of	NE	_1/4 of	Section 31 . T 23 N. R 24	E	Long_	0			F	eet D	IS _		Fcc				
Facilit	y ID			County Kewaunee	Cou	inty Code	Civi	Wn (	City/c	r Villa lest	Ke	waur	nee		1.00			
Sam	ple	1	8					T			Soil	Prope	rties		-			
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surfs	Soil/Rock Description And Geologic Origin For Each Major Unit	r	USCS	Graphic	Well	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments			
-1			2	br. clay		PA CL	1		0									
2	r		4						0									
3			6						0									
4			8					V	0									
5			10						0									
6			12						0									
2			14	brilan wisand		CL,			0									
8			16	briday		Sp			0						sange			
9			18					1	0									
10			20	EOB			111											
			22					_			10							
hereby	centi	fy tha	22 at the in	formation on this form is true and	d correct	to the be	st of m	y know	wledge	2.								

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# Well / Drillhole / Borehole Filling & Sealing Form 3300-005 (R 4/08) Page 1 of 2

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Verification Only of Fill and Sea	al	Route to: Drinking Water Waste Manageme	ent	] Watershed/ ] Other:	Wastewater	X Reme	diation/Redevelopment
1. Well Location Information	e e e e e e e e e e e e e e e e e e e	The first of the f	2. Facilit	y / Owner I	nformation	-	A A A A A A A A A A A A A A A A A A A
County WI Unique Well # Kewaunee Removed Well	of H	icap #	Facility Nar Mille	ne r Prope	erty		
Lattitude / Longitude (Degrees and Minutes)	Method (	Code (see instructions	Facility ID (	FID or PWS) -544904	; 54216-965	51-92	
''N			License/Pe	rmit/Monitorin	GP-5		
1/1/4 NW 1/4 NE Section	Towns	ship Range X E	Original We Thoma	ll Owner as Mille	er		
Well Street Address	2	3 N 24 🗌 W	Present We same	II Owner			
Well City, Village or Town Town of West Kewaunee		Well ZIP Code	Mailing Add N2892	ress of Press Church	ent Owner Rd		
Subdivision Name		Lot #	City of Pres Kewaur	ent Owner 1ee		State WI	ZIP Code 54216
Reason For Removal From Service WI Unio	ue Well #	of Replacement Well	4. Pump,	Liner, Scre	en, Casing & Seali	ing Mate	rial
Temporary Boring			Pump an	d piping remo	oved?		
3. Well / Drillhole / Borenole Informatic	)n	Data (mailed bases)	Liner(s) r	emoved?		H	
Monitoring Well	/2010	) ) Date (mm/dd/yyyy)	Screen re	moved?		H	
Water Well	72010	Dened is quellable		IT IN place?	ALCONG TO A		
X Borehole / Drillhole please atta	ch.	Report is available,	Was casi	ng cut off bel	ow surface?		
Construction Type: Drilled Driven (Sandpoint) X Other (specify):Geoprobe		Dug	Did sealir Did mater If yes If bentonit with water	ig material ris ial settle afte , was hole re e chips were from a know	se to surface? r 24 hours? topped? used, were they hydra n safe source?		Yes No N/A Yes No N/A Yes No X/A
Formation Type:			Required Me	thod of Placin	ng Sealing Material		Tes Divo DIVA
X Unconsolidated Formation	Bedrock		Condu	ctor Pipe-Gra	vity Conductor P	Pipe-Pump	bed
Total Well Depth From Ground Surface (ft.) $C$	asing Dia	meter (in.)	X Screen (Bento)	ed & Poured nite Chips)	Other (Explai	in):	
Lower Drillhole Diameter (in.) 2 inches	asing Dep	oth (ft.)	Neat C	ement Grout Cement (Conc	rete) Grout	Clay-Sand Bentonite	d Slurry (11 lb./gal. wt.) -Sand Slurry " "
Was well annular space grouted?	res [			te		Bentonite	Chips
f yes, to what depth (feet)? Depth	to Water (	feet)	Benton	g Wells and i ite Chips ar Bentonite	Monitoring Well Boreh Bentoni Bentoni	ite - Ceme ite - Sand	r: ent Grout Slurry
5. Material Used To Fill Well / Drillhole			From (ft.)	To (ft.)	No. Yards, Sacks	Sealant	Mix Ratio or
3/8" Bentonite			Surface	20	Sacks 2	2	100% Bentonit
3. Comments							

7. Supervision of Work	Service Service		DNR Use Only				
Name of Person or Firm Doing Filling & Sealing Chad M Fradette	License # 892926	Date of Filling & Sealing (mm/dd/yyyy) 11/18/2010	Date Received	Noted By			
Street or Route 211 N. Broadway, Suite 11	4	Telephone Number (920) 569-5765	Comments				
City S Green Bay	ate ZIP Code NI 54303	Signature of Person Doing T	Nork	Date Signed 12/21/2010			

#### SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Route To:

Watershed/Wastewater 🗌 Waste Management 🗌 Remediation/Revelopment 🛛 Other 🔲 \_\_\_\_\_

Facili Mi	ty/Proj	c Pi	rope	erty		in the second	L	icense/Per	mit/M	onitori	ng Nur	nber	Borin	g Num GP -	iber		
First 1	g Drille Name: L G	and eis	Name on s Sc	e of crew ch Last Name: Dil & S	ief (first, l Malza Sample	ast) and Firm hn s	D	ate Drillin 11 18 m d d	201	ed L1 yy	Date 11 mm	Drillin 18 7 a a	20: 20: /y	pleted 11 777	Drillin Ge	eop	nobe
~	nique v	vell N	o.	DNK Well	ID No.	Well Name	F	nal Static	Water Feet I	ASL	Surfa	ce Elev	Feet	MSL	Boreh 2	ole Di	ameter
ocal state I JW	Grid O Plane 1/4 of	rigin NE	□ (es	section 31	or Bor	ing Location 1 E 3N, R241		Lat	0		Local	Grid L		m 1 N 1 S		Fce	
SCILL	y ID		-	Ke	waune	e	Coun 3	ty Code	Civil To	wn (	City/o	r Villa lest	Ke	waur	nee		
Sam	ple ax a		(ace)		1.1					1.			Soil	Prope	rties	-	
Number and Type	Length Att. , Recovered (i	Blow Counts	Depth in Feel (Below ground and		Soil/Roc And Geole Each I	k Description ogic Origin For Major Unit		USCS	Graphic	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	12		2	gran orga	rel nic			GP OR CL			022						
2	12		4	br.C	lag	-					22						
3	18		6	brel	ayı	u/sand		CL		Y	7						
1	18		8	brela	yel			CL 6P	080		0 440 52						san
>			10	EOB	- Be	doche			111		1	8					
			12		a	oromi	te										
			14														
			16														
			18														
			20														
			22							12							

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in 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 this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wis., Dept. of Natural Resources dnr.wi.gov

# Well / Drillhole / Borehole Filling & Sealing Form 3300-005 (R 4/08) Page 1 of Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fil	l and Seal	Route to: Drinking Water Waste Managem	ent [	] Watershed	Wastewater	Reme	ediation/Redevelopment
1. Well Location Information	n an an an an Albert an Anna an Anna Anna an Anna an	et est-series of the series of a	2. Facilit	y / Owner I	nformation		- 12
County WI Un Kewaunee Remov	ique Well # of /ed Well	licap #	Facility Nar Mille	me er Prope	erty		A A A2 ~~ A B G ~ ~ ~
Lattitude / Longitude (Degrees an	d Minutes) Method	Code (see instructions	Facility ID ( ) 03-31	FID or PWS	) 4; 54216-	9651-92	
*	w		License/Pe	rmit/Monitori	ng# GP-6		
2/2 NW 24 NE	Section Town	ship Range X E	Thoma	as Mille	er		
Well Street Address N2892 Church Rd		J N 24 UW	Present We Same	II Owner			
Well City, Village or Town Town of West Kewa	aunee	Well ZIP Code 54216	Mailing Add N2892	ress of Pres Church	ent Owner Rd		
Subdivision Name		Lot #	City of Pres Kewaur	ent Owner 166		State WI	ZIP Code 54216
Reason For Removal From Servic	e WI Unique Well #	of Replacement Well	4. Pump,	Liner, Scre	en, Casing &	Sealing Mate	erial
Temporary Boring			Pump an	d piping rem	oved?	Ę	
	Driginal Construction	Date (mm/dd/www)	Screen re	emoved?			
Monitoring Well	11/18/2010	0	Casing le	ft in place?			
Water Well X Borehole / Drillhole	If a Well Construction please attach.	n Report is available,	Was casi	ng cut off bel	low surface?		
Construction Type: Drilled Driven (S X Other (specify): <u>Geopro</u>	andpoint)	Dug	Did sealir Did mater If yes, If bentonit	ng material ri rial settle afte , was hole re e chips were from a know	se to surface? er 24 hours? topped? used, were they	/ hydrated	Yes ☐No ☐N/A Yes ☐No ☐N/A Yes ☐No ☑N/A
Formation Type:			Required Me	thod of Placi	ng Sealing Mate	rial	IYes LINO LINA
X Unconsolidated Formation	Bedrock		Condu	ctor Pipe-Gra	wity Condu	ctor Pipe-Pum	ped
Total Well Depth From Ground Sur	face (ft.) Casing Dia	ameter (in.)	X Screen (Bentor	ed & Poured hite Chips)	Other	(Explain):	
Lower Drillhole Diameter (in.) 2 inches	Casing De	pth (ft.)	Neat C	ement Grout Cement (Cond	crete) Grout	Clay-San	d Slurry (11 lb./gal. wt.) -Sand Slurry " "
Was well annular space grouted?	Yes			te Molla and	Monitoring Well	Bentonite	Chips
f yes, to what depth (feet)?	Depth to Water	(feet)	Benton	ite Chips ar Bentonite	B B B	entonite - Cem entonite - Sand	y: ent Grout I Slurry
5. Material Used To Fill Well / Dri	Ilhole		From (ft.)	To (ft.)	No. Yards, S	acks Sealant	Mix Ratio or
3/8" Bentonite	weight of the second	3*	Surface	10	Sacks	(circle one)	Mud Weight 100% Bentonit
			1				
. Comments					1.		

7. Supervision of Work	upervision of Work										
Name of Person or Firm Doing Filling & Sealing Chad M Fradette	License # 892926	Date of Filling & Sealing (mm/dd/yyyy) 11/18/2010	Date Received	Noted By							
Street or Route 211 N. Broadway, Suite 11	4	Telephone Number (920) 569-5765	Comments								
City S Green Bay	tate ZIP Code WI 54303	Signature of Person Obing V	Nork July	Date Signed 12/21/2010							

#### SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Route To:

Watershed/Wastewater 🗋 Waste Management 🗋 Remediation/Revelopment 🖾 Other 📄 \_\_\_\_\_

Facility/Project N Miller F	rope	erty	License/Pe	rmit/M	onitori	ng Nur	mber	Borir	g Nun GP -	iber 7		
Boring Drilled By First Name: Land Firm: Geis	ion s S	e of crew chief (first, last) and Firm Last Name: Malzahn oil & Samples	Date Drillin 11 18 mm'd	20: 20:	ed 11 yyy	Date 11 mm	Drillin 18 / d d	g Com 20: / y y	pleted 11 yyy	Drillir Ge	eop	uhod robe
WI Unique well	NO.	DNR Well ID No. Well Name	Final Static	_Feet I	Level MSL	Surfa	ce Elev	_Feet	MSL	Boreh	ole Di	ameter inches
State Plane NW 1/4 of NE	_ 1/4 of	N. E Section 31, T 23 N. R 24E	Lai	0		Local	Grid I		m 1 N 1 S _		Fce	D E
Pacinty ID	-	Kewaunee	3 1	To	wn c	of W	r Villa lest	Ke	wauı	nee		
Number and Type Length Att. & ald Recovered (in) Blow Counts	Depth in Feet Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	uscs	raphic or	Well Diagram	PID/FID	ompressive	Aoisture Sontent	Prope	lasticity sait	200	tQD/ comments
-1	2	grave br class	GP	4200		0	0.0	20				
2	4			1/1		0						
3	6					0						
4	8					0						
5	10	EDB- dolomita	_	///								
	12	bedrocle										
	14											
	16											
	18											
	20				_							
	00			1					11.15	S. 8		

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in 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 this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wis., Dept. of Natural Resources dnr.wi.gov

# Well / Drillhole / Borehole Filling & Sealing Form 3300-005 (R 4/08) Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal	Route to: Drinking Water	ent [	Watershed	Wastewater	X Reme	diation/Redevelopment
1. Well Location Information	<ul> <li>Internet and a second se</li></ul>	2. Facili	ty / Owner I	nformation		a she and a she a
County WI Unique Well # of Kewaunee Removed Well	Hicap #	Facility Na Mille	me er Prope	erty		
Lattitude / Longitude (Degrees and Minutes) Metho	I d Code (see instructions	Facility ID	(FID or PWS) L-544904	1; 54216-96	51-92	
'N		License/Pe	rmit/Monitori	GP-7		
1/1/4 NW 1/4 NE Section Tow	Inship Range X E	Original W Thoma	ell Owner as Mille	er		
Well Street Address	23 N 24 W	Present We same	ell Owner			
Well City, Village or Town Town of West Kewaunee	Well ZIP Code	Mailing Add N2892	fress of Press Church	ent Owner Rd		
Subdivision Name	Lot #	City of Pres Kewaui	ent Owner 1ee		State WI	ZIP Code 54216
Reason For Removal From Service WI Unique Well	# of Replacement Well	4. Pump,	Liner, Scre	en, Casing & Sea	ling Mate	rial
Temporary Boring		Pump ar Liner(s)	d piping rem emoved?	oved?		Yes No XN/A Yes No XN/A
Monitoring Well Original Construction	on Date (mm/dd/yyyy) L O	Screen r	emoved?			
Water Well If a Well Construction Struction St	on Report is available,	Was cas	ng cut off bel	ow surface?		
Construction Type: Drilled Driven (Sandpoint) X Other (specify): <u>Geoprobe</u>	Dug	Did seam Did mate If yes If bentoni with wate	ng material ri rial settle afte , was hole re le chips were r from a know	se to surface? er 24 hours? topped? used, were they hyd n safe source?	drated	Yes No N/A Yes No N/A Yes No X/A
Formation Type:		Required Me	ethod of Placi	ng Sealing Material		res ino inia
X Unconsolidated Formation Bedro	ck	Condu	ctor Pipe-Gra	vity Conductor	Pipe-Pump	bed
	hameter (in.)	(Bento	nite Chips)	- Other (Exp	iain):	
Lower Drillhole Diameter (in.) Casing D 2 inches	Depth (ft.)	Neat C	ement Grout	crete) Grout	] Clay-Sand Bentonite	d Slurry (11 lb./gal. wt.) -Sand Slurry * *
Was well annular space grouted?			ete		Bentonite	Chips
f yes, to what depth (feet)? Depth to Wate	r (feet)	Bentor	ite Chips ar Bentonite	Bento	onite - Ceme onite - Sand	ent Grout Slurry
5. Material Used To Fill Well / Drillhole		From (ft.)	To (ft.)	No. Yards, Sack	s Sealant	Mix Ratio or
3/8" Bentonite		Surface	10	Sacks /,	O	100% Bentonit
. Comments	-	<u>, 2000</u>				a the second

7. Supervision of Work		DNR Use Only				
Name of Person or Firm Doing Filling & Sealing Chad M Fradette	License # 892926	Date of Filling & Sealing (mm/dd/yyyy) 11/18/2010	Date Received	Noted By		
Street or Route 211 N. Broadway, Suite 11	.4	Telephone Number (920) 569-5765	Comments			
City green Bay	tate ZIP Code WI 5430	Signature of Person Doing A	Vorig Litts	Date Signed 12/21/2010		

#### SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Route To:

Watershed/Wastewater Waste Management Remediation/Revelopment Other

Facili Mi	ty/Proj 11e	r P	rope	erty	Licens	se/Pe	rmit/M	onitori	ng Nu	nber	Borir	g Nun GP-	ber Ø		
Borin First I Firm:	g Drill Name: L G	and eis	s Sc	of crew chief (first, last) and Firm Last Nume: Malzahn oil & Samples	Date D 11 mm		201	ed 11 yy	Date 11		20: 20:	pleted 11	Drillir	eop	thod robe
WIU	nique '	Well N	ło.	DNR Well ID No. Well Name	Final S	Static	Water	Level	Surfa	ce Elev	ation		Borch	nle Di	ameter
Local	Grid C	Tigin	- (es	timated: ) or Boring Location			0	151	Local	Grid L	_Feet	m			inches
NW	1/4 of	NE	1/4 of	Section 31 T 23 N P 24E	L	at	0					IN			DE
Facili	y ID			County Kewaunee	County Co	ode	Civil	Town/	City/ o	r Villa	ge	13 _		Fee	
Sam	ple	-	8	newdanee		_	10		DI N	est	Soil	Pmne	ties	_	
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surfa	Soil/Rock Description And Geologic Origin For Each Major Unit		uscs	Graphic	Well Diagram	PID/FID	Compressive Strength	Moisture	Liquid	Plasticity Index	P 200	RQD/ Comments
-1	10	1	2	grovel sitt / ram	9	P	1000		0				-	Ĩ	
2	16		4	br class.					0						
3	20		6						0						
4	24		8	purchet	1			X	15						samp
5	24		10	420	,				0						
6	24		12	any					0						
2	24		14												
8	24		16	graysilt wet	/	hL		X	D						Sampl
			18	EOB possibly bedrock			卫								
			20												
			22												
arahu	certif	v that	the in	formation on this form is true and con	rect to the	hace	of mu	know	ladaa	_			-		

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# Well / Drillhole / Borehole Filling & Sealing Form 3300-005 (R 4/08) Page 1 o

Page 1 of 2

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1. Well Location Information       2. Facility / Owner Information         County       Removed Well of Removed Well of Removed Well of Removed Well of Long #       Hicap #         Lattitude / Longitude (Degrees and Minutes)       Mathod Code (ase instruction)       0.3 - 31 - 54 4904 ; 54216 - 9651 - 92         Lattitude / Longitude (Degrees and Minutes)       Mathod Code (ase instruction)       0.3 - 31 - 54 4904 ; 54216 - 9651 - 92         Lattitude / Longitude (Degrees and Minutes)       Mathod Code (ase instruction)       0.3 - 31 - 54 4904 ; 54216 - 9651 - 92         Lattitude / Longitude (Degrees and Minutes)       Mathod Code (ase instruction)       0.3 - 31 - 54 4904 ; 54216 - 9651 - 92         V// X NN       M NE       Section       GP-Q         V// X NN       N NE       Section       GP-Q         V// X NN       M NE       Section       GP-Q         Vistor Chord       Raage (Pace Address)       GP-Q         Vistor Chord       Raage (Pace Address)       GP-Q         Vistor Chord       State (Pace Address)       GP-Q         Subdivision Name       Well Zip Code       Naid Address (Pace Address)         Subdivision Name       Lot #       Kewaumee       Naid Social Address (Pace Address)         Subdivision Name       Lot #       Naid Social Address (Pace Address)       No (Mace Address)	Verification Only of F	ill and Seal	Route to: Drinking Water Waste Manageme	ent [	] Watershed/ ] Other:	Wastewater	X Reme	diation/Redevelopment
County Kewaunee       Will Joigue Well # of Renoved Well       Facility Name Facility Name Miller Property         Lattitude / Longitude (Degrees and Minutes)       Method Code (see instructions)       03-31-544904; 54216-9651-92         Lattitude / Longitude (Degrees and Minutes)       Method Code (see instructions)       03-31-544904;       54216-9651-92         Lattitude / Longitude (Degrees and Minutes)       Method Code (see instructions)       03-31-544904;       54216-9651-92         View Mark       Yes       Yes       Original Well Owner       Thomas Miller         View Cover Cove	1. Well Location Information	n 	n y le profession de la comme	2. Facilit	y / Owner I	nformation	ing series of the series of th	
Latitude / Longitude (Degrees and Minutes)       Method Code (see instructions)       Facility ID (FID or PWS)	County WIU Kewaunee Rem	nique Well # of H oved Well	licap #	Facility Nar Mille	ne r Prope	erty		
	Lattitude / Longitude (Degrees a	Ind Minutes) Method	Code (see instructions	Facility ID ( ) 03-31	FID or PWS) -544904	4; 54216-96	51-92	
X/Y NW       NW       NE       Section       Township       Range       Displant Well Owner         Thomas Miller       Thomas Miller         Well Stret Address       N12892       Church Rd         Well Stret Address       Same       Naling Address of Present Owner         N2892       Church Rd       N2892       Church Rd         Subdivision Name       Lot #       Ke waunee       Will ZiP Code         Subdivision Name       Lot #       Ke waunee       Will Stret Address of Present Owner         Reason For Removal From Service       Wil Unique Well # of Replacement Well       Pump and piping removed?       Yes       No INA         3. Weil / Drillhole / Borehole information       Original Construction Date (mm/dd/yyyy)       Screen removed?       Yes       No INA         Stree Poilibol       Original Construction Report is available, please attach.       Was casing cut off below surface?       Yes       No INA         Construction Type:       Drill Oriver (Sandpoint)       Dug       Unders of Plaind granterial rise to surface?       Yes       No INA         If unconsolidated Formation       Bedrock       Constructor Plains are solid present Gout       Yes       No INA         If unconsolidated Formation       Bedrock       Conductor Pleo-Gravity       Conductor Pleo-Pumped		'w		License/Pe	rmit/Monitorir	GP-8		
or Govt Lot #       31       23       N       24       W       Thomas Miller         Weil Street Address       N       Same       Same       Same         N2892 Church Rd       Mailing Address of Present Owner       State       ZIP Code         Subdivision Name       Lot #       N2892 Church Rd       N11Er         Subdivision Name       Lot #       Kewaunee       Will S4216         Thomps Liner, Screen, Casing & Sealing Material       Thomoved?       Lyrs       No         Thomps Liner, Screen, Casing & Sealing Material       Pump and piping removed?       Lyrs       No       N/A         Thoms Proved?       Lyrs       No       N/A       Screen removed?       Lyrs       No       N/A         Weil (Drillhole / Borehole Information       Informatulan Paral ration       Screen removed?       Lyrs       No       N/A         Maing Address of Present Owner       If a Weil Construction Report is available, please attach.       No       N/A       Screen removed?       Lyrs       No       N/A         Screent Chopped?       If vest Construction Type:       If weil Construction Report is available, please attach.       No       N/A       Screent Chopped?       Yes       No       N/A         Screent Chips were used, were they hydrated <t< td=""><td>%/% NW % NE</td><td>Section Town</td><td>ship Range IXI E</td><td>Original We</td><td>Il Owner</td><td>A.T.</td><td></td><td></td></t<>	%/% NW % NE	Section Town	ship Range IXI E	Original We	Il Owner	A.T.		
Well Street Address       Image: Street Address       Image: Street Address         N2892 Church Rd       Mailing Address of Present Owner         Well City, Village or Town       State       ZIP Code         Subdivision Name       Lot #       City of Present Owner       State       ZIP Code         Subdivision Name       Lot #       City of Present Owner       State       ZIP Code         Reason For Removal From Service       MU Unique Well # of Replacement Well       Pump, Liner, Screen, Casing & Sealing Material         TempOr ary Boring       Original Construction Date (mm/dd/yyyr)       Screen removed?       Yes       No       N/A         Water Well       Original Construction Report is available, please attach.       Oid sealing material rise to surface?       Yes       No       N/A         Construction Type:       Construction Report is available, please attach.       Did sealing material rise to surface?       Yes       No       N/A         Monitoring Well       Driven (Sandpoint)       Dug       If well construction Report is available, please attach.       Did sealing material rise to surface?       Yes       No       N/A         Construction Type:       Conductor Pipe-Gravity       Conductor Pipe-Fumped       Screen Rd Source?       Yes       No       N/A         Water (rein)       Bedrock	or Gov't Lot #	31 2	3 N 24 TW	Thoma	IS MILLE	er		
Well City, Village or Town TOWN Of West Kewaunee       Well ZIP Code 54216       Nailing Address of Present Owner N2892 Church Rd         Subdivision Name       Lot #       City of Present Owner Kewaunee       State       ZIP Code 54216         Reason For Removal From Service       Wil Unique Well # of Replacement Well       Fump; Liner, Screen, Casing & Sealing Material         Temporary Boring	Well Street Address N2892 Church Rd			Present We same	II Owner			
Subdivision Name       Lot #       City of Present Owner       State       ZIP Code         Reason For Removal From Service       Wi Unique Well # of Replacement Weil       4. Pump, Liner, Screen, Casing & Sealing Material         Temporary Boring	Well City, Village or Town Town of West Kew	vaunee	Well ZIP Code 54216	Mailing Add N2892	ress of Prese Church	ent Owner Rd		
Reason For Removal From Service       Wi Unique Well # of Replacement Well       4. Pump; Liner, Screen, Casing & Sealing Material         Temporary Boring       Pump and piping removed?       Yes       No       N/A         3. Well / Drillhole / Borehole information       Uner(s) removed?       Yes       No       N/A         Monitoring Well       11/18/2010       Screen removed?       Yes       No       N/A         Water Well       If a Well Construction Report is available, please attach.       Was casing out off below surface?       Yes       No       N/A         Construction Type:       Original Construction Report is available, please attach.       Did material settle after 24 hours?       Yes       No       N/A         If yes, was hole relopped?       Yes       No       N/A       Ni/A       Ni	Subdivision Name		Lot #	City of Pres Kewaur	ent Owner 1ee		State WI	ZIP Code 54216
Temporary Boring       Pump and piping removed?       Ves       No       M/A         3. Wall / Drillhole / Borehole Information       Liner(s) removed?       Ves       No       M/A         Monitoring Well       Original Construction Date (mm/dd/yyyy)       Screen removed?       Ves       No       M/A         Water Well       I1/18/2010       Screen removed?       Ves       No       M/A         Screen removed?       Ves       No       M/A         Construction Type:       I1/18/2010       Was casing cut off below surface?       Ves       No       M/A         Did sealing material rise to surface?       Ves       No       M/A         Construction Type:       Did material settle after 24 hours?       Ves       No       M/A         Did material settle after 24 hours?       Ves       No       M/A         Maconsolidated Formation       Bedrock       If yes, was hole retopped?       Ves       No       M/A         Vinconsolidated Formation       Bedrock       Conductor Pipe-Gravity       Conductor Pipe-Pumped       Screened & Poured       Other (Explain):       Screened & Poured       Screened & Poured       Scr	Reason For Removal From Serv	ice WI Unique Well #	of Replacement Well	4. Pump,	Liner, Scre	en, Casing & Sea	ling Mate	erial
3. Weil // Drillhöle / Borehöle Information       Uner(s) removed?       Yes       No       X//A         Monitoring Weil       Original Construction Date (mm/dd/yyyy)       Screen removed?       Yes       No       N/A         Water Weil       If a Weil Construction Report is available, please attach.       Was casing cut off below surface?       Yes       No       N/A         Construction Type:       Driven (Sandpoint)       Dug       Was casing cut off below surface?       Yes       No       N/A         Construction Type:       Driven (Sandpoint)       Dug       Was casing cut off below surface?       Yes       No       N/A         Construction Type:       Other (specify):       Geoprobe       Was casing were they hydrated with water from a known safe source?       Yes       No       N/A         Formation Type:       Conductor Pipe-Gravity       Conductor Pipe-Pumped       Screened & Poured       Screened & Poured       Was casing Detrive (Sand Surry (111 b/gal. wt.)       Screened & Poured       Clay-Sand Slurry (111 b/gal. wt.)       Screened & Poured       Clay-Sand Slurry (111 b/gal. wt.)       Screenet (Concrete) Grout       Clay-Sand Slurry (111 b/gal. wt.)       Screenet (Concrete) Grout       Bentonite - Chips       Sealing Materials       Concrete       Materials       Screenet down corigon weight weight weight weight weight weight       Screenet & Concrete)       Scr	Temporary Boring			Pump an	d piping remo	oved?		
Monitoring Well       Original Construction Date (mm/dd/yyyy)       Screen removed?       Yes       No       M/A         Water Well       I1/18/2010       If a Well Construction Report is available, please attach.       Screen removed?       Yes       No       N/A         Construction Type:       Driven (Sandpoint)       Dug       Ud material rise to surface?       Yes       No       N/A         Monitoring Well       Driven (Sandpoint)       Dug       If yes, was hole retopped?       Yes       No       N/A         Construction Type:       Other (specify):       Geoprobe       Geoprobe       Yes       No       N/A         Formation Type:       Dunconsolidated Formation       Bedrock       Required Method of Placing Sealing Material       Yes       No       N/A         Conductor Pipe-Gravity       Conductor Pipe-Gravity       Conductor Pipe-Pumped       Screened & Poured       Other (Explain):       Sealing Materials         Lower Drillhole Diameter (in.)       2 inches       Casing Depth (ft.)       Sand-Cement Grout       Clay-Sand Slurry (11 lb./gal. wt.)         2 inches       Yes       No       Unknown       Sand-Cement Grout       Bentonite - Sand Slurry **         Was well annular space grouted?       Yes       No       Unknown       Gronular Bentonite       Bentonite	3. Well / Drillhole / Borehole	Information	an a	Liner(s) r	emoved?			Yes No XN/A
Water Well       If a Well Construction Report is available, please attach.         Was casing cut off below surface?       Yes       No       N/A         Construction Type:       Driven (Sandpoint)       Dug       Did sealing material rise to surface?       Yes       No       N/A         Was construction Type:       Driven (Sandpoint)       Dug       If yes, was hole retopped?       Yes       No       N/A         Yes       Other (specify):       Geoprobe       Pres       No       N/A         Formation Type:       Conductor Pipe-Gravity       Conductor Pipe-Pumped       Yes       No       N/A         X Unconsolidated Formation       Bedrock       Conductor Pipe-Gravity       Conductor Pipe-Pumped       Screened & Pourced       Other (Explain):	Monitoring Well	Original Construction	Date (mm/dd/yyyy)	Screen re Casing le	emoved? ft in place?	- 1 - C		
Construction Type:       Driven (Sandpoint)       Dug         Did sealing material settle after 24 hours?       Pres No N/A         Did material settle after 24 hours?       Yes No N/A         Material Sector       If yes, was hole retopped?       Yes No N/A         If yes, was hole retopped?       Yes No No N/A         If yes, was hole retopped?       Yes No No N/A         If yes, was hole retopped?       Yes No No N/A         If yes, was hole retopped?       Yes No No N/A         If yes, was hole retopped?       Yes No NA         If yes, was hole retopped?       Yes No NA         If yes, was hole retopped?       Other (Explain):         Screened & Poured	Water Well X Borehole / Drillhole	If a Well Construction please attach.	n Report is available,	Was casi	ng cut off bel	ow surface?		
Formation Type:       Required Method of Placing Sealing Material         Image: Strength of the streng strengt of the strength of the strengt of the streng	Construction Type: Drilled Driven ( X Other (specify): <u>Geopr</u>	Sandpoint)	] Dug	Did seam Did mater If yes If bentonit with water	ial settle afte , was hole re e chips were	er 24 hours? topped? used, were they hydrogeneration	drated	
Image: Section of the section of th	Formation Type:			Required Me	thod of Placin	ng Sealing Material		
Total Well Depth From Ground Surface (ft.)       Casing Diameter (in.)       X       Screened & Poured (Bentonite Chips)       Other (Explain):	X Unconsolidated Formation	Bedrock		Condu	ctor Pipe-Gra	vity Conductor	Pipe-Pum	ped
Lower Drillhole Diameter (in.)       Casing Depth (ft.)       Neat Cement Grout       Clay-Sand Slurry (11 lb./gal. wt.)         2 inches       Neat Cement Grout       Bentonite-Sand Slurry " "         Was well annular space grouted?       Yes       No       Unknown         If yes, to what depth (feet)?       Depth to Water (feet)       Bentonite Chips       Bentonite - Cement Grout         5. Material Used To Fill Well / Drillhole       From (ft.)       To (ft.)       No. Yards, Sacks Sealant       Mix Ratio or         3/8 " Bentonite       Surface       I/6       Sacks / 6       100% Bentonite	Total Well Depth From Ground St	urface (ft.) Casing Dia	ameter (in.)	(Benton Sealing Mate	ed & Poured nite Chips)	C Other (Exp	lain):	
Was well annular space grouted?       Yes       No       Unknown       Concrete       Bentonite Chips         If yes, to what depth (feet)?       Depth to Water (feet)       Bentonite Chips       Bentonite - Cernent Grout         Granular Bentonite       Bentonite       Bentonite - Sand Slurry         5. Material Used To Fill Well / Drillhole       From (ft.)       To (ft.)       No. Yards, Sacks Sealant       Mix Ratio or Mud Weight         3/8 "       Bentonite       Surface       I/e       Sacks /	Lower Drillhole Diameter (in.) 2 inches	Casing De	pth (ft.)	Neat C	ement Grout Cement (Conc	crete) Grout	Clay-San Bentonite	d Slurry (11 lb./gal. wt.) -Sand Slurry " "
If yes, to what depth (feet)?       Depth to Water (feet)       Bentonite Chips       Bentonite - Cement Grout         Granular Bentonite       Bentonite       Bentonite - Sand Slurry         5. Material Used To Fill Well / Drillhole       From (ft.)       To (ft.)       No. Yards, Sacks Sealant       Mix Ratio or Mud Weight         3/8 " Bentonite       Surface       I/e       Sacks /. ()       100% Bentonite         b. Comments       Comments       Sacks /. ()       Sacks /. ()       Sacks /. ()	Was well annular space grouted?	Yes [		Concre	le Wells and i	Monitoring Woll Ros	Bentonite	Chips
5. Material Used To Fill Well / Drillhole     From (ft.)     To (ft.)     No. Yards, Sacks Sealant or Volume (circle one)     Mix Ratio or Mud Weight       3/8 " Bentonite     Surface     //e     Sacks / e     100% Bentonit       3. Comments     Surface     Surface     Sacks / e     Surface	If yes, to what depth (feet)?	Depth to Water	(feet)	Benton	ite Chips ar Bentonite	Bento	onite - Cem onite - Sand	y. ent Grout I Slurry
3/8" Bentonite Surface //e Sacks /. 6 100% Bentonit	5. Material Used To Fill Well / D	rillhole	Contraction (2) Contraction	From (ft.)	To (ft.)	No. Yards, Sack	s Sealant	Mix Ratio or
). Comments	3/8" Bentonite	1,2,2,2,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1		Surface	He	Sacks /.	(p	100% Bentonit
	6. Comments							

7. Supervision of Work				DNR Use Only				
Name of Person or Firm Doing Filling & Sealin Chad M Fradette	g License 892	926 I	Date of Filling & Sealing (mm/dd/yyyy) 11/18/2010	Date Received	Noted By			
Street or Route 211 N. Broadway, Suite 1	14		Telephone Number (920) 569-5765	Comments				
City Green Bay	State Z WI	ZIP Code 54303	Signature of Person Doing	Work	Date Signed 12/21/2010			

#### SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Route To:

2: Watershed/Wastewater 
Waste Management
Remediation/Revelopment 
Other

Miller	Pr	ne ope	rty	1.		Lice	msc/Pe	rmit/Me	onitori	ng Nu	mber	Borin	g Nun GP-	iber 9		
Boring Drille First Name: La Firm: Ge VI Unique W	d By: and eise /ell No	Name on S So	of crew chiel Lest Name: M Dil & Sa DNR Well ID	f (first, last) and lalzahn imples No. Well N	d Firm fame	Date 11 mm Final	Drillin 18 d d	201 201 yyy Water	ed 1 7 7 Level	Date 11 m m Surfa	Drillin 18 1 d d ce Elev	g Com 201 / y y	pleted 11 y y	Drillir Ge Boreh	eop	robe
ocal Grid Or tate Plane W 1/4 of	rigin NE	(est	timated:  ) N Section 31	or Boring Loc	E R R 24E		Lat	Feet N	/SL 	Local	Grid I	_Feet	MSL m IN IS	2	Fce	inches DE
acility ID			County Kewa	aunee		County 3	Code 1	Civil Tou	vn c	City/o	r Villa lest	Ke	waur	nee		
Sample Sample (ii) Sample	ounts	I Feet and surface)	S	ioil/Rock Descr nd Geologic Ori	ription igin For						ive	Soil	Prope	rties		4
and Typ Length Recover	Blow C	Depth in Below gro		Each Major U	Jnit		USCS	Graphic Log	Well Diagram	PID/FID	Compress	Moisture	Liquid	Plasticity Index	P 200	RQD/ Comment
1 20		2	Topso	17			70		1	0						
2 20		4	br Ci	ay			CL		]	0						
24		6								0						
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		16	SOR					///		0						sany
	1	18	200													
	2	20														
	-															

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in 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 this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wis., Dept. of Natural Resources dnr.wi.gov

# Well / Drillhole / Borehole Filling & Sealing Form 3300-005 (R 4/08) Page 1 of Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fil	l and Seal	Route to: Drinking Water Waste Managem	ent	] Watershed	Wastewater	Rem	ediation/Redevelopment
1. Well Location Information	an ang sa shasana sa s	ار از میشوند. محمد بر میشو کرنو میشوند. از م	2. Facili	y / Owner I	nformation	1.2 A	Mon galaxies also also also also
County WI Un Kewaunee Remov	ique Well # of ved Well	licap #	Facility Na Mille	me er Prope	erty		
Lattitude / Longitude (Degrees an	d Minutes) Method	Code (see instructions	Facility ID 03-31 License/Pe	FID or PWS -544904 rmit/Monitori	) 4; 54216-9 ng#	9651-92	
	'W Section Town	ship Range X E	Original We	II Owner	GP-9		
or Gov't Lot #	31 2	3 N 24 TW	Thoma	IS MILLE	er		
Well Street Address N2892 Church Rd			Present We same	ll Owner			
Well City, Village or Town Town of West Kewa	aunee	Well ZIP Code 54216	Mailing Add N2892	ress of Press Church	ent Owner Rd		
Subdivision Name		Lot #	City of Pres Kewaur	ent Owner 166		State WI	ZIP Code 54216
Reason For Removal From Servic	e MI Unique Well #	of Replacement Well	4. Pump,	Liner, Scre	en, Casing & S	ealing Mat	erial
Temporary Boring			Pump an	d pipina rem	oved?		Yes No XINA
3. Well / Drillhole / Borehole I	nformation		Liner(s) removed?				
Monitoring Well	Driginal Construction	Date (mm/dd/yyyy) )	Screen re Casing le	moved? ft in place?			
Water Well X Borehole / Drillhole	If a Well Construction please attach.	n Report is available,	Was casing cut off below surface?				
Construction Type: Drilled Driven (S X Other (specify): <u>Geopro</u>	andpoint)	Dug	Did seam Did mater If yes If bentonit with water	ial settle afte , was hole re e chips were	er 24 hours? topped? used, were they t	nydrated	Yes ⊠No ⊡N/A Yes ⊠No ⊡N/A
Formation Type:			Required Me	thod of Placin	ng Sealing Materi	al	Yes No MN/A
X Unconsolidated Formation	Bedrock		Condu	tor Pipe-Gra	vity Conduc	lor Pipe-Pum	ped
Total Well Depth From Ground Sur	face (ft.) Casing Dia	meter (in.)	(Benton Sealing Mate	ed & Poured hite Chips) rials	C Other (E	xplain):	
Lower Drillhole Diameter (in.) 2 inches	Casing De	pth (ft.)	Neat C	ement Grout	crete) Grout	Clay-San	d Slurry (11 lb./gal. wt.) -Sand Slurry " "
Was well annular space grouted?	Yes		Concre	te a Wells and I	Monitoring Well B	Bentonite	Chips
f yes, to what depth (feet)?	Depth to Water (	feet)	Benton	te Chips ar Bentonite	Ber Ber	ntonite - Cem ntonite - Sanc	r. ent Grout I Slurrv
5. Material Used To Fill Well / Dri	llhole	Colored and a second	From (ft.)	To (ft.)	No. Yards, Sad	ks Sealant	Mix Ratio or
3/8" Bentonite	and the set of the second		Surface	16	Sacks	1, (p	100% Bentonit
. Comments							

7. Supervision of Work			DNR Use Only		
Name of Person or Firm Doing Filling & Sealin Chad M Fradette	g License # 892926	Date of Filling & Sealing (mm/dd/yyyy) 11/18/2010	Date Received Noted By		
Street or Route 211 N. Broadway, Suite 1	14	Telephone Number (920) 569 - 5765	Comments		
City Green Bay	State ZIP Cod WI 5430	e Signature of Person Doing 3	Work	Date Signed 12/21/2010	

#### SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

Route To:

Watershed/Wastewater Waste Management Remediation/Revelopment Other

Facili Mi	ty/Proj	r P	rope	erty	License/F	ermit/M	lonitori	ng Nu	mber	Bori	g Nun GP-	nber 10	_ 01 .	
Borin First 1 Firm: WI Un	g Drill Name: L G nique V	ed By and eis Well N	Name lon s Sc	e of crew chief (first, last) and Firm LastName: Malzahn Dil & Samples DNR Well ID No. Well Name	Date Drill 122 mm'd Final Stat	ing Star 20 d y :	ted 11 y y y	Date 12 m m	Drillin 20 d d	g Completed Drilling Meth 2011 ('y y y y y Geopr		thod robe		
			_			Feet	MSL	5414		_Feet	MSL	2		inches
State F	lane_	Aigin		N. E	Lat_	0		Loca	Grid I	Locatio	n IN			
Facilit	1/4 of v 1D	NE	_ 1/4 of	Section 31, T 23 N, R 24E	Long_	0			F	eet c	IS_	_	Fee	
		_		Kewaunee	3 1	To	wn	of V	Vest	Ke	wau	nee		
Sam	ple असि		t urface)						-	Soil	Prope	rties	_	
Number and Type	Length Att. Recovered (j	Blow Count	Depth in Fee (Below ground at	And Geologic Origin For Each Major Unit	Uscs	Graphic	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
. (	0		2	TEpsoit h (1	TE	1		6						
2	0		4	brown clary	T									
3	0		6			VI								
4	6		8			11								
5	24		10			11		6						
6	24		12	sandy groudwat	to cy	65	X	0						sany
7	24		14	granding Clay	spe			0						
8	M		16	C. D. Roderal m		11								
			18	2010 very hard	CL	V								
			20	σ.										
			22											
ereby	certil	y tha	t the in	formation on this form is true and co	Firm	t of m	y know	ledge						

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in 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 this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wis., Dept. of Natural Resources dnr.wi.gov

# Well / Drillhole / Borehole Filling & Sealing Form 3300-005 (R 4/08) Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill	and Seal	Route to: Drinking Water Waste Manageme	ent [	] Watershed/ ] Other:	Wastewater	X Reme	diation/Redevelopment
1. Well Location Information			2. Facili	v / Owner I	nformation	Contraction & C	and the state of the second
County WI Unic Kewaunee Remove	que Well # of H ed Well	licap #	Facility Na Mille	me er Prope	erty		on a Millingalan ( 2003
Lattitude / Longitude (Degrees and	Minutes) Method	Code (see instructions)	Facility ID	(FID or PWS) L - 544904	1; 54216-96	51-92	
			License/Pe	rmit/Monitori	GP-/0		
%/% NW % NE	Section Town	ship Range IN F	Original We	ell Owner			
or Gov't Lot #	31 2	3 N 24 TW	Thoma	as Mille	er		
Well Street Address N2892 Church Rd			Present We same	ell Owner			
Well City, Village or Town Town of West Kewa	unee	Well ZIP Code 54216	Mailing Add N2892	Church	ent Owner Rd		
Subdivision Name		Lot #	City of Pres Kewaur	ent Owner 1ee		State WI	ZIP Code 54216
Reason For Removal From Service	WI Unique Well #	f of Replacement Well	4. Pump,	Liner, Scre	en, Casing & Se	aling Mate	rial
Temporary Boring			Pump an	d piping rem	oved?		Ves DNo XINA
3. Well / Drillhole / Borehole II	nformation		Liner(s) r	emoved?	- Toul		
	Original Construction Date (mm/dd/vvvv)			emoved?			
Monitoring Well	12/20/2010		Casing le	ft in place?			
Water Well	f a Well Constructio	n Report is available,	Was casi	ng cut off bel	ow surface?		
Construction Type: Drilled Driven (Sa X Other (specify): <u>Geopro</u>	andpoint) [ be	Dug	Did sealin Did mate If yes If bentonin with wate	ng material ris rial settle afte , was hole re te chips were r from a know	se to surface? er 24 hours? topped? used, were they hy o safe source?		Yes No N/A Yes No N/A Yes No N/A
Formation Type:	10		Required Me	thod of Placin	ng Sealing Material		
X Unconsolidated Formation	Bedrock	¢.	Condu	ctor Pipe-Gra	vity Conducto	Pipe-Pump	bed
Total Well Depth From Ground Surf	ace (ft.) Casing Dia	ameter (in.)	X Screer (Bento	ned & Poured nite Chips)	Other (Exp	blain):	
Lower Drillhole Diameter (in.) 2 inches	Casing De	opth (ft.)	Neat C	enais ement Grout Cement (Conc	crete) Grout	] Clay-San ] Bentonite	d Slurry (11 lb./gal. wt.) -Sand Slurry " "
Was well annular space grouted?	Yes [			ete	2	Bentonite	Chips
If yes, to what depth (feet)?	Depth to Water	(feet)	Benton	ng Wells and i lite Chips ar Bentonite	Monitoring Well Bor	eholes Only onite - Ceme onite - Sand	r: ent Grout Slurry
5. Material Used To Fill Well / Dri	lihole		From (ft.)	To (ft.)	No. Yards, Sack	s Sealant	Mix Ratio or
3/8" Bentonite	eren bure Brebrie Provi	ndan oli "Andrea perio 1946 de la com	Surface	16	Sacks /	(p	100% Bentonit
3. Comments		ala estatut de la constatut de La constatut de la constatut de		Russil I	n ingenskin in drives Antseptig berning	Single P	

7. Supervision of Work		같은 신사람과 연안 정말에서 벗는다.		DNR Use Only
Name of Person or Firm Doing Filling & Sealing Chad M Fradette	License # 892926	Date of Filling & Sealing (mm/dd/yyyy) 11/18/2010	Date Received	Noted By
Street or Route 211 N. Broadway, Suite 11	4	Telephone Number (920) 569-5765	Comments	
City St Green Bay	ate ZIP Code VI 54303	Signature of Person Doing	Work	Date Signed 12/21/2010

State of Wisconsin Department of Natural Resources	Route to:	Watershed/Wastew Remediation/Redex	vater	Waste Manage	ement	MONITORING WE Form 4400-113A	LL CONSTRUC Rev. 7-98	TION
Facility/Project Name	1	Local Grid Locati	ion of Well			Well Name		
Miller Pro	DAILTU		n HS		A DE	MANI-	)	
Facility License, Permit or	Monitoring No.	Local Grid Origin	C (estimate	ed: 🗋 ) or W	Tell Location	Wis. Unique Well N	D. DNR Well ID	No.
	<u> </u>	Lat	"Lo	ong	"or	VZ273		
Facility ID		St. Plane	fL N,		_ft. E. S/C/N	Date Well Installed	2,20,20	10
T		Section Location	of Waste/Source	æ	57.0	m n	dd yy	Y Y
Well Code	11, Mind	NW14 of NE	1/4 of Sec, 3	L.T. 23 M	I.R. 24	Weil installed By:	ame (mst, isst) an	AN
Distance from Waste/	Enf. Stds.	Location of Well	Relative to Wa	ste/Source	Gov. Lot Number	1 A C	1100	
Sourceft.	Apply	d Downgrad	lient n 🗆	Not Known		58135 30	2114 Jam	plesLL
A. Protective pipe, top ele	vetion 101	23 ft MSL		7 1.0	Cap and lock?		I Yes Q	No
B. Well casing, top elevati	ion 100	77 ft. MSL		10 21	Protective cover	pipe:	2	
	10	1.23 + MET			h. Length:	r.	- 7	ft.
C. Land surface cicvation	14.	A .	200		c. Material:		Steel	04
D. Surface seal, bottom _	ft. M	SLor 0_ ft.					Other	
12. USCS classification	of soil near scree	a:	100	Kachas	d. Additional pro	tection?	I Yes D	No
					If yes, describ	e:		
Bedrock				3.1	Surface scal:		Bentonite	30
13. Sieve analysis perform	med7	Yes X No					Concrete A	
14 Drilling method used:	R	tary 150		4	Material between	well casing and prote	ctive nine:	11.11
- in printing instance area.	Hollow Stem A	uger 🖾 41				and the second and broad	Bentonite	30
	(	ther D					Other	
				5.	Annular space se	al: a. Granular/Chi	pped Bentonite	33
15. Drilling fluid used:	Water 0 0 2	Air 🗆 01		h	Lbs/gal t	nud weight Benton	nite-sand slurry	35
Driting		None (A 99		C.	Lbs/gal r	nud weight Be	entonite slurry	31
16 Drilling additives use	17 17	Ver MINO		d.	% Benton	ite Bentonit	e-cement grout	50
TO. DAILING SOULTVS 150	~. ⊔	in Alin		е.	Ft	volume added for an	y of the above	
Describe				f.	How installed		Tremie 🖸	01
17. Source of water (attac	ch analysis, if req	uired):				т	remie pumped	. 02
1		202			Dentonite scale	a Ren	Gravity A	08
	auto analysis				Dentonite seat	3/8 in □1/2 in 1	Bentonite chine	32
E. Bentonite seal, top	ft. M	SLor5_ft			6. — 17 + 111. <del>/</del> 4	of the man and the me	Other	
		2			Fine cand materi	Manufacturer ner	duat name & ma	h eize
F. Fine sand, top	ft. M	SL orft.		×/ /	#15	REN Plint	Charles and the second	
C Ellerate bas	6 14	1 - 4 A			a. 10	MUTTIN	c3	
G. Philer pack, top					b. Volume addee	ial Manufacturar me	_ IL~	ah aiza
H. Screen joint, ton	ft. M	SLorft			#HO	Red Plint		
		10			h Volume adde	d	ft <sup>3</sup>	
I. Well bottom	ft. M	SLor_12_ft		9.	Well casing:	Flush threaded PVC	schedule 40	23
		15 .		HL I		Flush threaded PVC	schedule 80 🗆	24
J. Filter pack, bottom	ft. M	SLor_1_ft	-				Other 🛛	
V Domhole hottom	ft M	SLor 15 A		10.	Screen material:		Factors as	(11)
K. Borenoic, bouom					. Screen type:	C	ontinuous slot	01
L. Borebole, diameter	8.05 :-						Other	
an artisting tillitiette	0.11h				Manufacturer	MONOTIE	2X	THE REAL
M. O.D. well casing	2.40 in.				. Slot size:		0.0	10 in.
	201			1 4	. Slotted length	11	_1	2_fL
N. I.D. well casing	01.00 in.			11.	Backfill material	(below filter pack):	None	14
							Other 2	F
I hereby certify that the in	ntormation on thi	s torm is true and c	correct to the be	est of my know	leage.	1		
Diadon M	Ment		1-Pi	55 SA	149	molas	IIC.	
	man			00 00	1 0	unpus .		

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.

## MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

Remediation/Redev	elopment	Other		
Facility/Project Name C Miller Property C	County Name Kewaune	e	Well Name MW-/	
Facility License, Permit or Monitoring Number	County Code 31	Wis. Unique Well Nu VZ 2	umber 27_3	DNR Well ID Number
1. Can this well be purged dry?       Yes         2. Well development method <ul> <li>surged with bailer and bailed</li> <li>surged with bailer and pumped</li> <li>61</li> <li>surged with block and pumped</li> <li>62</li> <li>surged with block, bailed and pumped</li> <li>62</li> <li>surged with block, bailed and pumped</li> <li>70</li> <li>compressed air</li> <li>20</li> <li>bailed only</li> <li>10</li> <li>pumped slowly</li> <li>50</li> <li>Other</li> </ul> <li>3. Time spent developing well</li> <li>4. Depth of well (from top of well casisng)</li> <li>7. 2. 0</li>	    	<ul> <li>11. Depth to Water (from top of well casing)</li> <li>Date</li> <li>Time</li> <li>12. Sediment in well bottom</li> <li>13. Water clarity</li> </ul>	Before Dev a3 b. 03 / 02 m m d d c. 07: /02 3. Clear1 Purbid1 (Describe) 4 7	$\frac{1/2 \text{ ft. } - \frac{1}{2} \sum_{n} \frac{1}{2} \sum_{$
5. Volume of water in filter pack and well	Z gal.			
Volume of water removed from well $- 2.4$	Z gal.	Fill in if drilling fluids	were used an	d well is at solid waste facility:
3. Volume of water added (if any)	_ gal.	14. Total suspended . solids		mg/l mg/l
). Source of water added	_	15. COD		mg/lmg/l
0. Analysis performed on water added?	D No	16. Well developed by First Name: Chad Firm: Mach	: Name (first, la: IV Engi	st) and Firm Last Name: Fradette neering & Surveying LI

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party           First         Last         Miller           Name:         Thomas         Name:         Miller	I hereby certify that the above information is true and correct to the best of my knowledge.
Facility/Firm: Miller Property	Signature: Chalm Friday
Street: N2892 Church Rd	Print Name: Chad M Fradette
City/State/Zip: Kewaunee, WI 54216	- Firm: Mach IV Engineering & Surveying LLC

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin Department of Netural Resources	Route to:	Watershed/Wastewat	er Was	te Management	MONITORING WI Form 4400-113A	ELL CONSTRUC Rev. 7-98	TION
Facility/Project Name		Local Grid Location	a of Well_		Well Name		
Miller Dro	nartil		A HN.	÷ 91	MANN-	2	
Facility License Permit o	Monitoring No	Local Grid Origin	C (estimated: [	1) or Well Location	T Wis Unique Well N	IONR WHITD	No
I willing Lactine, I clinic o	a should be the	Lat.	Long.	a the second	" VZ274		140.
Facility ID	10.000	St. Plane	fL N,	ft. E. S/C	ZN Date Well Installed	2120120	10
Time of Wall		Section Location of	Waste/Source	5	E Wall Installed Day	m d d y y y	V V
Type of well	ANNA!	NW 1/4 of NE	1/4 of Sec. 31.7	23 N.R.24 C	W Wei instance by:	Marine (urst, hast) at	AIA
Well Code	Def Orde	Location of Well R	elative to Waste/So	Surce Gov. Lot Numb	= Lunaon	marcal	-m(
Sourceft.	Apply	u 🛛 Upgradient	s □ Sideg at n □ Not K	radient	_ Gerss S	oil + Sam.	plesLL
A. Protective pipe, top ele	evation _ LOZ	4. 15_ ft. MSL -		1. Cap and lock	?	I Yes Q	No
B. Well casing, top elevat	tion?	9. 26 ft. MSL -	TAD	a. Inside diam	ver pipe: heter:	_8	_ in_
C I and surface elevation	100	20 A MSL		b. Length:		51	ft.
C. Land Sundoc Cicvalson				c. Material:		Steel 12	04
D. Surface seal, bottom _	ft. MS	SLor ft.				Other D	3000
12. USCS classification	of soil near scree	n: 5		d. Additional	protection?	T Yes Da	No
GP C GM C G		SW D SP D	VIIIV	If yes, des	cribe:		
SM C SC M	LO MHO			// -/		Bentmite []	30
Bedrock				3. Surface scal:		Concente X	01
13. Sieve analysis perfor	med?	Yes X No		1		Other []	
14 Drilling method wed	e Po	TI 50		A Material betw	rean wall casing and prot		
14. Mining method used	Hollow Stem As	Name RIA1		4. IVIGINITAL DELV	icen wen casing and pro-	Bontomito M	20
	HOLLOW SIGHT AL					Demonte A	30
		ALLOS - MEXINE			0 1 10		22
15 Drilling finid used	Water D 02	Air D 01		5. Annular space	e seal: a. Oranular/Ch	ipped Bentonite 12	33
Drillin	Mud Dog	Viene IN 99		bLbs/g	al mud weight Bento	mtc-sand slurry L	33
		HULL YA		cLbs/	al mud weight B	entonite slurry	31
16. Drilling additives use	ed? D	Yes KI No		d % Ber	ntonite Bentoni	te-cement grout LI	50
	-			e	_Ft volume added for a	ny of the above	
Describe				f. How insta	lled:	Tremie 🛛	01
17 Source of water (atta	ch maluris if ma	(heating				remie pumped	02
17. Source of water land	car energens, it requ	anou).				Gravity K	08
				6. Bentonite sea	a. Ber	ilonite granules	33
		5		b. 11/4 in.	⊠3/8 in. □1/2 in.	Bentonite chips	32
E. Bentonite seal, top _	ft. MS	Lorfl.		/ c		- Other 🛛	¥¥
F. Fine sand, top	ft. MS	Lor_3_ft.		7. Fine sand ma	terial: Manufacturer, pr	oduct name & mes	h size
		11		/ a	5 Red Hint		
G. Filter pack, top _	ft. MS	Lor ft.		b. Volume a	dded	_ft <sup>3</sup>	
		5		8. Filter pack m	aterial: Manufacturer, pr	oduct name & mes	h size
H. Screen joint, top	IL MS			1 a	O KED FUN		
		15.		b. Volume a	dded	_ft <sup>3</sup>	
I. Well bottom	ft MS	Lor_1_ft.		9. Well casing:	Flush threaded PV	C schedule 40 E	23
		15			Flush threaded PV	C schedule 80	24
J. Filter pack, bottom _	ft. MS	Lor_1_ft			PVA	Other 🗆	
K Borehole, hottom	ft MS	Lor_15 ft		IU. Screen mater		Factory out	11
	A			a. contait sy	~ (	continuous slot	01
I Domhala diamatan	8.25.					Other []	-
r. Bolenole, diameter	Leve m.		1		Manafl		THE R.
1 0D	2.40.			D. Mamufach	ner THUNDIL	A 00	10:0
M. O.D. well casing	$\simeq$ L' $=$ in.			d Stotted la	noth-	0.0	Ó A
	200			A a stoudd le	ingen		
N. I.D. well casing	in.			11. Backfill mate	mai (below filter pack):	None LI	14
						- Uther A	× 202
I hereby certify that the in	normation on this	torm is true and con	rect to the best of	my knowledge.			
Signature 1 MA	101	Fin		Silac	2000 alan	110	
- LUNIGON N	JULPON	N I	155155	S VOI TU	Jumpics	LLC	
					The second se		

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.

# MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

Remediation/R	edevelopment [X]	Other		
Facility/Project Name Miller Property	County Name Kewaune	e	Well Name MW-2	
Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well No. VZ 2	umber 274	DNR Well ID Number
1. Can this well be purged dry? 2. Well development method surged with bailer and bailed	Yes I No	<ol> <li>Depth to Water (from top of well casing)</li> </ol>	Before Dev	$\frac{25}{2} \text{ ft. } \underline{-2.60} \text{ ft.}$
surged with bailer and pumped surged with block and bailed surged with block and pumped surged with block, bailed and pumped compresent air	61 42 62 70	Date	b. <u>03</u> / <u>02</u> mmdd	$\frac{2}{y} \frac{2011}{y y y y} \frac{03}{m m} \frac{21}{d d} \frac{2011}{y y y y}$
bailed only  pumped only  pumped slowly  Other	20 10 51 50	12. Sediment in well bottom 13. Water clarity	c. <u>∪</u> . <u>−</u> ∠. Clear <u>□</u> 1	
Time spent developing well	2.5 min.	C	Turbid 1 (Describe)	Turbid 2 5 (Describe)
Depth of well (from top of well casisng) $- \angle$	3.7n.		SYIT	y
Inside diameter of well $-\frac{2}{2}$ .	<u>0 6</u> in.			
. Volume of water in filter pack and well casing :	1. 8 gal.		2	
Volume of water removed from well	L. & gal.	Fill in if drilling fluid	s were used an	d well is at solid waste facility:
Volume of water added (if any)	gal.	14. Total suspended solids		mg/1mg/1
Source of water added		15. COD		mg/1mg/1
0. Analysis performed on water added?	Yes 🗆 No	16. Well developed by First Name: Chad Birm: Mach	: Name (first, la IV Engi	st) and Firm Last Name: Fradette .neering & Surveying Li

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party First Name: Thomas Last Name: Miller	I hereby certify that the above information is true and correct to the best of my knowledge.
Facility/Firm: Miller Property	Signature: Cold m malt
Street: N2892 Church Rd	Print Name: Chad M Fradette
City/State/Zip: Kewaunee, WI 54216	Firm: Mach IV Engineering & Surveying LLC

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin Department of Natural Resources <u>Route to:</u>	Watershed/Wastewater	Waste Manage	ement	MONITORING WELL CONSTR Form 4400-113A Rev. 7-98	UCTION
Recilin/Project Name	I ocal Grid Location of W			Well Name	
Miller Property	LOCAL ON IS LOCALON OF W	D DN.	f BE	MW3	
Facility License Permit or Monitoring No.	Local Grid Origin D (e	stimated: []) or W	Vell Location	Wis Unique Well No. IDNR Well	ID No.
Pacinty License, Fernit of Monitoring 140.	Lat	Long	or or	VZ 3 71	
Facility ID	St. Plane	ft. N,	_ft.E. S/C/N	Date Well Installed 212012 m m d d v	010
Type of Well 11 min #	A Hal THA SAIC ANA S	8- 21 m 22 N	1 2 2 1 音歌	Well Installed By: Name (first, last	t) and Firm
Well Code / MW	<u>NVV 1/4 OF NZ 1/4 OF</u>	Sec. 21 , 1. 25 N	N. R. ZY UW	Landon Malza	2111
Distance from Waste/ Enf. Stds.	Location of Well Kelalive	s D Sidegradient	Jov. Lot Number	A. C.1.C.	1 110
Sourceft. Apply	d Downgradient	n 🗆 Not Known		158155 JOIL + Ja	mples
A. Protective pipe, top elevation $-12$	4.5.5_ ft. MSL	1.0	Cap and lock?	□ Yes	R No
B. Well casing, top elevation _/02	1_95_ft. MSL	TAD	a. Inside diameter	npe:	8_ in.
C I and surface elevation (D)	SS A MSL		b. Length:		ft.
			c. Material:	Steel	図 04
D. Surface seal, bottom ft. M:	SL or n.			Other	
12. USCS classification of soil near scree	n: 23.30		d. Additional pro	tection?	DA No
GP GM GC GW G	SW D SP D		If yes, describe	8:	
			Surface scal-	Bentonite	□ 30
Bearock []			builde obuil	Concrete	M 01
13. Sieve analysis performed?	Yes ANO			Other	
14. Drilling method used: Ro	tary 50	4.1	Material between	well casing and protective pipe:	4
Hollow Stem An	uger 🖾 41			Bentonite	與 30
0	ther 🗆 🥋	M M .		Other	
and the second		5.	Annular space se	al: a. Granular/Chipped Bentonite	s⊠(33
15. Drilling fluid used: Water 0 0 2	Air 🗆 01	Б.	Lbs/gal n	nud weight Bentonite-sand slurr	y□ 35
	None A 99	С.	Lbs/gal n	and weight Bentonite slurry	<b>□</b> 31
	V. WAY	d.	% Benton	ite Bentonite-cement grou	#D 50
16. Driling additives used?	Yes A NO	е.	Ft	volume added for any of the above	6
		188 189 f.	How installed:	Tremie	01
Describe				Tremie pumped	0 02
17. Source of water (attach analysis, if req	uired):			Gravity	08
		6.1	Bentonite seal:	a. Bentonite granules	5 🛛 33
	E		b. D1/4 in.	3/8 in. 1/2 in. Bentonite chips	3 2 32
E. Bentonite seal, topft, MS	Lorfl.		c	Other	
P. P	I Klar	8 7.1	Fine sand materia	al: Manufacturer, product name &	mesh size
F. Fine sand, top IL MS			#15	RED Plint	100000
	79.0.	图图/	a	-3	
G. Filter pack, top II. MS	nor		b. Volume addee	n <sup>3</sup>	
H. Screen joint, top ft. MS	SL or _ 83ft		Filter pack mater	Red Hint	mesh size
	12		b. Volume added	dft <sup>3</sup>	N/
I. Well bottom ft. MS	Lor_12_ft	9.	Well casing:	Flush threaded PVC schedule 40	图 23
	12			Flush threaded PVC schedule 80	24
J. Filter pack, bottomft. MS	SL or ft.		· · · · · · · · · · · · · · · · · · ·		
2 D. J. J. L	ST 13 A.	10.	Screen material:	Passan	
N. Borenoie, bouom IL MS			L. acreen type:	Continuous elet	
L. Borehole, diameter 8,25 in.			and the local sector of th	Other	
24h			b. Manufacturer	MONOTEX	010-
M. O.D. well casing $2.72$ in.		1 0	c. Slot size:		0.010 in.
2~			d. Slotted length	u .	ft.
N. I.D. well casing 9.09 in.		11.	Backfill material	(below filter pack): None	
		1 1	2.4	Other	
I hereby certify that the information on this	s form is true and correct to	o the best of my know	ledge.		
Landon Malcah	M Firm	Piss So	1 4 30	imples LLC	

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.

# MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

Remediation/Redev	aler Waste M	lanagement	
Facility/Project Name // Miller Property	County Name Kewaunee	Well Nan MW-	ne 3
Facility License, Permit or Monitoring Number	County Code Wis. Unio	UZ 27 /	DNR Well ID Number
<ol> <li>Can this well be purged dry?</li> <li>Well development method surged with bailer and bailed</li> </ol>	No No 11. Depti	to Water top of a	Development After Development
surged with bailer and pumped       61         surged with block and bailed       42         surged with block and pumped       62         surged with block, bailed and pumped       70         compressed air       20	Date	b. <u>03</u> / <u>0</u> mm/d	02/2011 03/21/20 d y y y y m m d d y y 0 2 a.m. 2:20 a.m.
bailed only  pumped only  51 pumped slowly  50 Other	12. Sedime bottom 13. Water	clarity Clear	10 Clear 20
3. Time spent developing well2	2min.	(Describe)	(Describe)
4. Depth of well (from top of well casisng)	<u>2n</u> .		well seal
5. Inside diameter of well $-2.0$ .	<u>6</u> in.		neurseal
6. Volume of water in filter pack and well	🖉 gal.		Matallet
. Volume of water removed from well	gal.	illing fluids were used	and well is at solid waste facility:
3. Volume of water added (if any)	gal. 14. Total solids	uspended	mg/lmg/l
D. Source of water added	15. COD		mg/lmg/l
0. Analysis performed on water added?	No     First Nam     First Nam	veloped by: Name (first e: Chad Mach IV Eng	; last) and Firm Last Name: Fradette gineering & Surveying

17. Additional comments on development:

I hereby certify that the above information is true and correct to the best of my knowledge,
Signature: Challen Jack
Print Name: Chad M Fradette
- Firm: Mach IV Engineering & Surveying LLC

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin Department of Natural Resources	Route to:	Watershed/Wastewa		Waste Manag	ement []	MONITORING WEL Form 4400-113A	L CONSTRUCTION Rev. 7-98	ON
Pacility/Project Name		Local Grid Locati	on of Well	Ould I		Wall Name		-
Miller Dra	nairtil	Lover Orio 20040		4.	- DE	AA 101-U		
ITTUCK FIL	Wary	Tanto Hours			IL DW.	10100-7		-
activity Lacense, Permit o	r Monitoring Wo.	Lat,	"Lo	xd: □) or V ong	Vell Location	VZ272	DNR Well ID No.	•
acility ID		St. Planc	ft. N,		_ft. E. S/C/N	Date Well Installed 2	12012010	2
ype of Well	11	Als to a stre	A Wastersould		AL COL	Well Installed By: Na	me (first, last) and F	irm
Well Code	Enf Stda	Location of Well 1	2 1/4 of Sec. 3 Relative to Was	L.T. 23 M	N. R. <u>24</u> W Gov. Lot Number	Landon	Malzahn	(
ourceft.	Apply	d Downgradi	ient n 🗆 l	Not Known		Geiss So	11+Sample	25LI
. Protective pipe, top ele	vetion _ LOZ	2.22 ft MSL	T	1.0	Cap and lock? Protective cover:	nine:	I Yes Q'No	>
I. Well casing, top elevat	ion $-2$	7. 80 ft. MSL -	TH	10	a. Inside diamete	r:	_8_ii	n.
2. Land surface elevation	_101	2 L45_ fL MSL		-	b. Length: c. Material:		Steel 17 0	t. 14
). Surface seal, bottom _	ft. MS	SLor $\_$ $\bigcirc$ ft.					Other 🖬 🕷	
12. USCS classification	of soil near scree	n:	1.4.4	A line and	d. Additional pro	ection?	Ves to No	0
				N	If yes, describ	e:		
Bedrock	1477 C			3.	Surface scal:		Bentonite 🖸 3	0
13. Sieve analysis neefor	med?	Vac Mar			A STATE OF A STATE		Concrete 🖾 0	1
14 Drilling method weat					Material hotur	well casing and another	Other	
Diming method asco.	Hollow Stem An	mer KA1		-	Watchar Delween	i well casing and protect	Bontomito M 2	0
	Contraction Steam A	ther					Demonte A	0
						> Generales/Chier		2
5. Drilling fluid used:	Water 0 0 2	Air D 01		3.	Annular space se	al: a. Granular/Chipj	ed Bentonite 12 3	2
Drilling	Mud D 03	None Di 99		b.	Lbs/gal n	nud weight Bentom	ic-sand slurry LI 3	3
				C.	Lbs/gal m	nud weight Ben	tonite slurry 1 3	1
16. Drilling additives use	d? 🗆	Yes X No		👷 d.	% Benton	ite Bentonite-	cement grout LI 5	0
				e.	Ft	<ul> <li>volume added for any</li> </ul>	of the above	
Describe				f.	How installed	: T		11
7. Source of water (atta	ch analysis, if requ	uired):		***		110		12
		114 C			Dentonite soals	a Renter	uite granules [] 3	8
E. Bentonite seal, top _	ft. MS	Lorfl.			с	5/6 IR. 11/2 IR. Be	Other 🛛 🚆	12 (14)
Fine sand, top	ft. MS	Lor4_ft.		7.1	Fine sand materia	al: Manufacturer, prod	uct name & mesh si	ze
		r			a15	Ked Hint		
J. Filter pack, top	ft, MS	Lorft.			b. Volume addee	df	13	
I. Screen joint, top	ft. MS	Lor 6 A		8.1	Filter pack mater	Red Plint	uct name & mesh si	ize
		11.			b. Volume adde	d1	R3	Sale.
. Well bottom	ft. MS	Lor $1-\ell_{fl}$		9.	Well casing:	Flush threaded PVC s	chedule 40 🙇 2	3
Filter pack, bottom	ft. MS	Lor_]_[.ft.					Other 🗆	
. Borehole, bottom	ft MS	Lor_]]_ft.		10.	Screen material:		Factory cut X 1	戀 1
Romahoda diamatar	8.25.			S.		Con	tinuous slot	1
- Poleinie, diminerei	14h			1 6	Manufacturer	Monoffe		1997 - 19
A. O.D. well casing	2.70 in.				. Slot size: Slotted length	1	0.010i	in. ft.
I. I.D. well casing	0.06 in.			11.	Backfill material	(below filter pack):	None 1	4
hereby certify that the in	formation on this	form is true and co	meet to the bes	st of my knowl	ledge.		Ouner Ask	
ignature	1 A	IFin	m A i	_	1 0	1		-
Landon N	alcah	N	ISPIE	55 20	4 30	Imples L	LC	

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.

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#### MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

Remediation/Re	development X	Other	_		
Facility/Project NameCounty NameMiller PropertyKewau		e	Well Name MW - 4		
Pacility License, Permit or Monitoring Number	County Code	Wis. Unique Well Nu VZ 2	umber 72	DNR Well ID Number	
. Can this well be purged dry?	Les D No	11. Depth to Water	Before Dev	velopment After Development	
2. Well development method surged with bailer and bailed surged with bailer and pumped	41	(from top of well casing)	alo	<u> </u>	
surged with block and bailed	42 62 70	Date	b. <u>03</u> / <u>02</u> mmdd	$\frac{2}{2}$ $\frac{2011}{y y y y}$ $\frac{03}{m m}$ $\frac{21}{d}$ $\frac{2011}{y y y}$	
compressed air	20	Time	c. <u>[0:0</u> ]		
pumped only	51	12. Sediment in well	-4.	_inchesi_inches	
Other	50	13. Water clarity	Clear 1	0 Clear 20	
Time spent developing well	S_min.		(Describe)	(Describe)	
Depth of well (from top of well casisng) $-\frac{1}{2}$	₽.S.ft.			stry_	
Inside diameter of well $-2$ .	<u>0 6 in.</u>				
Volume of water in filter pack and well casing					
Volume of water removed from well	Z gal.	Fill in if drilling fluids	s were used ar	nd well is at solid waste facility:	
Volume of water added (if any)	gal.	14. Total suspended solids		<sup>mg/l</sup> <sup>mg/l</sup>	
Source of water added		15. COD		mg/lmg/l	
Analysis performed on water added?	es 🗆 No	16. Well developed by First Name: Chad	: Name (first, la	ast) and Firm Last Name: Fradette	

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party First Name: Thomas Last Name: Miller	I hereby certify that the above information is true and correct to the best of my knowledge.
Facility/Firm: Miller Property	Signature: Charlen Muddet
Street: N2892 Church Rd	Print Name: Chad M Fradette
City/State/Zip: Kewaunee, WI 54216	- Firm: Mach IV Engineering & Surveying LLC

NOTE: See instructions for more information including a list of county codes and well type codes.

Separtment of Natural Resources Route to:	Watershed/Wastewater	Waste Management	Form 4400-113A Rev. 7-98	DCHON
acility/Project Name	ILocal Grid Location of Well		Well Name	
Willer Droparty	P		MA101-5	
TIMOL FLOW 19	I acal Grid Origin D / actin	S. Well Location	Wis Unique Well No IDNR Well	TD No.
actiny License, Permit or sociationing two		Long or	VZ275	
acility ID	St. Plancft. 1 Section Location of Waste/So	N,ft. E. S/C/N	Date Well Installed 212012 m m d d y	010
ype of Well 11	Malau selle an se	21 m 92 N n 71/ 1	Well Installed By: Name (first, last	) and Firm
Well Code / MW	114 of NE 1/4 of Sec	21.1.22 N.K. 27 UW	- Landon Malza	nn
listance from Waste/   Enf. Stds.	-Location of Well Relative to	Waste/Source Gov. Lot Number	10: 0:10	1 11
ource & Apply		Not Known	58155 JOIL + Ja	noles
Protective pipe, top elevation _/02	-92_ft.MSL	1. Cap and lock?	[] Yes	No No
Well casing, top elevation /02	2. 44 ft. MSL	2. Protective cover	pipe:	8 in.
	90 90 6 MEL	h Length:		T ft.
. Land surface elevation -/ U(		Material:	Steel	1 04
. Surface seal, bottom ft. N	ISLor _ D_ ft.		Other	6
2 USCS classification of soil near scre	en:	d Additional m	otection?	No No
	SOUTI SP TI	IS If use desceil		7
SM C SC C MLC MHC	CL CH CH CH L	LE \ I yes, descrit	Bartalia	D 30
Bedrock		3. Surface scal:	Bentonne	01
3. Sieve analysis performed?	Ves NNo		Concrete	
	And And		Other	
4. Drilling method used: R	otary LISU	4. Material Detwee	a well casing and protective pipe:	1 20
Hollow Stem A	Auger (41		Bentonite	20050
	Other L		Other	
		5. Annular space s	cal: a. Granular/Chipped Bentonite	× 🛛 33
5. Drilling fluid used: Water 1 0 2	Air L 01	bLbs/gal	mud weight Bentonite-sand slurr	y 🛛 35
Drilling Mud 🗆 0 3	None (A 99	cLbs/gal	mud weight Bentonite slurry	<b>□</b> 31
		d% Bento	nite Bentonite-cement grou	tD 50
16. Drilling additives used?	Yes No	- F	<sup>3</sup> volume added for any of the above	
		f How installe	d: Tremie	0 01
Describe			Tremie pumped	0, 02
7. Source of water (attach analysis, if re-	quired):		Gravity	1 08
		6. Bentonite seal:	a. Bentonite granules	0 33
North and the second		b []1/4 in.	3/8 in. 1/2 in. Bentonite chine	1 32
E. Bentonite seal, topft. M	ISL or _ o 5_ft.	/ c	Other	
	_ 2 \	7. Fine sand mater	ial: Manufacturer, product name &	mesh size
Fine sand, top ft. M	ISL or ft	#15	Rad Flint	1942125
	4		Rainna	
J. Filter pack, top ft. M	ISL or ft.	b. Volume add	nd ft <sup>3</sup>	
	5	8. Filter pack mate	rial: Manufacturer, product name &	mesh size
I. Screen joint, topft. M	ISL orft		) Rea Flint	
	- 15	b. Volume add	ed tto	2 00
Weil boutom	ISL or	9. Well casing:	Fiush threaded PVC schedule 40	2 23
	15		Flush threaded PVC schedule 80	0 24
Filter pack, bottomft. M	ISL or _ 1 ft.		Other Other	
	15	10. Screen material	: <u></u>	-, , 98
Borchole, bottomft. M	ISL or _ L ft.	a. Screen type:	Factory cu	1 11
0.05			Continuous slot	0 01
Borebole, diameter 0,00 in			Other Other	
		b. Manufacture	, Monotlex	1100
AD mall caring 2,40		c. Slot size:		0.010 in.
		d. Slotted leng	th:	_10 fL
ADG .		11 Backfill materia	al (below filter pack): Non	14
N. L.L. WEII CASULE		A LI DUDALLAS MIDEOLIS	Othe	1000
			Une	Carl Annual
	to form to have a dimension of	a best of my knowledge	Oute	

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., sailure 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

1

# MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

Route to: Watershed/Wastew		Waste Management		
Facility/Project Name Miller Property	County Name Kewaune	e	Well Nam MW-4	•
Facility License, Permit or Monitoring Number	County Code 31	Wis. Unique Well N <u>VZ</u>	umber 275	DNR Well ID Number
<ol> <li>Can this well be purged dry?</li> <li>Well development method surged with bailer and bailed surged with bailer and pumped</li> </ol>		<ol> <li>Depth to Water (from top of well casing)</li> </ol>	Before D	$\frac{1}{2} \frac{1}{2} \frac{1}$
surged with block and bailed       4         surged with block and pumped       6         surged with block, bailed and pumped       7         compressed air       2         bailed only       1         pumped only       5         pumped slowly       5         Other       2	2 2 0 0 1 0	Date Time 12. Sediment in well bottom 13. Water clarity	b. 03 / 0 m m d c. / 1 : 2 - 4 Citear 0 Turbid 0	$\frac{\frac{12}{d} \cdot \frac{2011}{y \cdot y \cdot y \cdot y \cdot y \cdot y \cdot m \cdot m \cdot d \cdot d \cdot y \cdot y$
3. Time spent developing well $-4$ 4. Depth of well (from top of well casisng) $-4$ 5. Inside diameter of well $-2$ , 0	2 min. <u>2</u> ft. <u>6</u> in.		(Describe)	(Describe)
6. Volume of water in filter pack and well	S gal.	Fill in if drilling flui	ds were used	and well is at solid waste facility:
8. Volume of water added (if any)	gal.	14. Total suspended solids		mg/lmg/l
9. Source of water added		15. COD		mg/lmg/l
10. Analysis performed on water added? (If yes, attach results)	s 🗆 No	16. Well developed b First Name: Chao Firm: Mach	by: Name(firs 1 1 IV En	n, last) and Firm Last Name: Fradette gineering & Surveying LI

17. Additional comments on development:

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Chalm Jude
Print Name: Chad M Fradette
- Fim: Mach IV Engineering & Surveying LLC

NOTE: See instructions for more information including a list of county codes and well type codes.

APPENDIX D

Laboratory Report



Pace Analytical Services, Inc. 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

November 24, 2010

Chad Fradette Mach IV Engineering & Surveying 2701 Larsen Road Green Bay, WI 54303

RE: Project: 0315-01-10 MILLER PROPERTY Pace Project No.: 4039823

Dear Chad Fradette:

Enclosed are the analytical results for sample(s) received by the laboratory on November 18, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

D-VM-

Steven Mleczko for Brian Basten brian.basten@pacelabs.com Project Manager

Enclosures

# **REPORT OF LABORATORY ANALYSIS**





# CERTIFICATIONS

#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

#### **Green Bay Certification IDs**

1241 Bellevue Street, Green Bay, WI 54302 California Certification #: 09268CA Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334 New York Certification #: 11888

New York Certification #: 11888 North Carolina Certification #: 503 North Dakota Certification #: R-150 South Carolina Certification #: 83006001 US Dept of Agriculture #: S-76505 Wisconsin Certification #: 405132750 Wisconsin DATCP Certification #: 105-444

# **REPORT OF LABORATORY ANALYSIS**





# SAMPLE SUMMARY

# Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4039823001	GP1, S-4	Solid	11/18/10 10:15	11/18/10 15:50
4039823002	GP1, S-6	Solid	11/18/10 10:15	11/18/10 15:50
4039823003	GP1, S-9	Solid	11/18/10 10:15	11/18/10 15:50
4039823004	GP2, S-4	Solid	11/18/10 11:15	11/18/10 15:50
4039823005	GP2, S-6	Solid	11/18/10 11:15	11/18/10 15:50
4039823006	GP3, S-7	Solid	11/18/10 11:40	11/18/10 15:50
4039823007	GP5, S-8	Solid	11/18/10 12:30	11/18/10 15:50
4039823008	GP6, S-5	Solid	11/18/10 12:55	11/18/10 15:50
4039823009	GP8, S-5	Solid	11/18/10 13:30	11/18/10 15:50
4039823010	GP8, S-8	Solid	11/18/10 13:45	11/18/10 15:50
4039823011	GP9, S-6	Solid	11/18/10 14:15	11/18/10 15:50
4039823012	GP9, S-8	Solid	11/18/10 14:15	11/18/10 15:50

# **REPORT OF LABORATORY ANALYSIS**





Pace Analytical Services, Inc. 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

# SAMPLE ANALYTE COUNT

Project:0315-01-10 MILLER PROPERTYPace Project No.:4039823

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4039823001	GP1, S-4	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G
4039823002	GP1, S-6	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G
4039823003	GP1, S-9	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G
4039823004	GP2, S-4	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G
4039823005	GP2, S-6	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G
4039823006	GP3, S-7	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G
4039823007	GP5, S-8	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G
4039823008	GP6, S-5	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G
4039823009	GP8, S-5	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G
4039823010	GP8, S-8	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G
4039823011	GP9, S-6	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G
4039823012	GP9, S-8	WI MOD GRO	PMS	10	PASI-G
		EPA 6010	DLB	1	PASI-G
		ASTM D2974-87	KAM	1	PASI-G

# **REPORT OF LABORATORY ANALYSIS**

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## **PROJECT NARRATIVE**

Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

#### Method: WI MOD GRO

Description:WIGRO GCVClient:Mach IV EngineeringDate:November 24, 2010

#### General Information:

12 samples were analyzed for WI MOD GRO. All samples were received in acceptable condition with any exceptions noted below.

#### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

#### Sample Preparation:

The samples were prepared in accordance with TPH GRO/PVOC WI ext. with any exceptions noted below.

#### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

#### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

#### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

#### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

#### Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

#### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

### Additional Comments:

# **REPORT OF LABORATORY ANALYSIS**





## **PROJECT NARRATIVE**

Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

# Method: EPA 6010 Description: 6010 MET ICP

Client:Mach IV EngineeringDate:November 24, 2010

#### General Information:

12 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

#### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

#### Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

#### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

#### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

#### Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

#### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

#### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

# **REPORT OF LABORATORY ANALYSIS**





Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

Sample: GP1, S-4 Lab ID: 4039823001 Collected: 11/18/10 10:15 Received: 11/18/10 15:50 Matrix: Solid Results reported on a "dry-weight" basis Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Qual WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext. 10900 ug/kg Benzene 5810 2420 80 11/19/10 07:51 11/19/10 16:05 71-43-2 116000 ug/kg Ethylbenzene 5810 2420 80 11/19/10 07:51 11/19/10 16:05 100-41-4 Gasoline Range Organics 5540 mg/kg 242 80 242 11/19/10 07:51 11/19/10 16:05 Methyl-tert-butyl ether <2000 ug/kg 4800 2000 80 11/19/10 07:51 11/19/10 16:05 1634-04-4 W Toluene 164000 ug/kg 5810 2420 80 11/19/10 07:51 11/19/10 16:05 108-88-3 1,2,4-Trimethylbenzene 200000 ug/kg 5810 2420 80 11/19/10 07:51 11/19/10 16:05 95-63-6 1,3,5-Trimethylbenzene 73600 ug/kg 5810 2420 80 11/19/10 07:51 11/19/10 16:05 108-67-8 336000 ug/kg 4850 m&p-Xylene 11600 80 11/19/10 07:51 11/19/10 16:05 179601-23-1 o-Xylene 111000 ug/kg 5810 2420 80 11/19/10 07:51 11/19/10 16:05 95-47-6 80-120 11/19/10 07:51 11/19/10 16:05 98-08-8 a,a,a-Trifluorotoluene (S) 101 % 80 **6010 MET ICP** Analytical Method: EPA 6010 Preparation Method: EPA 3050 57.4 mg/kg 0.10 11/19/10 11:25 11/23/10 17:03 7439-92-1 Lead 1.1 1 Percent Moisture Analytical Method: ASTM D2974-87 Percent Moisture 17.4 % 0.10 0.10 1 11/23/10 07:35

Sample: GP1, S-6 Lab ID: 4039823002 Collected: 11/18/10 10:15 Received: 11/18/10 15:50 Matrix: Solid Results reported on a "dry-weight" basis

Parameters	Results Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: V	VI MOD GRO Pr	eparation I	Method	: TPH GRO/PVO	C WI ext.		
Benzene	<b>&lt;312</b> ug/kg	750	312	12.5	11/19/10 07:51	11/19/10 16:30	71-43-2	W
Ethylbenzene	<b>3460</b> ug/kg	865	360	12.5	11/19/10 07:51	11/19/10 16:30	100-41-4	
Gasoline Range Organics	<b>1420</b> mg/kg	36.0	36.0	12.5	11/19/10 07:51	11/19/10 16:30		
Methyl-tert-butyl ether	<b>&lt;312</b> ug/kg	750	312	12.5	11/19/10 07:51	11/19/10 16:30	1634-04-4	W
Toluene	<b>443J</b> ug/kg	865	360	12.5	11/19/10 07:51	11/19/10 16:30	108-88-3	
1,2,4-Trimethylbenzene	<b>22400</b> ug/kg	865	360	12.5	11/19/10 07:51	11/19/10 16:30	95-63-6	
1,3,5-Trimethylbenzene	<b>15600</b> ug/kg	865	360	12.5	11/19/10 07:51	11/19/10 16:30	108-67-8	
m&p-Xylene	<b>8990</b> ug/kg	1730	720	12.5	11/19/10 07:51	11/19/10 16:30	179601-23-1	
o-Xylene	<b>2340</b> ug/kg	865	360	12.5	11/19/10 07:51	11/19/10 16:30	95-47-6	
a,a,a-Trifluorotoluene (S)	105 %	80-120		12.5	11/19/10 07:51	11/19/10 16:30	98-08-8	
6010 MET ICP	Analytical Method: E	PA 6010 Prepara	ation Meth	od: EP/	A 3050			
Lead	<b>6.0</b> mg/kg	1.0	0.097	1	11/19/10 11:25	11/23/10 17:07	7439-92-1	
Percent Moisture	Analytical Method: A	STM D2974-87						
Percent Moisture	13.3 %	0.10	0.10	1		11/23/10 07:35		

Date: 11/24/2010 02:14 PM

## **REPORT OF LABORATORY ANALYSIS**

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Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

Sample: GP1, S-9 Lab ID: 4039823003 Collected: 11/18/10 10:15 Received: 11/18/10 15:50 Matrix: Solid Results reported on a "dry-weight" basis Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Qual WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext. W Benzene <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 15:14 71-43-2 1 30.1 Ethylbenzene 298 ug/kg 72.2 1 11/19/10 07:51 11/19/10 15:14 100-41-4 Gasoline Range Organics 19.1 mg/kg 3.0 3.0 1 11/19/10 07:51 11/19/10 15:14 Methyl-tert-butyl ether <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 15:14 1634-04-4 W 1 Toluene 319 ug/kg 72.2 30.1 1 11/19/10 07:51 11/19/10 15:14 108-88-3 1,2,4-Trimethylbenzene 554 ug/kg 72.2 30.1 11/19/10 07:51 11/19/10 15:14 95-63-6 1 72.2 30.1 11/19/10 07:51 11/19/10 15:14 108-67-8 1,3,5-Trimethylbenzene 219 ug/kg 1 60.2 m&p-Xylene 851 ug/kg 144 11/19/10 07:51 11/19/10 15:14 179601-23-1 1 o-Xylene 263 ug/kg 72.2 30.1 11/19/10 07:51 11/19/10 15:14 95-47-6 1 80-120 11/19/10 07:51 11/19/10 15:14 98-08-8 a,a,a-Trifluorotoluene (S) 105 % 1 **6010 MET ICP** Analytical Method: EPA 6010 Preparation Method: EPA 3050 11/19/10 11:25 11/23/10 17:11 7439-92-1 Lead 8.8 mg/kg 1.1 0.10 1 **Percent Moisture** Analytical Method: ASTM D2974-87 Percent Moisture 16.9 % 0.10 0.10 1 11/23/10 07:35

Sample:GP2, S-4Lab ID: 4039823004Collected:11/18/1011:15Received:11/18/1015:50Matrix:SolidResults reported on a "dry-weight" basis

Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Qual WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext. Benzene <500 ug/kg 1200 500 20 11/19/10 07:51 11/19/10 16:56 71-43-2 W Ethylbenzene 6900 ug/kg 1320 552 20 11/19/10 07:51 11/19/10 16:56 100-41-4 **Gasoline Range Organics** 2250 mg/kg 55.2 55.2 20 11/19/10 07:51 11/19/10 16:56 Methyl-tert-butyl ether <500 ug/kg 1200 500 20 11/19/10 07:51 11/19/10 16:56 1634-04-4 W Toluene <500 ug/kg 1200 500 20 11/19/10 07:51 11/19/10 16:56 108-88-3 W 11/19/10 16:56 95-63-6 33700 ug/kg 20 1,2,4-Trimethylbenzene 1320 552 11/19/10 07:51 11/19/10 16:56 108-67-8 1,3,5-Trimethylbenzene 24100 ug/kg 1320 552 20 11/19/10 07:51 11/19/10 16:56 179601-23-1 m&p-Xylene 52900 ug/kg 2650 1100 20 11/19/10 07:51 11/19/10 16:56 95-47-6 o-Xylene 10600 ug/kg 1320 552 20 11/19/10 07:51 11/19/10 16:56 98-08-8 a,a,a-Trifluorotoluene (S) 105 % 80-120 20 11/19/10 07:51 **6010 MET ICP** Analytical Method: EPA 6010 Preparation Method: EPA 3050 Lead 5.7 mg/kg 0.98 0.095 1 11/19/10 11:25 11/23/10 17:15 7439-92-1 Percent Moisture Analytical Method: ASTM D2974-87 9.3 % 0.10 Percent Moisture 0.10 1 11/23/10 07:35

Date: 11/24/2010 02:14 PM

## **REPORT OF LABORATORY ANALYSIS**

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Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

Sample: GP2, S-6 Lab ID: 4039823005 Collected: 11/18/10 11:15 Received: 11/18/10 15:50 Matrix: Solid Results reported on a "dry-weight" basis Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Qual WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext. W Benzene <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 14:48 71-43-2 1 25.0 Ethylbenzene <25.0 ug/kg 60.0 1 11/19/10 07:51 11/19/10 14:48 100-41-4 W Gasoline Range Organics <2.9 mg/kg 2.9 2.9 1 11/19/10 07:51 11/19/10 14:48 Methyl-tert-butyl ether <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 14:48 1634-04-4 W 1 Toluene <25.0 ug/kg 60.0 25.0 1 11/19/10 07:51 11/19/10 14:48 108-88-3 W 1,2,4-Trimethylbenzene <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 14:48 95-63-6 W 1 1,3,5-Trimethylbenzene <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 14:48 108-67-8 W 1 120 50.0 m&p-Xylene <50.0 ug/kg 11/19/10 07:51 11/19/10 14:48 179601-23-1 W 1 25.0 o-Xylene <25.0 ug/kg 60.0 11/19/10 07:51 11/19/10 14:48 95-47-6 W 1 80-120 11/19/10 07:51 11/19/10 14:48 98-08-8 a,a,a-Trifluorotoluene (S) 104 % 1 **6010 MET ICP** Analytical Method: EPA 6010 Preparation Method: EPA 3050 5.7 mg/kg 11/22/10 09:30 11/23/10 08:51 7439-92-1 Lead 1.2 0.11 1 Percent Moisture Analytical Method: ASTM D2974-87 Percent Moisture 14.5 % 0.10 0.10 1 11/23/10 07:35

 Sample: GP3, S-7
 Lab ID: 4039823006
 Collected: 11/18/10 11:40
 Received: 11/18/10 15:50
 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	<b>&lt;25.0</b> U	ıg/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 12:15	71-43-2	W
Ethylbenzene	<b>31.0J</b> u	ıg/kg	70.8	29.5	1	11/19/10 07:51	11/19/10 12:15	100-41-4	
Gasoline Range Organics	<b>3.6</b> n	ng/kg	2.9	2.9	1	11/19/10 07:51	11/19/10 12:15		
Methyl-tert-butyl ether	<b>&lt;25.0</b> U	ıg/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 12:15	1634-04-4	W
Toluene	<b>&lt;25.0</b> U	ıg/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 12:15	108-88-3	W
1,2,4-Trimethylbenzene	<b>92.3</b> U	ıg/kg	70.8	29.5	1	11/19/10 07:51	11/19/10 12:15	95-63-6	
1,3,5-Trimethylbenzene	<b>42.9</b> J u	ıg/kg	70.8	29.5	1	11/19/10 07:51	11/19/10 12:15	108-67-8	
m&p-Xylene	<b>97.4</b> J u	ıg/kg	142	59.0	1	11/19/10 07:51	11/19/10 12:15	179601-23-1	
o-Xylene	<b>&lt;25.0</b> U	ıg/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 12:15	95-47-6	W
a,a,a-Trifluorotoluene (S)	105 %	6	80-120		1	11/19/10 07:51	11/19/10 12:15	98-08-8	
6010 MET ICP	Analytical	Method: EP	A 6010 Prepar	ation Metho	od: EP/	A 3050			
Lead	<b>5.5</b> n	ng/kg	1.0	0.098	1	11/22/10 09:30	11/23/10 09:03	7439-92-1	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	15.2 %	6	0.10	0.10	1		11/23/10 07:35		

Date: 11/24/2010 02:14 PM

## **REPORT OF LABORATORY ANALYSIS**





Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

Sample: GP5, S-8 Lab ID: 4039823007 Collected: 11/18/10 12:30 Received: 11/18/10 15:50 Matrix: Solid Results reported on a "dry-weight" basis Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Qual WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext. W Benzene <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 19:03 71-43-2 1 25.0 Ethylbenzene <25.0 ug/kg 60.0 1 11/19/10 07:51 11/19/10 19:03 100-41-4 W Gasoline Range Organics <2.9 mg/kg 2.9 2.9 1 11/19/10 07:51 11/19/10 19:03 Methyl-tert-butyl ether <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 19:03 1634-04-4 W 1 Toluene <25.0 ug/kg 60.0 25.0 1 11/19/10 07:51 11/19/10 19:03 108-88-3 W 1,2,4-Trimethylbenzene <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 19:03 95-63-6 W 1 1,3,5-Trimethylbenzene <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 19:03 108-67-8 W 1 120 50.0 m&p-Xylene <50.0 ug/kg 11/19/10 07:51 11/19/10 19:03 179601-23-1 W 1 o-Xylene <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 19:03 95-47-6 W 1 80-120 11/19/10 07:51 11/19/10 19:03 98-08-8 a,a,a-Trifluorotoluene (S) 105 % 1 **6010 MET ICP** Analytical Method: EPA 6010 Preparation Method: EPA 3050 0.098 Lead 4.1 mg/kg 1.0 11/22/10 09:30 11/23/10 09:07 7439-92-1 1 Percent Moisture Analytical Method: ASTM D2974-87 Percent Moisture 12.6 % 0.10 0.10 1 11/23/10 07:35

 Sample: GP6, S-5
 Lab ID: 4039823008
 Collected: 11/18/10 12:55
 Received: 11/18/10 15:50
 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical	Method: WI	MOD GRO PI	eparation N	/lethod	: TPH GRO/PVO	C WI ext.		
Benzene	<b>&lt;125</b> u	g/kg	300	125	5	11/19/10 07:51	11/19/10 17:21	71-43-2	W
Ethylbenzene	<b>434</b> u	g/kg	337	140	5	11/19/10 07:51	11/19/10 17:21	100-41-4	
Gasoline Range Organics	<b>118</b> m	ng/kg	14.0	14.0	5	11/19/10 07:51	11/19/10 17:21		
Methyl-tert-butyl ether	<b>&lt;125</b> u	g/kg	300	125	5	11/19/10 07:51	11/19/10 17:21	1634-04-4	W
Toluene	<b>35700</b> u	g/kg	337	140	5	11/19/10 07:51	11/19/10 17:21	108-88-3	
1,2,4-Trimethylbenzene	<b>&lt;125</b> u	g/kg	300	125	5	11/19/10 07:51	11/19/10 17:21	95-63-6	W
1,3,5-Trimethylbenzene	<b>188J</b> u	g/kg	337	140	5	11/19/10 07:51	11/19/10 17:21	108-67-8	
m&p-Xylene	<b>1320</b> u	g/kg	674	281	5	11/19/10 07:51	11/19/10 17:21	179601-23-1	
o-Xylene	<b>315J</b> u	g/kg	337	140	5	11/19/10 07:51	11/19/10 17:21	95-47-6	
a,a,a-Trifluorotoluene (S)	109 %	0	80-120		5	11/19/10 07:51	11/19/10 17:21	98-08-8	
6010 MET ICP	Analytical	Method: EP	A 6010 Prepar	ation Metho	od: EP	A 3050			
Lead	<b>5.4</b> m	ng/kg	0.99	0.095	1	11/22/10 09:30	11/23/10 09:11	7439-92-1	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	11.0 %	, D	0.10	0.10	1		11/23/10 07:35		

Date: 11/24/2010 02:14 PM

## **REPORT OF LABORATORY ANALYSIS**

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Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

Sample: GP8, S-5 Lab ID: 4039823009 Collected: 11/18/10 13:30 Received: 11/18/10 15:50 Matrix: Solid Results reported on a "dry-weight" basis Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Qual WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext. Benzene 274 ug/kg 68.1 28.4 11/19/10 07:51 11/19/10 12:41 71-43-2 1 28.4 Ethylbenzene 253 ug/kg 68.1 1 11/19/10 07:51 11/19/10 12:41 100-41-4 Gasoline Range Organics 6.1 mg/kg 2.8 2.8 1 11/19/10 07:51 11/19/10 12:41 Methyl-tert-butyl ether <25.0 ug/kg 60.0 25.0 1 11/19/10 07:51 11/19/10 12:41 1634-04-4 W Toluene 69.6 ug/kg 68.1 28.4 1 11/19/10 07:51 11/19/10 12:41 108-88-3 1,2,4-Trimethylbenzene 320 ug/kg 68.1 28.4 11/19/10 07:51 11/19/10 12:41 95-63-6 1 1,3,5-Trimethylbenzene 113 ug/kg 68.1 28.4 11/19/10 07:51 11/19/10 12:41 108-67-8 1 136 56.8 m&p-Xylene 417 ug/kg 11/19/10 07:51 11/19/10 12:41 179601-23-1 1 o-Xylene 213 ug/kg 68.1 28.4 11/19/10 07:51 11/19/10 12:41 95-47-6 1 80-120 11/19/10 07:51 11/19/10 12:41 98-08-8 a,a,a-Trifluorotoluene (S) 105 % 1 **6010 MET ICP** Analytical Method: EPA 6010 Preparation Method: EPA 3050 7.9 mg/kg 0.10 11/22/10 09:30 11/23/10 09:23 7439-92-1 Lead 1.1 1 Percent Moisture Analytical Method: ASTM D2974-87 Percent Moisture 11.9 % 0.10 0.10 1 11/23/10 07:36

 Sample: GP8, S-8
 Lab ID: 4039823010
 Collected: 11/18/10 13:45
 Received: 11/18/10 15:50
 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical	Method: WI	MOD GRO Pr	eparation N	/lethod	: TPH GRO/PVO	C WI ext.		
Benzene	<b>&lt;25.0</b> ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:06	71-43-2	W
Ethylbenzene	<b>&lt;25.0</b> ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:06	100-41-4	W
Gasoline Range Organics	<b>&lt;3.0</b> m	ng/kg	3.0	3.0	1	11/19/10 07:51	11/19/10 13:06		
Methyl-tert-butyl ether	<b>&lt;25.0</b> ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:06	1634-04-4	W
Toluene	<b>&lt;25.0</b> ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:06	108-88-3	W
1,2,4-Trimethylbenzene	<b>&lt;25.0</b> ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:06	95-63-6	W
1,3,5-Trimethylbenzene	<b>&lt;25.0</b> ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:06	108-67-8	W
m&p-Xylene	<b>&lt;50.0</b> ug	g/kg	120	50.0	1	11/19/10 07:51	11/19/10 13:06	179601-23-1	W
o-Xylene	<b>&lt;25.0</b> ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:06	95-47-6	W
a,a,a-Trifluorotoluene (S)	104 %	, D	80-120		1	11/19/10 07:51	11/19/10 13:06	98-08-8	
6010 MET ICP	Analytical	Method: EP	A 6010 Prepar	ation Metho	od: EP/	A 3050			
Lead	<b>2.7</b> m	ng/kg	1.2	0.12	1	11/22/10 09:30	11/23/10 09:27	7439-92-1	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	17.5 %	, D	0.10	0.10	1		11/23/10 07:36		

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## **REPORT OF LABORATORY ANALYSIS**

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Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

Sample: GP9, S-6 Lab ID: 4039823011 Collected: 11/18/10 14:15 Received: 11/18/10 15:50 Matrix: Solid Results reported on a "dry-weight" basis Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Qual WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext. W Benzene <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 13:32 71-43-2 1 25.0 Ethylbenzene <25.0 ug/kg 60.0 1 11/19/10 07:51 11/19/10 13:32 100-41-4 W Gasoline Range Organics <2.8 mg/kg 2.8 2.8 1 11/19/10 07:51 11/19/10 13:32 Methyl-tert-butyl ether <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 13:32 1634-04-4 W 1 Toluene <25.0 ug/kg 60.0 25.0 1 11/19/10 07:51 11/19/10 13:32 108-88-3 W 1,2,4-Trimethylbenzene <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 13:32 95-63-6 W 1 1,3,5-Trimethylbenzene <25.0 ug/kg 60.0 25.0 11/19/10 07:51 11/19/10 13:32 108-67-8 W 1 120 50.0 m&p-Xylene <50.0 ug/kg 11/19/10 07:51 11/19/10 13:32 179601-23-1 W 1 25.0 o-Xylene <25.0 ug/kg 60.0 11/19/10 07:51 11/19/10 13:32 95-47-6 W 1 80-120 11/19/10 07:51 11/19/10 13:32 98-08-8 a,a,a-Trifluorotoluene (S) 106 % 1 **6010 MET ICP** Analytical Method: EPA 6010 Preparation Method: EPA 3050 Lead 3.2 mg/kg 1.1 0.10 1 11/22/10 09:30 11/23/10 09:31 7439-92-1 Percent Moisture Analytical Method: ASTM D2974-87 11.2 % Percent Moisture 0.10 0.10 1 11/23/10 07:36

 Sample: GP9, S-8
 Lab ID: 4039823012
 Collected: 11/18/10 14:15
 Received: 11/18/10 15:50
 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical	Method: WI	MOD GRO Pr	eparation N	/lethod	: TPH GRO/PVO	C WI ext.		
Benzene	<b>&lt;25.0</b> ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:57	71-43-2	W
Ethylbenzene	<25.0 ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:57	100-41-4	W
Gasoline Range Organics	<b>&lt;3.0</b> m	g/kg	3.0	3.0	1	11/19/10 07:51	11/19/10 13:57		
Methyl-tert-butyl ether	< <b>25.0</b> ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:57	1634-04-4	W
Toluene	< <b>25.0</b> ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:57	108-88-3	W
1,2,4-Trimethylbenzene	<25.0 ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:57	95-63-6	W
1,3,5-Trimethylbenzene	<25.0 ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:57	108-67-8	W
m&p-Xylene	<b>&lt;50.0</b> ug	g/kg	120	50.0	1	11/19/10 07:51	11/19/10 13:57	179601-23-1	W
o-Xylene	< <b>25.0</b> ug	g/kg	60.0	25.0	1	11/19/10 07:51	11/19/10 13:57	95-47-6	W
a,a,a-Trifluorotoluene (S)	103 %	)	80-120		1	11/19/10 07:51	11/19/10 13:57	98-08-8	
6010 MET ICP	Analytical	Method: EP	A 6010 Prepar	ation Metho	od: EP/	A 3050			
Lead	<b>6.5</b> m	g/kg	1.1	0.11	1	11/22/10 09:30	11/23/10 09:35	7439-92-1	
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	17.6 %	,	0.10	0.10	1		11/23/10 07:36		

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## **REPORT OF LABORATORY ANALYSIS**

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# **QUALITY CONTROL DATA**

Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

QC Batch:GCV/5930QC Batch Method:TPH GRO/PVOC WI ext.Associated Lab Samples:4039823001, 4039

Analysis Method:

Analysis Description:

Samples: 4039823001, 4039823002, 4039823003, 4039823004, 4039823005, 4039823006, 4039823007, 4039823008, 4039823009, 4039823010, 4039823011, 4039823012

WI MOD GRO

WIGRO Solid GCV

139623009, 4039623010, 4039623011, 403962301

 METHOD BLANK:
 386673
 Matrix:
 Solid

 Associated Lab Samples:
 4039823001, 4039823002, 4039823003, 4039823004, 4039823005, 4039823006, 4039823007, 4039823008, 4039823012, 4039823012
 Plank
 Plank

Parameter	Units	Result	Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	11/19/10 08:51	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	11/19/10 08:51	
Benzene	ug/kg	<25.0	60.0	11/19/10 08:51	
Ethylbenzene	ug/kg	<25.0	60.0	11/19/10 08:51	
Gasoline Range Organics	mg/kg	<2.5	2.5	11/19/10 08:51	
m&p-Xylene	ug/kg	<50.0	120	11/19/10 08:51	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	11/19/10 08:51	
o-Xylene	ug/kg	<25.0	60.0	11/19/10 08:51	
Toluene	ug/kg	<25.0	60.0	11/19/10 08:51	
a,a,a-Trifluorotoluene (S)	%	104	80-120	11/19/10 08:51	

LABORATORY CONTROL SAMPLE & LCSD: 386674 386675										
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	949	972	95	97	80-120	2	20	
1,3,5-Trimethylbenzene	ug/kg	1000	944	958	94	96	80-120	1	20	
Benzene	ug/kg	1000	911	920	91	92	80-120	.9	20	
Ethylbenzene	ug/kg	1000	942	961	94	96	80-120	2	20	
Gasoline Range Organics	mg/kg	10	10.6	10.6	106	106	80-120	.1	20	
m&p-Xylene	ug/kg	2000	1890	1930	95	97	80-120	2	20	
Methyl-tert-butyl ether	ug/kg	1000	931	949	93	95	80-120	2	20	
o-Xylene	ug/kg	1000	939	960	94	96	80-120	2	20	
Toluene	ug/kg	1000	930	943	93	94	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				104	104	80-120			

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# **REPORT OF LABORATORY ANALYSIS**

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# **QUALITY CONTROL DATA**

Project:	0315-01-10	MILLER PRO	PERTY										
Pace Project No.:	4039823												
QC Batch:	C Batch: MPRP/4806			Analys	Analysis Method:		EPA 6010						
QC Batch Method: EPA 3050			Analys	is Descript	tion: 6	010 MET							
Associated Lab Sar	nples: 4039	9823001, 403	9823002, 4	039823003	, 40398230	004							
METHOD BLANK: 386888				Ν	Aatrix: Soli	id							
Associated Lab Sar	nples: 4039	9823001, 403	9823002, 4	039823003	, 40398230	004							
				Blank	R	eporting							
Parar	neter		Units	Resul	Result Lir		Analyzed		Qualifiers				
Lead		mg/kg		(	).17J	1.0	) 11/23/10	15:29					
LABORATORY CO	NTROL SAMP	LE: 38688	9										
				Spike	LCS	5	LCS	% Re	<b>C</b>				
Parar	neter	I	Units	Conc.	Resu	ılt	% Rec	Limits	; Qi	ualifiers			
Lead		mg/kg		50		51.7	103	80	)-120		-		
MATRIX SPIKE & N	IATRIX SPIKE	E DUPLICATE	: 38689	0		386891							
				MS	MSD								
		40	39817008	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parame	ter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Lead		mg/kg	1300	58.8	58.7	1580	1590	470	493	75-125	.8	20	P6

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Project:	0315-01-10 N	/ILLER PRO	PERTY										
Pace Project No.:	4039823												
QC Batch:	MPRP/4810	)		Analys	is Method:	: E	PA 6010						
QC Batch Method:	EPA 3050			Analys	is Descript	tion: 6	010 MET						
Associated Lab Sar	mples: 4039	823005, 403	9823006, 4	1039823007	, 40398230	008, 40398	323009, 4039	823010, 4	03982301′	1, 4039823	3012		
METHOD BLANK:	387697			N	Aatrix: Soli	id							
Associated Lab Sar	mples: 4039	823005, 403	9823006, 4	1039823007	, 40398230	008, 40398	323009, 4039	823010, 4	03982301 <sup>2</sup>	1, 4039823	3012		
_				Blank	R	eporting							
Parar	meter		Units	Resul	t	Limit	Analyz	ed	Qualifiers				
Lead		mg/kg		<(	0.097	1.0	) 11/23/10 (	08:43					
LABORATORY CO	NTROL SAMP	LE: 38769	8										
				Spike	LCS	3	LCS	% Rec	;				
Parar	meter	I	Units	Conc.	Resu	ult	% Rec	Limits	Q	ualifiers			
Lead		mg/kg		50		49.5	99	80	-120		-		
MATRIX SPIKE & M	MATRIX SPIKE	DUPLICATE	: 38769	9		387700							
				MS	MSD								
		40	39823005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parame				0	0	Decult	Pocult	% Poc	% Poo	Limito			Qual
i alamo	ter	Units	Result	Conc.	Conc.	Result	Result	10 Kec	10 Kec	LIIIIIIS	RPD	RPD	Quai

# **REPORT OF LABORATORY ANALYSIS**

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Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

QC Batch:	PMST	/4920		Analysi	s Method:	ASTM D	2974-87			
QC Batch Method:	ASTM	D2974-87		Analysi	s Description:	Dry Weig	ght/Percent Mo	pisture		
Associated Lab Samp	les:	4039823001, 4039823009,	4039823002, 4039823010,	4039823003, 4039823011,	4039823004, 4039823012	4039823005,	4039823006,	4039823007, 40	039823008,	
SAMPLE DUPLICATE	: 387	762								

Parameter	Units	4039857001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture		7.2	7.2	.08	10	

Date: 11/24/2010 02:14 PM

# **REPORT OF LABORATORY ANALYSIS**

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# QUALIFIERS

Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4039823

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

**RPD** - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

#### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

#### ANALYTE QUALIFIERS

- P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
- W Non-detect results are reported on a wet weight basis.

# **REPORT OF LABORATORY ANALYSIS**





Pace Analytical Services, Inc. 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

March 28, 2011

Chad Fradette Mach IV Engineering & Surveying 2701 Larsen Road Green Bay, WI 54303

RE: Project: 0315-01-10 MILLER PROPERTY Pace Project No.: 4043586

Dear Chad Fradette:

Enclosed are the analytical results for sample(s) received by the laboratory on March 21, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

**Brian Basten** 

brian.basten@pacelabs.com Project Manager

Enclosures

**REPORT OF LABORATORY ANALYSIS** 





## CERTIFICATIONS

#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4043586

#### **Green Bay Certification IDs**

1241 Bellevue Street, Green Bay, WI 54302 California Certification #: 09268CA Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334 New York Certification #: 11888

New York Certification #: 11888 North Carolina Certification #: 503 North Dakota Certification #: R-150 South Carolina Certification #: 83006001 US Dept of Agriculture #: S-76505 Wisconsin Certification #: 405132750 Wisconsin DATCP Certification #: 105-444

# **REPORT OF LABORATORY ANALYSIS**





# SAMPLE SUMMARY

# Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4043586

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4043586001		Water	03/21/11 13:00	03/21/11 15:47
4043586002	MW-2	Water	03/21/11 12:30	03/21/11 15:47
4043586003	MW-3	Water	03/21/11 11:30	03/21/11 15:47
4043586004	MW-4	Water	03/21/11 11:45	03/21/11 15:47
4043586005	MW-5	Water	03/21/11 11:00	03/21/11 15:47
4043586006	POTABLE WELL-MILLER N2892	Water	03/21/11 12:00	03/21/11 15:47

# **REPORT OF LABORATORY ANALYSIS**

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# SAMPLE ANALYTE COUNT

Project:0315-01-10 MILLER PROPERTYPace Project No.:4043586

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory	
4043586001		EPA 8260	JJB	64	PASI-G	
4043586002	MW-2	EPA 8260	JJB	64	PASI-G	
4043586003	MW-3	EPA 8260	JJB	64	PASI-G	
4043586004	MW-4	EPA 8260	JJB	64	PASI-G	
4043586005	MW-5	EPA 8260	JJB	64	PASI-G	
4043586006	POTABLE WELL-MILLER N2892	EPA 8260	JJB	64	PASI-G	

# **REPORT OF LABORATORY ANALYSIS**





Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4043586

# Method: EPA 8260

Description:8260 MSVClient:Mach IV EngineeringDate:March 28, 2011

#### General Information:

6 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

#### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):** All criteria were within method requirements with any exceptions noted below.

#### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

#### **Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

#### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

#### Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

#### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

#### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

# **REPORT OF LABORATORY ANALYSIS**

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#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No .:

4043586	

Sample: MW-1	Lab ID:	4043586001	Collected	d: 03/21/11	13:00	Received: 03	8/21/11 15:47 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA	8260						
Benzene	<b>81.5</b> u	ıg/L	5.0	2.0	5		03/25/11 17:55	71-43-2	
Bromobenzene	<b>&lt;4.1</b> ι	ıg/L	5.0	4.1	5		03/25/11 17:55	108-86-1	
Bromochloromethane	<b>&lt;4.8</b> ເ	ıg/L	5.0	4.8	5		03/25/11 17:55	74-97-5	
Bromodichloromethane	<b>&lt;2.8</b> ເ	ıg/L	5.0	2.8	5		03/25/11 17:55	75-27-4	
Bromoform	<b>&lt;4.7</b> ເ	ıg/L	5.0	4.7	5		03/25/11 17:55	75-25-2	
Bromomethane	<b>&lt;4.6</b> ເ	ıg/L	5.0	4.6	5		03/25/11 17:55	74-83-9	
n-Butylbenzene	<b>&lt;4.6</b> ເ	ıg/L	5.0	4.6	5		03/25/11 17:55	104-51-8	
sec-Butylbenzene	<b>&lt;4.4</b> L	ıg/L	25.0	4.4	5		03/25/11 17:55	135-98-8	
tert-Butylbenzene	<b>&lt;4.8</b> ເ	ıg/L	5.0	4.8	5		03/25/11 17:55	98-06-6	
Carbon tetrachloride	<b>&lt;2.4</b> ເ	ıg/L	5.0	2.4	5		03/25/11 17:55	56-23-5	
Chlorobenzene	<b>&lt;2.0</b> ເ	ıg/L	5.0	2.0	5		03/25/11 17:55	108-90-7	
Chloroethane	<b>&lt;4.8</b> ເ	ıg/L	5.0	4.8	5		03/25/11 17:55	75-00-3	
Chloroform	<b>&lt;6.5</b> ເ	ıg/L	25.0	6.5	5		03/25/11 17:55	67-66-3	
Chloromethane	<b>&lt;1.2</b> ເ	ıg/L	5.0	1.2	5		03/25/11 17:55	74-87-3	
2-Chlorotoluene	<b>&lt;4.2</b> ເ	ıg/L	5.0	4.2	5		03/25/11 17:55	95-49-8	
4-Chlorotoluene	<b>&lt;3.7</b> ເ	ıg/L	5.0	3.7	5		03/25/11 17:55	106-43-4	
1,2-Dibromo-3-chloropropane	<b>&lt;8.4</b> ເ	ıg/L	25.0	8.4	5		03/25/11 17:55	96-12-8	
Dibromochloromethane	<b>&lt;4.0</b> ι	ıg/L	5.0	4.0	5		03/25/11 17:55	124-48-1	
1,2-Dibromoethane (EDB)	<b>&lt;2.8</b> ເ	ıg/L	5.0	2.8	5		03/25/11 17:55	106-93-4	
Dibromomethane	<b>&lt;3.0</b> ເ	ıg/L	5.0	3.0	5		03/25/11 17:55	74-95-3	
1,2-Dichlorobenzene	<b>&lt;4.2</b> ເ	ıg/L	5.0	4.2	5		03/25/11 17:55	95-50-1	
1,3-Dichlorobenzene	<b>&lt;4.4</b> L	ıg/L	5.0	4.4	5		03/25/11 17:55	541-73-1	
1,4-Dichlorobenzene	<b>&lt;4.8</b> ເ	ıg/L	5.0	4.8	5		03/25/11 17:55	106-46-7	
Dichlorodifluoromethane	<b>&lt;5.0</b> ເ	ıg/L	5.0	5.0	5		03/25/11 17:55	75-71-8	
1,1-Dichloroethane	<b>&lt;3.8</b> ເ	ıg/L	5.0	3.8	5		03/25/11 17:55	75-34-3	
1,2-Dichloroethane	<b>&lt;1.8</b> ເ	ıg/L	5.0	1.8	5		03/25/11 17:55	107-06-2	
1,1-Dichloroethene	<b>&lt;2.8</b> ເ	ıg/L	5.0	2.8	5		03/25/11 17:55	75-35-4	
cis-1,2-Dichloroethene	<b>&lt;4.2</b> ເ	ıg/L	5.0	4.2	5		03/25/11 17:55	156-59-2	
trans-1,2-Dichloroethene	<b>&lt;4.4</b> ເ	ıg/L	5.0	4.4	5		03/25/11 17:55	156-60-5	
1,2-Dichloropropane	<b>&lt;2.4</b> ເ	ıg/L	5.0	2.4	5		03/25/11 17:55	78-87-5	
1,3-Dichloropropane	<b>&lt;3.0</b> ເ	ıg/L	5.0	3.0	5		03/25/11 17:55	142-28-9	
2,2-Dichloropropane	<b>&lt;3.1</b> ເ	ıg/L	5.0	3.1	5		03/25/11 17:55	594-20-7	
1,1-Dichloropropene	<b>&lt;3.8</b> ເ	ıg/L	5.0	3.8	5		03/25/11 17:55	563-58-6	
cis-1,3-Dichloropropene	<b>&lt;1.0</b> ເ	ıg/L	5.0	1.0	5		03/25/11 17:55	10061-01-5	
trans-1,3-Dichloropropene	<b>&lt;0.95</b> ເ	ıg/L	5.0	0.95	5		03/25/11 17:55	10061-02-6	
Diisopropyl ether	<b>&lt;3.8</b> ເ	ıg/L	5.0	3.8	5		03/25/11 17:55	108-20-3	
Ethylbenzene	<b>134</b> ι	ıg/L	5.0	2.7	5		03/25/11 17:55	100-41-4	
Hexachloro-1,3-butadiene	<b>&lt;3.4</b> L	ıg/L	25.0	3.4	5		03/25/11 17:55	87-68-3	
Isopropylbenzene (Cumene)	<b>17.0</b> ι	ıg/L	5.0	3.0	5		03/25/11 17:55	98-82-8	
p-Isopropyltoluene	<b>13.7</b> ι	ıg/L	5.0	3.4	5		03/25/11 17:55	99-87-6	
Methylene Chloride	<b>&lt;2.2</b> ເ	ıg/L	5.0	2.2	5		03/25/11 17:55	75-09-2	
Methyl-tert-butyl ether	<b>&lt;3.0</b> ເ	ıg/L	5.0	3.0	5		03/25/11 17:55	1634-04-4	
Naphthalene	<b>32.1</b> ເ	ıg/L	25.0	4.4	5		03/25/11 17:55	91-20-3	
n-Propylbenzene	<b>27.9</b> ເ	ıg/L	5.0	4.0	5		03/25/11 17:55	103-65-1	
Styrene	<b>&lt;4.3</b> ເ	ıg/L	5.0	4.3	5		03/25/11 17:55	100-42-5	
1,1,1,2-Tetrachloroethane	<b>&lt;4.6</b> ເ	ıg/L	5.0	4.6	5		03/25/11 17:55	630-20-6	

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# **REPORT OF LABORATORY ANALYSIS**

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#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No .:

# 4043586

Sample: MW-1	Lab ID:	4043586001	Collecte	d: 03/21/1 <sup>/</sup>	1 13:00	Received: 03	3/21/11 15:47 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytica	I Method: EPA 8	3260						
1,1,2,2-Tetrachloroethane	<1.0	ug/L	5.0	1.0	5		03/25/11 17:55	79-34-5	
Tetrachloroethene	<2.2	ug/L	5.0	2.2	5		03/25/11 17:55	127-18-4	
Toluene	546	ug/L	5.0	3.4	5		03/25/11 17:55	108-88-3	
1,2,3-Trichlorobenzene	<3.7	ug/L	5.0	3.7	5		03/25/11 17:55	87-61-6	
1,2,4-Trichlorobenzene	<4.8	ug/L	5.0	4.8	5		03/25/11 17:55	120-82-1	
1,1,1-Trichloroethane	<4.5	ug/L	5.0	4.5	5		03/25/11 17:55	71-55-6	
1,1,2-Trichloroethane	<2.1	ug/L	5.0	2.1	5		03/25/11 17:55	79-00-5	
Trichloroethene	<2.4	ug/L	5.0	2.4	5		03/25/11 17:55	79-01-6	
Trichlorofluoromethane	<4.0	ug/L	5.0	4.0	5		03/25/11 17:55	75-69-4	
1,2,3-Trichloropropane	<5.0	ug/L	5.0	5.0	5		03/25/11 17:55	96-18-4	
1,2,4-Trimethylbenzene	234	ug/L	5.0	4.8	5		03/25/11 17:55	95-63-6	
1,3,5-Trimethylbenzene	<b>105</b> u	ug/L	5.0	4.2	5		03/25/11 17:55	108-67-8	
Vinyl chloride	<0.90	ug/L	5.0	0.90	5		03/25/11 17:55	75-01-4	
m&p-Xylene	485 (	ug/L	10.0	9.0	5		03/25/11 17:55	179601-23-1	
o-Xylene	211 (	ug/L	5.0	4.2	5		03/25/11 17:55	95-47-6	
4-Bromofluorobenzene (S)	86 9	%	69-130		5		03/25/11 17:55	460-00-4	
Dibromofluoromethane (S)	93 9	%	70-134		5		03/25/11 17:55	1868-53-7	
Toluene-d8 (S)	94 9	%	70-130		5		03/25/11 17:55	2037-26-5	
Sample: MW-2	Lab ID:	4043586002	Collecte	d: 03/21/1 <sup>-</sup>	1 12:30	Received: 03	B/21/11 15:47 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analvzed	CAS No.	Qual

							Quui
ical Method: EPA	8260						
1 ug/L	1.0	0.41	1		03/25/11 16:01	71-43-2	
<b>2</b> ug/L	1.0	0.82	1		03/25/11 16:01	108-86-1	
7 ug/L	1.0	0.97	1		03/25/11 16:01	74-97-5	
6 ug/L	1.0	0.56	1		03/25/11 16:01	75-27-4	
4 ug/L	1.0	0.94	1		03/25/11 16:01	75-25-2	
1 ug/L	1.0	0.91	1		03/25/11 16:01	74-83-9	
<b>3</b> ug/L	1.0	0.93	1		03/25/11 16:01	104-51-8	
<b>9</b> ug/L	5.0	0.89	1		03/25/11 16:01	135-98-8	
<b>7</b> ug/L	1.0	0.97	1		03/25/11 16:01	98-06-6	
<b>9</b> ug/L	1.0	0.49	1		03/25/11 16:01	56-23-5	
1 ug/L	1.0	0.41	1		03/25/11 16:01	108-90-7	
7 ug/L	1.0	0.97	1		03/25/11 16:01	75-00-3	
<b>3</b> ug/L	5.0	1.3	1		03/25/11 16:01	67-66-3	
<b>4</b> ug/L	1.0	0.24	1		03/25/11 16:01	74-87-3	
<b>5</b> ug/L	1.0	0.85	1		03/25/11 16:01	95-49-8	
<b>4</b> ug/L	1.0	0.74	1		03/25/11 16:01	106-43-4	
<b>7</b> ug/L	5.0	1.7	1		03/25/11 16:01	96-12-8	
1 ug/L	1.0	0.81	1		03/25/11 16:01	124-48-1	
<b>6</b> ug/L	1.0	0.56	1		03/25/11 16:01	106-93-4	
<b>0</b> ug/L	1.0	0.60	1		03/25/11 16:01	74-95-3	
	ical Method: EPA a i ug/L 2 ug/L 7 ug/L 6 ug/L 4 ug/L 1 ug/L 9 ug/L 1 ug/L 7 ug/L 3 ug/L 4 ug/L 5 ug/L 4 ug/L 5 ug/L 4 ug/L 5 ug/L 4 ug/L 6 ug/L 0 ug/L 0 ug/L	ical Method: EPA 8260 1 ug/L 1.0 2 ug/L 1.0 7 ug/L 1.0 4 ug/L 1.0 1 ug/L 1.0 9 ug/L 1.0 9 ug/L 5.0 7 ug/L 1.0 9 ug/L 1.0 9 ug/L 1.0 1 ug/L 1.0 1 ug/L 1.0 7 ug/L 1.0 3 ug/L 1.0 1 ug/L 1.0 1 ug/L 1.0 5 ug/L 1.0 5 ug/L 1.0 5 ug/L 1.0 6 ug/L 1.0 6 ug/L 1.0 0 ug/L 1.0 1 ug/L	ical Method: EPA 8260           1 ug/L         1.0         0.41           2 ug/L         1.0         0.82           7 ug/L         1.0         0.97           6 ug/L         1.0         0.97           6 ug/L         1.0         0.94           1 ug/L         1.0         0.94           1 ug/L         1.0         0.91           3 ug/L         1.0         0.93           9 ug/L         5.0         0.89           7 ug/L         1.0         0.97           9 ug/L         5.0         0.89           7 ug/L         1.0         0.97           9 ug/L         1.0         0.97           9 ug/L         1.0         0.49           1 ug/L         1.0         0.49           1 ug/L         1.0         0.41           7 ug/L         1.0         0.424           5 ug/L         1.0         0.85           4 ug/L         1.0         0.74           7 ug/L         5.0         1.7           1 ug/L         1.0         0.81           6 ug/L         1.0         0.56           0 ug/L         1.0         0.60	ical Method: EPA 8260           1         ug/L         1.0         0.41         1           2         ug/L         1.0         0.82         1           7         ug/L         1.0         0.82         1           7         ug/L         1.0         0.97         1           6         ug/L         1.0         0.97         1           1         ug/L         1.0         0.94         1           1         ug/L         1.0         0.94         1           1         ug/L         1.0         0.93         1           9         ug/L         1.0         0.93         1           9         ug/L         1.0         0.97         1           9         ug/L         1.0         0.41         1           7         ug/L         1.0         0.41         1           7	ical Method: EPA 8260           1         ug/L         1.0         0.41         1           2         ug/L         1.0         0.82         1           7         ug/L         1.0         0.97         1           6         ug/L         1.0         0.97         1           6         ug/L         1.0         0.97         1           1         ug/L         1.0         0.94         1           1         ug/L         1.0         0.93         1           9         ug/L         1.0         0.93         1           9         ug/L         1.0         0.93         1           9         ug/L         1.0         0.97         1           9         ug/L         1.0         0.49         1           1         ug/L         1.0         0.41         1           7         ug/L         1.0         0.49         1           1         ug/L         1.0         0.97         1           3         ug/L         1.0         0.41         1           7         ug/L         1.0         0.85         1           4	ical Method: EPA 8260           1         ug/L         1.0         0.41         1         03/25/11         16:01           2         ug/L         1.0         0.82         1         03/25/11         16:01           7         ug/L         1.0         0.82         1         03/25/11         16:01           7         ug/L         1.0         0.97         1         03/25/11         16:01           6         ug/L         1.0         0.97         1         03/25/11         16:01           4         ug/L         1.0         0.97         1         03/25/11         16:01           4         ug/L         1.0         0.94         1         03/25/11         16:01           4         ug/L         1.0         0.91         1         03/25/11         16:01           9         ug/L         1.0         0.93         1         03/25/11         16:01           9         ug/L         1.0         0.97         1         03/25/11         16:01           1         ug/L         1.0         0.97         1         03/25/11         16:01           1         ug/L         1.0         0.97	Image: Interpretent of the second s

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# **REPORT OF LABORATORY ANALYSIS**

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#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4043586

Sample: MW-2	Lab ID:	4043586002	Collecte	d: 03/21/1	12:30	Received: 03	/21/11 15:47 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytica	l Method: EPA 8	3260						
1,2-Dichlorobenzene	<0.83	ug/L	1.0	0.83	1		03/25/11 16:01	95-50-1	
1,3-Dichlorobenzene	<0.87	ug/L	1.0	0.87	1		03/25/11 16:01	541-73-1	
1,4-Dichlorobenzene	<0.95	ug/L	1.0	0.95	1		03/25/11 16:01	106-46-7	
Dichlorodifluoromethane	<0.99	ug/L	1.0	0.99	1		03/25/11 16:01	75-71-8	
1,1-Dichloroethane	<0.75	ug/L	1.0	0.75	1		03/25/11 16:01	75-34-3	
1,2-Dichloroethane	<0.36	ug/L	1.0	0.36	1		03/25/11 16:01	107-06-2	
1,1-Dichloroethene	<0.57	ug/L	1.0	0.57	1		03/25/11 16:01	75-35-4	
cis-1,2-Dichloroethene	<0.83	ug/L	1.0	0.83	1		03/25/11 16:01	156-59-2	
trans-1,2-Dichloroethene	<0.89	ug/L	1.0	0.89	1		03/25/11 16:01	156-60-5	
1,2-Dichloropropane	<0.49	ug/L	1.0	0.49	1		03/25/11 16:01	78-87-5	
1.3-Dichloropropane	<0.61	ua/L	1.0	0.61	1		03/25/11 16:01	142-28-9	
2.2-Dichloropropane	<0.62	ua/L	1.0	0.62	1		03/25/11 16:01	594-20-7	
1.1-Dichloropropene	<0.75	ua/L	1.0	0.75	1		03/25/11 16:01	563-58-6	
cis-1.3-Dichloropropene	<0.20	ua/L	1.0	0.20	1		03/25/11 16:01	10061-01-5	
trans-1.3-Dichloropropene	<0.19	ua/l	1.0	0.19	1		03/25/11 16:01	10061-02-6	
Diisopropyl ether	<0.76	ua/l	1.0	0.76	1		03/25/11 16:01	108-20-3	
Ethylbenzene	<0.54	ug/L	1.0	0.54	1		03/25/11 16:01	100-41-4	
Hexachloro-1.3-butadiene	<0.67	ua/l	5.0	0.67	1		03/25/11 16:01	87-68-3	
Isopropylbenzene (Cumene)	<0.59	ug/L	1.0	0.59	1		03/25/11 16:01	98-82-8	
p-Isopropyltoluene	<0.67	ug/L	1.0	0.67	1		03/25/11 16:01	99-87-6	
Methylene Chloride	<0.43	ug/L	1.0	0.43	1		03/25/11 16:01	75-09-2	
Methyl-tert-butyl ether	<0.40	ug/L	1.0	0.40	1		03/25/11 16:01	1634-04-4	
Nanhthalene	<0.89	ug/L	5.0	0.01	1		03/25/11 16:01	91-20-3	
n-Propylbenzene	<0.00	ug/L	1.0	0.81	1		03/25/11 16:01	103-65-1	
Styrene	<0.86	ug/L	1.0	0.86	1		03/25/11 16:01	100-42-5	
1 1 1 2-Tetrachloroethane	<0.00	ug/L	1.0	0.00	1		03/25/11 16:01	630-20-6	
1 1 2 2-Tetrachloroethane	<0.32	ug/L	1.0	0.02	1		03/25/11 16:01	79-34-5	
Tetrachloroethene	<0.20	ug/L	1.0	0.20	1		03/25/11 16:01	127-18-4	
Toluene	<0.45	ug/L	1.0	0.40	1		03/25/11 16:01	108-88-3	
1 2 3-Trichlorobenzene	<0.07	ug/L	1.0	0.07	1		03/25/11 16:01	87-61-6	
1.2.4-Trichlorobenzene	<0.74	ug/L	1.0	0.74	1		03/25/11 16:01	120-82-1	
1 1 1 Trichloroothana	<0.97	ug/L	1.0	0.07	1		03/25/11 16:01	71 55 6	
1 1 2-Trichloroethane	<0.30	ug/L	1.0	0.30	1		03/25/11 16:01	79-00-5	
Trichloroothono	<0.42	ug/L	1.0	0.42	1		03/25/11 16:01	79-00-5	
Trichlorofluoromothono	<0.40	ug/L	1.0	0.40	1		03/25/11 10:01	79-01-0	
	<0.79	ug/L	1.0	0.79	1		03/25/11 10:01	75-09-4	
	<0.99	ug/L	1.0	0.99	1		03/25/11 10.01	90-10-4	
1,2,4-Trimeuryidenzene	<0.97	ug/L	1.0	0.97	1		03/23/11 10:01	30-00-0 109 67 9	
	<0.03	ug/L	1.0	0.03	1		03/23/11 10:01	75 01 4	
	<0.18	ug/L	1.0	0.18	1		03/25/11 10:01	10-01-4	
map-Aylene	<1.8	ug/L	2.0	1.8	1		03/25/11 16:01	179601-23-1	
o-Aylene	<0.83	ug/L	1.0	0.83	1		03/25/11 16:01	95-47-6	
4-Bromotiuorobenzene (S)	80 9	%	69-130		1		03/25/11 16:01	460-00-4	
Dipromotiuoromethane (S)	99 9	% 	70-134		1		03/25/11 16:01	1868-53-7	
Ioluene-d8 (S)	92 9	%	70-130		1		03/25/11 16:01	2037-26-5	

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#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4043586

Sample: MW-3	Lab ID:	4043586003	Collecte	d: 03/21/1	1 11:30	Received: 03	21/11 15:47 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytica	I Method: EPA 8	3260						
Benzene	<0.41	ug/L	1.0	0.41	1		03/25/11 16:24	71-43-2	
Bromobenzene	<0.82	ug/L	1.0	0.82	1		03/25/11 16:24	108-86-1	
Bromochloromethane	<0.97	ug/L	1.0	0.97	1		03/25/11 16:24	74-97-5	
Bromodichloromethane	<0.56	ug/L	1.0	0.56	1		03/25/11 16:24	75-27-4	
Bromoform	<b>&lt;0.94</b> (	ug/L	1.0	0.94	1		03/25/11 16:24	75-25-2	
Bromomethane	<b>&lt;0.91</b> (	ug/L	1.0	0.91	1		03/25/11 16:24	74-83-9	
n-Butylbenzene	<0.93	ug/L	1.0	0.93	1		03/25/11 16:24	104-51-8	
sec-Butylbenzene	<0.89	ug/L	5.0	0.89	1		03/25/11 16:24	135-98-8	
tert-Butylbenzene	<0.97	ug/L	1.0	0.97	1		03/25/11 16:24	98-06-6	
Carbon tetrachloride	<0.49	ug/L	1.0	0.49	1		03/25/11 16:24	56-23-5	
Chlorobenzene	<0.41	ug/L	1.0	0.41	1		03/25/11 16:24	108-90-7	
Chloroethane	<0.97	ug/L	1.0	0.97	1		03/25/11 16:24	75-00-3	
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/11 16:24	67-66-3	
Chloromethane	<0.24	ug/L	1.0	0.24	1		03/25/11 16:24	74-87-3	
2-Chlorotoluene	<0.85	ug/L	1.0	0.85	1		03/25/11 16:24	95-49-8	
4-Chlorotoluene	<0.74	ug/L	1.0	0.74	1		03/25/11 16:24	106-43-4	
1,2-Dibromo-3-chloropropane	<1.7	ug/L	5.0	1.7	1		03/25/11 16:24	96-12-8	
Dibromochloromethane	<0.81	ug/L	1.0	0.81	1		03/25/11 16:24	124-48-1	
1,2-Dibromoethane (EDB)	<0.56	ug/L	1.0	0.56	1		03/25/11 16:24	106-93-4	
Dibromomethane	<0.60	ug/L	1.0	0.60	1		03/25/11 16:24	74-95-3	
1,2-Dichlorobenzene	<0.83	ug/L	1.0	0.83	1		03/25/11 16:24	95-50-1	
1.3-Dichlorobenzene	<0.87	ua/L	1.0	0.87	1		03/25/11 16:24	541-73-1	
1,4-Dichlorobenzene	<0.95	ug/L	1.0	0.95	1		03/25/11 16:24	106-46-7	
Dichlorodifluoromethane	<0.99	ua/L	1.0	0.99	1		03/25/11 16:24	75-71-8	
1,1-Dichloroethane	<0.75	ug/L	1.0	0.75	1		03/25/11 16:24	75-34-3	
1.2-Dichloroethane	<0.36	ua/L	1.0	0.36	1		03/25/11 16:24	107-06-2	
1.1-Dichloroethene	<0.57	ua/L	1.0	0.57	1		03/25/11 16:24	75-35-4	
cis-1,2-Dichloroethene	<0.83	ug/L	1.0	0.83	1		03/25/11 16:24	156-59-2	
trans-1,2-Dichloroethene	<0.89	ug/L	1.0	0.89	1		03/25/11 16:24	156-60-5	
1,2-Dichloropropane	<0.49	ug/L	1.0	0.49	1		03/25/11 16:24	78-87-5	
1.3-Dichloropropane	<0.61	ua/L	1.0	0.61	1		03/25/11 16:24	142-28-9	
2,2-Dichloropropane	<0.62	ug/L	1.0	0.62	1		03/25/11 16:24	594-20-7	
1,1-Dichloropropene	< <b>0.75</b> (	ug/L	1.0	0.75	1		03/25/11 16:24	563-58-6	
cis-1,3-Dichloropropene	<0.20	ug/L	1.0	0.20	1		03/25/11 16:24	10061-01-5	
trans-1,3-Dichloropropene	<b>&lt;0.19</b> (	ug/L	1.0	0.19	1		03/25/11 16:24	10061-02-6	
Diisopropyl ether	<0.76	ug/L	1.0	0.76	1		03/25/11 16:24	108-20-3	
Ethylbenzene	<0.54	ug/L	1.0	0.54	1		03/25/11 16:24	100-41-4	
Hexachloro-1,3-butadiene	<0.67	ug/L	5.0	0.67	1		03/25/11 16:24	87-68-3	
Isopropylbenzene (Cumene)	<0.59	ug/L	1.0	0.59	1		03/25/11 16:24	98-82-8	
p-Isopropyltoluene	<0.67	ug/L	1.0	0.67	1		03/25/11 16:24	99-87-6	
Methylene Chloride	<0.43	ug/L	1.0	0.43	1		03/25/11 16:24	75-09-2	
Methyl-tert-butyl ether	<0.61	ug/L	1.0	0.61	1		03/25/11 16:24	1634-04-4	
Naphthalene	<0.89	ug/L	5.0	0.89	1		03/25/11 16:24	91-20-3	
n-Propylbenzene	<0.81	ug/L	1.0	0.81	1		03/25/11 16:24	103-65-1	
Styrene	<0.86	ug/L	1.0	0.86	1		03/25/11 16:24	100-42-5	
1,1,1,2-Tetrachloroethane	<0.92	ug/L	1.0	0.92	1		03/25/11 16:24	630-20-6	

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#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 40

#### 4043586

Sample: MW-3	Lab ID: 4043586003		Collected: 03/21/11 11:30			Received: 03/21/11 15:47 Matrix: Water			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical M	Vethod: EPA 8	260						
1,1,2,2-Tetrachloroethane	<b>&lt;0.20</b> ug	ı/L	1.0	0.20	1		03/25/11 16:24	79-34-5	
Tetrachloroethene	<b>&lt;0.45</b> ug	I/L	1.0	0.45	1		03/25/11 16:24	127-18-4	
Toluene	<b>&lt;0.67</b> ug	I/L	1.0	0.67	1		03/25/11 16:24	108-88-3	
1,2,3-Trichlorobenzene	<b>&lt;0.74</b> ug	I/L	1.0	0.74	1		03/25/11 16:24	87-61-6	
1,2,4-Trichlorobenzene	<b>&lt;0.97</b> ug	I/L	1.0	0.97	1		03/25/11 16:24	120-82-1	
1,1,1-Trichloroethane	<0.90 ug	/L	1.0	0.90	1		03/25/11 16:24	71-55-6	
1,1,2-Trichloroethane	<b>&lt;0.42</b> ug	/L	1.0	0.42	1		03/25/11 16:24	79-00-5	
Trichloroethene	<0.48 ug	/L	1.0	0.48	1		03/25/11 16:24	79-01-6	
Trichlorofluoromethane	<0.79 ug	/L	1.0	0.79	1		03/25/11 16:24	75-69-4	
1,2,3-Trichloropropane	<0.99 ug	/L	1.0	0.99	1		03/25/11 16:24	96-18-4	
1,2,4-Trimethylbenzene	<0.97 ug	I/L	1.0	0.97	1		03/25/11 16:24	95-63-6	
1,3,5-Trimethylbenzene	<0.83 ug	/L	1.0	0.83	1		03/25/11 16:24	108-67-8	
Vinyl chloride	<0.18 ug	/L	1.0	0.18	1		03/25/11 16:24	75-01-4	
m&p-Xylene	<1.8 ug	/L	2.0	1.8	1		03/25/11 16:24	179601-23-1	
o-Xylene	<0.83 ug	I/L	1.0	0.83	1		03/25/11 16:24	95-47-6	
4-Bromofluorobenzene (S)	82 %		69-130		1		03/25/11 16:24	460-00-4	
Dibromofluoromethane (S)	99 %		70-134		1		03/25/11 16:24	1868-53-7	
Toluene-d8 (S)	91 %		70-130		1		03/25/11 16:24	2037-26-5	
Sample: MW-4	Lab ID: 4	4043586004	Collected	d: 03/21/1	11:45	Received: 03	8/21/11 15:47 Ma	atrix: Water	

Parameters	Results	Units		LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytica	al Method: EP/	A 8260						
Benzene	<0.41	ug/L	1.0	0.41	1		03/25/11 16:47	71-43-2	
Bromobenzene	<0.82	ug/L	1.0	0.82	1		03/25/11 16:47	108-86-1	
Bromochloromethane	<0.97	ug/L	1.0	0.97	1		03/25/11 16:47	74-97-5	
Bromodichloromethane	<0.56	ug/L	1.0	0.56	1		03/25/11 16:47	75-27-4	
Bromoform	<0.94	ug/L	1.0	0.94	1		03/25/11 16:47	75-25-2	
Bromomethane	<0.91	ug/L	1.0	0.91	1		03/25/11 16:47	74-83-9	
n-Butylbenzene	<0.93	ug/L	1.0	0.93	1		03/25/11 16:47	104-51-8	
sec-Butylbenzene	<0.89	ug/L	5.0	0.89	1		03/25/11 16:47	135-98-8	
tert-Butylbenzene	<0.97	ug/L	1.0	0.97	1		03/25/11 16:47	98-06-6	
Carbon tetrachloride	<0.49	ug/L	1.0	0.49	1		03/25/11 16:47	56-23-5	
Chlorobenzene	<0.41	ug/L	1.0	0.41	1		03/25/11 16:47	108-90-7	
Chloroethane	<0.97	ug/L	1.0	0.97	1		03/25/11 16:47	75-00-3	
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/11 16:47	67-66-3	
Chloromethane	<0.24	ug/L	1.0	0.24	1		03/25/11 16:47	74-87-3	
2-Chlorotoluene	<0.85	ug/L	1.0	0.85	1		03/25/11 16:47	95-49-8	
4-Chlorotoluene	<0.74	ug/L	1.0	0.74	1		03/25/11 16:47	106-43-4	
1,2-Dibromo-3-chloropropane	<1.7	ug/L	5.0	1.7	1		03/25/11 16:47	96-12-8	
Dibromochloromethane	<0.81	ug/L	1.0	0.81	1		03/25/11 16:47	124-48-1	
1,2-Dibromoethane (EDB)	<0.56	ug/L	1.0	0.56	1		03/25/11 16:47	106-93-4	
Dibromomethane	<0.60	ug/L	1.0	0.60	1		03/25/11 16:47	74-95-3	

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#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.:

# .: 4043586

Sample: MW-4	Lab ID: 4043586004		Collected: 03/21/11 11:45			Received: 03			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytic	al Method: EPA 8	260						
1,2-Dichlorobenzene	<0.83	ug/L	1.0	0.83	1		03/25/11 16:47	95-50-1	
1,3-Dichlorobenzene	<0.87	ug/L	1.0	0.87	1		03/25/11 16:47	541-73-1	
1,4-Dichlorobenzene	<0.95	ug/L	1.0	0.95	1		03/25/11 16:47	106-46-7	
Dichlorodifluoromethane	<0.99	ug/L	1.0	0.99	1		03/25/11 16:47	75-71-8	
1,1-Dichloroethane	<0.75	ug/L	1.0	0.75	1		03/25/11 16:47	75-34-3	
1,2-Dichloroethane	<0.36	ug/L	1.0	0.36	1		03/25/11 16:47	107-06-2	
1,1-Dichloroethene	<0.57	ug/L	1.0	0.57	1		03/25/11 16:47	75-35-4	
cis-1,2-Dichloroethene	<0.83	ug/L	1.0	0.83	1		03/25/11 16:47	156-59-2	
trans-1,2-Dichloroethene	<0.89	ug/L	1.0	0.89	1		03/25/11 16:47	156-60-5	
1,2-Dichloropropane	<0.49	ug/L	1.0	0.49	1		03/25/11 16:47	78-87-5	
1,3-Dichloropropane	<0.61	ug/L	1.0	0.61	1		03/25/11 16:47	142-28-9	
2,2-Dichloropropane	<0.62	ug/L	1.0	0.62	1		03/25/11 16:47	594-20-7	
1,1-Dichloropropene	<0.75	ug/L	1.0	0.75	1		03/25/11 16:47	563-58-6	
cis-1,3-Dichloropropene	<0.20	ug/L	1.0	0.20	1		03/25/11 16:47	10061-01-5	
trans-1,3-Dichloropropene	<0.19	ug/L	1.0	0.19	1		03/25/11 16:47	10061-02-6	
Diisopropyl ether	<0.76	ug/L	1.0	0.76	1		03/25/11 16:47	108-20-3	
Ethylbenzene	<0.54	ug/L	1.0	0.54	1		03/25/11 16:47	100-41-4	
Hexachloro-1,3-butadiene	<0.67	ug/L	5.0	0.67	1		03/25/11 16:47	87-68-3	
Isopropylbenzene (Cumene)	<0.59	ug/L	1.0	0.59	1		03/25/11 16:47	98-82-8	
p-Isopropyltoluene	<0.67	ug/L	1.0	0.67	1		03/25/11 16:47	99-87-6	
Methylene Chloride	<0.43	ug/L	1.0	0.43	1		03/25/11 16:47	75-09-2	
Methyl-tert-butyl ether	<0.61	ug/L	1.0	0.61	1		03/25/11 16:47	1634-04-4	
Naphthalene	<0.89	ug/L	5.0	0.89	1		03/25/11 16:47	91-20-3	
n-Propylbenzene	<0.81	ug/L	1.0	0.81	1		03/25/11 16:47	103-65-1	
Styrene	<0.86	ug/L	1.0	0.86	1		03/25/11 16:47	100-42-5	
1,1,1,2-Tetrachloroethane	<0.92	ug/L	1.0	0.92	1		03/25/11 16:47	630-20-6	
1,1,2,2-Tetrachloroethane	<0.20	ug/L	1.0	0.20	1		03/25/11 16:47	79-34-5	
Tetrachloroethene	<0.45	ug/L	1.0	0.45	1		03/25/11 16:47	127-18-4	
Toluene	<0.67	ug/L	1.0	0.67	1		03/25/11 16:47	108-88-3	
1,2,3-Trichlorobenzene	<0.74	ug/L	1.0	0.74	1		03/25/11 16:47	87-61-6	
1,2,4-Trichlorobenzene	<0.97	ug/L	1.0	0.97	1		03/25/11 16:47	120-82-1	
1,1,1-Trichloroethane	<0.90	ug/L	1.0	0.90	1		03/25/11 16:47	71-55-6	
1,1,2-Trichloroethane	<0.42	ug/L	1.0	0.42	1		03/25/11 16:47	79-00-5	
Trichloroethene	<0.48	ug/L	1.0	0.48	1		03/25/11 16:47	79-01-6	
Trichlorofluoromethane	<0.79	ug/L	1.0	0.79	1		03/25/11 16:47	75-69-4	
1,2,3-Trichloropropane	<0.99	ug/L	1.0	0.99	1		03/25/11 16:47	96-18-4	
1,2,4-Trimethylbenzene	<0.97	ug/L	1.0	0.97	1		03/25/11 16:47	95-63-6	
1,3,5-Trimethylbenzene	<0.83	ug/L	1.0	0.83	1		03/25/11 16:47	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/25/11 16:47	75-01-4	
m&p-Xylene	<1.8	ug/L	2.0	1.8	1		03/25/11 16:47	179601-23-1	
o-Xylene	<0.83	ug/L	1.0	0.83	1		03/25/11 16:47	95-47-6	
4-Bromofluorobenzene (S)	82	%	69-130		1		03/25/11 16:47	460-00-4	
Dibromofluoromethane (S)	99	%	70-134		1		03/25/11 16:47	1868-53-7	
Toluene-d8 (S)	92	%	70-130		1		03/25/11 16:47	2037-26-5	

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#### Project: 0315-01-10 MILLER PROPERTY

4043586

Pace Project No .:

Sample: MW-5	MW-5         Lab ID: 4043586005         Collected: 03/21/11 11:00         Received: 03/21/11 15:47         Matrix: Wate				atrix: Water				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytica	al Method: EPA 8	3260						
Benzene	<0.41	ug/L	1.0	0.41	1		03/25/11 17:09	71-43-2	
Bromobenzene	<0.82	ug/L	1.0	0.82	1		03/25/11 17:09	108-86-1	
Bromochloromethane	<0.97	ug/L	1.0	0.97	1		03/25/11 17:09	74-97-5	
Bromodichloromethane	<0.56	ug/L	1.0	0.56	1		03/25/11 17:09	75-27-4	
Bromoform	<0.94	ug/L	1.0	0.94	1		03/25/11 17:09	75-25-2	
Bromomethane	<0.91	ug/L	1.0	0.91	1		03/25/11 17:09	74-83-9	
n-Butylbenzene	<0.93	ug/L	1.0	0.93	1		03/25/11 17:09	104-51-8	
sec-Butylbenzene	<0.89	ug/L	5.0	0.89	1		03/25/11 17:09	135-98-8	
tert-Butylbenzene	<0.97	ug/L	1.0	0.97	1		03/25/11 17:09	98-06-6	
Carbon tetrachloride	<0.49	ug/L	1.0	0.49	1		03/25/11 17:09	56-23-5	
Chlorobenzene	<0.41	ug/L	1.0	0.41	1		03/25/11 17:09	108-90-7	
Chloroethane	<0.97	ug/L	1.0	0.97	1		03/25/11 17:09	75-00-3	
Chloroform	<1.3	ug/L	5.0	1.3	1		03/25/11 17:09	67-66-3	
Chloromethane	<0.24	ug/L	1.0	0.24	1		03/25/11 17:09	74-87-3	
2-Chlorotoluene	<0.85	ug/L	1.0	0.85	1		03/25/11 17:09	95-49-8	
4-Chlorotoluene	<0.74	ug/L	1.0	0.74	1		03/25/11 17:09	106-43-4	
1,2-Dibromo-3-chloropropane	<1.7	ug/L	5.0	1.7	1		03/25/11 17:09	96-12-8	
Dibromochloromethane	<0.81	ug/L	1.0	0.81	1		03/25/11 17:09	124-48-1	
1,2-Dibromoethane (EDB)	<0.56	ug/L	1.0	0.56	1		03/25/11 17:09	106-93-4	
Dibromomethane	<0.60	ug/L	1.0	0.60	1		03/25/11 17:09	74-95-3	
1,2-Dichlorobenzene	<0.83	ug/L	1.0	0.83	1		03/25/11 17:09	95-50-1	
1,3-Dichlorobenzene	<0.87	ug/L	1.0	0.87	1		03/25/11 17:09	541-73-1	
1,4-Dichlorobenzene	<0.95	ug/L	1.0	0.95	1		03/25/11 17:09	106-46-7	
Dichlorodifluoromethane	<0.99	ug/L	1.0	0.99	1		03/25/11 17:09	75-71-8	
1,1-Dichloroethane	<0.75	ug/L	1.0	0.75	1		03/25/11 17:09	75-34-3	
1,2-Dichloroethane	<0.36	ug/L	1.0	0.36	1		03/25/11 17:09	107-06-2	
1,1-Dichloroethene	<0.57	ug/L	1.0	0.57	1		03/25/11 17:09	75-35-4	
cis-1,2-Dichloroethene	<0.83	ug/L	1.0	0.83	1		03/25/11 17:09	156-59-2	
trans-1,2-Dichloroethene	<0.89	ug/L	1.0	0.89	1		03/25/11 17:09	156-60-5	
1,2-Dichloropropane	<0.49	ug/L	1.0	0.49	1		03/25/11 17:09	78-87-5	
1,3-Dichloropropane	<0.61	ug/L	1.0	0.61	1		03/25/11 17:09	142-28-9	
2,2-Dichloropropane	<0.62	ug/L	1.0	0.62	1		03/25/11 17:09	594-20-7	
1,1-Dichloropropene	<0.75	ug/L	1.0	0.75	1		03/25/11 17:09	563-58-6	
cis-1,3-Dichloropropene	<0.20	ug/L	1.0	0.20	1		03/25/11 17:09	10061-01-5	
trans-1,3-Dichloropropene	<0.19	ug/L	1.0	0.19	1		03/25/11 17:09	10061-02-6	
Diisopropyl ether	<0.76	ug/L	1.0	0.76	1		03/25/11 17:09	108-20-3	
Ethylbenzene	<0.54	ug/L	1.0	0.54	1		03/25/11 17:09	100-41-4	
Hexachloro-1,3-butadiene	<0.67	ug/L	5.0	0.67	1		03/25/11 17:09	87-68-3	
Isopropylbenzene (Cumene)	<0.59	ug/L	1.0	0.59	1		03/25/11 17:09	98-82-8	
p-Isopropyltoluene	<0.67	ug/L	1.0	0.67	1		03/25/11 17:09	99-87-6	
Methylene Chloride	<0.43	ug/L	1.0	0.43	1		03/25/11 17:09	75-09-2	
Methyl-tert-butyl ether	<0.61	ug/L	1.0	0.61	1		03/25/11 17:09	1634-04-4	
Naphthalene	<0.89	ug/L	5.0	0.89	1		03/25/11 17:09	91-20-3	
n-Propylbenzene	<0.81	ug/L	1.0	0.81	1		03/25/11 17:09	103-65-1	
Styrene	<0.86	ug/L	1.0	0.86	1		03/25/11 17:09	100-42-5	
1,1,1,2-Tetrachloroethane	<0.92	ug/L	1.0	0.92	1		03/25/11 17:09	630-20-6	

Date: 03/28/2011 05:19 PM

# **REPORT OF LABORATORY ANALYSIS**

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Received: 03/21/11 15:47

Matrix: Water

#### Project: 0315-01-10 MILLER PROPERTY

Lab ID: 4043586006

Pace Project N 

lo.:	4043586

Sample: MW-5	Lab ID:	4043586005	Collected	d: 03/21/1	1 11:00	Received: 03	/21/11 15:47 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA 8	3260						
1,1,2,2-Tetrachloroethane	<b>&lt;0.20</b> ug	g/L	1.0	0.20	1		03/25/11 17:09	79-34-5	
Tetrachloroethene	<0.45 u	g/L	1.0	0.45	1		03/25/11 17:09	127-18-4	
Toluene	<0.67 u	g/L	1.0	0.67	1		03/25/11 17:09	108-88-3	
1,2,3-Trichlorobenzene	<b>&lt;0.74</b> ug	g/L	1.0	0.74	1		03/25/11 17:09	87-61-6	
1,2,4-Trichlorobenzene	<0.97 u	g/L	1.0	0.97	1		03/25/11 17:09	120-82-1	
1,1,1-Trichloroethane	<0.90 ug	g/L	1.0	0.90	1		03/25/11 17:09	71-55-6	
1,1,2-Trichloroethane	<0.42 u	g/L	1.0	0.42	1		03/25/11 17:09	79-00-5	
Trichloroethene	<0.48 u	g/L	1.0	0.48	1		03/25/11 17:09	79-01-6	
Trichlorofluoromethane	<0.79 ug	g/L	1.0	0.79	1		03/25/11 17:09	75-69-4	
1,2,3-Trichloropropane	<b>&lt;0.99</b> ug	g/L	1.0	0.99	1		03/25/11 17:09	96-18-4	
1,2,4-Trimethylbenzene	<b>&lt;0.97</b> ug	g/L	1.0	0.97	1		03/25/11 17:09	95-63-6	
1,3,5-Trimethylbenzene	<0.83 u	g/L	1.0	0.83	1		03/25/11 17:09	108-67-8	
Vinyl chloride	<b>&lt;0.18</b> ug	g/L	1.0	0.18	1		03/25/11 17:09	75-01-4	
m&p-Xylene	<b>&lt;1.8</b> ug	g/L	2.0	1.8	1		03/25/11 17:09	179601-23-1	
o-Xylene	<0.83 u	g/L	1.0	0.83	1		03/25/11 17:09	95-47-6	
4-Bromofluorobenzene (S)	81 %	•	69-130		1		03/25/11 17:09	460-00-4	
Dibromofluoromethane (S)	99 %	,	70-134		1		03/25/11 17:09	1868-53-7	
Toluene-d8 (S)	93 %		70-130		1		03/25/11 17:09	2037-26-5	

Collected: 03/21/11 12:00

Sample: POTABLE WELL-MILLER N2892

Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Qual 8260 MSV Analytical Method: EPA 8260 <0.41 ug/L 0.41 03/25/11 17:32 71-43-2 Benzene 1.0 1 <0.82 ug/L 0.82 03/25/11 17:32 108-86-1 Bromobenzene 1.0 1 Bromochloromethane <0.97 ug/L 1.0 0.97 03/25/11 17:32 74-97-5 1 Bromodichloromethane <0.56 ug/L 1.0 0.56 1 03/25/11 17:32 75-27-4 Bromoform <0.94 ug/L 1.0 0.94 03/25/11 17:32 75-25-2 1 Bromomethane <0.91 ug/L 0.91 03/25/11 17:32 74-83-9 1.0 1 <0.93 ug/L n-Butylbenzene 1.0 0.93 03/25/11 17:32 104-51-8 1 sec-Butylbenzene <0.89 ug/L 5.0 0.89 03/25/11 17:32 135-98-8 1 tert-Butylbenzene <0.97 ug/L 0.97 03/25/11 17:32 98-06-6 1.0 1 Carbon tetrachloride <0.49 ug/L 0.49 03/25/11 17:32 56-23-5 1.0 1 Chlorobenzene <0.41 ug/L 1.0 0.41 03/25/11 17:32 108-90-7 1 Chloroethane <0.97 ug/L 1.0 0.97 1 03/25/11 17:32 75-00-3 Chloroform <1.3 ug/L 5.0 1.3 1 03/25/11 17:32 67-66-3 Chloromethane <0.24 ug/L 1.0 0.24 1 03/25/11 17:32 74-87-3 2-Chlorotoluene <0.85 ug/L 1.0 0.85 03/25/11 17:32 95-49-8 1 4-Chlorotoluene <0.74 ug/L 1.0 0.74 03/25/11 17:32 106-43-4 1 1,2-Dibromo-3-chloropropane <1.7 ug/L 03/25/11 17:32 96-12-8 5.0 1.7 1 <0.81 ug/L 03/25/11 17:32 124-48-1 Dibromochloromethane 1.0 0.81 1 1,2-Dibromoethane (EDB) <0.56 ug/L 0.56 03/25/11 17:32 106-93-4 1.0 1

Date: 03/28/2011 05:19 PM

## **REPORT OF LABORATORY ANALYSIS**

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# ANALYTICAL RESULTS

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#### Project: 0315-01-10 MILLER PROPERTY

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Pace Project No.: 4043586

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Sample: POTABLE WELL-MILLER N2892	Lab ID: 4043586006		Collected: 03/21/11 12:00			Received: 03/21/11 15:47 Matrix: Water				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV	Analytica	al Method: EPA 8	260							
Dibromomethane	<0.60	ug/L	1.0	0.60	1		03/25/11 17:32	74-95-3		
1,2-Dichlorobenzene	<0.83	ug/L	1.0	0.83	1		03/25/11 17:32	95-50-1		
1,3-Dichlorobenzene	<0.87	ug/L	1.0	0.87	1		03/25/11 17:32	541-73-1		
1,4-Dichlorobenzene	<0.95	ug/L	1.0	0.95	1		03/25/11 17:32	106-46-7		
Dichlorodifluoromethane	<0.99	ug/L	1.0	0.99	1		03/25/11 17:32	75-71-8		
1,1-Dichloroethane	<0.75	ug/L	1.0	0.75	1		03/25/11 17:32	75-34-3		
1,2-Dichloroethane	<0.36	ug/L	1.0	0.36	1		03/25/11 17:32	107-06-2		
1,1-Dichloroethene	<0.57	ug/L	1.0	0.57	1		03/25/11 17:32	75-35-4		
cis-1,2-Dichloroethene	<0.83	ug/L	1.0	0.83	1		03/25/11 17:32	156-59-2		
trans-1,2-Dichloroethene	<0.89	ug/L	1.0	0.89	1		03/25/11 17:32	156-60-5		
1,2-Dichloropropane	<0.49	ug/L	1.0	0.49	1		03/25/11 17:32	78-87-5		
1,3-Dichloropropane	<0.61	ug/L	1.0	0.61	1		03/25/11 17:32	142-28-9		
2,2-Dichloropropane	<0.62	ug/L	1.0	0.62	1		03/25/11 17:32	594-20-7		
1,1-Dichloropropene	<0.75	ug/L	1.0	0.75	1		03/25/11 17:32	563-58-6		
cis-1,3-Dichloropropene	<0.20	ug/L	1.0	0.20	1		03/25/11 17:32	10061-01-5		
trans-1,3-Dichloropropene	<0.19	ug/L	1.0	0.19	1		03/25/11 17:32	10061-02-6		
Diisopropyl ether	<0.76	ug/L	1.0	0.76	1		03/25/11 17:32	108-20-3		
Ethylbenzene	<0.54	ug/L	1.0	0.54	1		03/25/11 17:32	100-41-4		
Hexachloro-1,3-butadiene	<0.67	ug/L	5.0	0.67	1		03/25/11 17:32	87-68-3		
Isopropylbenzene (Cumene)	<0.59	ug/L	1.0	0.59	1		03/25/11 17:32	98-82-8		
p-Isopropyltoluene	<0.67	ug/L	1.0	0.67	1		03/25/11 17:32	99-87-6		
Methylene Chloride	0.52J	ug/L	1.0	0.43	1		03/25/11 17:32	75-09-2	Z3	
Methyl-tert-butyl ether	<0.61	ug/L	1.0	0.61	1		03/25/11 17:32	1634-04-4		
Naphthalene	<0.89	ug/L	5.0	0.89	1		03/25/11 17:32	91-20-3		
n-Propylbenzene	<0.81	ug/L	1.0	0.81	1		03/25/11 17:32	103-65-1		
Styrene	<0.86	ug/L	1.0	0.86	1		03/25/11 17:32	100-42-5		
1,1,1,2-Tetrachloroethane	<0.92	ug/L	1.0	0.92	1		03/25/11 17:32	630-20-6		
1,1,2,2-Tetrachloroethane	<0.20	ug/L	1.0	0.20	1		03/25/11 17:32	79-34-5		
Tetrachloroethene	<0.45	ug/L	1.0	0.45	1		03/25/11 17:32	127-18-4		
Toluene	<0.67	ug/L	1.0	0.67	1		03/25/11 17:32	108-88-3		
1,2,3-Trichlorobenzene	<0.74	ug/L	1.0	0.74	1		03/25/11 17:32	87-61-6		
1,2,4-Trichlorobenzene	<0.97	ug/L	1.0	0.97	1		03/25/11 17:32	120-82-1		
1,1,1-Trichloroethane	<0.90	ug/L	1.0	0.90	1		03/25/11 17:32	71-55-6		
1,1,2-Trichloroethane	<0.42	ug/L	1.0	0.42	1		03/25/11 17:32	79-00-5		
Trichloroethene	<0.48	ug/L	1.0	0.48	1		03/25/11 17:32	79-01-6		
Trichlorofluoromethane	<0.79	ug/L	1.0	0.79	1		03/25/11 17:32	75-69-4		
1,2,3-Trichloropropane	<0.99	ug/L	1.0	0.99	1		03/25/11 17:32	96-18-4		
1,2,4-Trimethylbenzene	<0.97	ug/L	1.0	0.97	1		03/25/11 17:32	95-63-6		
1,3,5-Trimethylbenzene	<0.83	ug/L	1.0	0.83	1		03/25/11 17:32	108-67-8		
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/25/11 17:32	75-01-4		
m&p-Xylene	<1.8	ug/L	2.0	1.8	1		03/25/11 17:32	179601-23-1		
o-Xylene	<0.83	ug/L	1.0	0.83	1		03/25/11 17:32	95-47-6		
4-Bromofluorobenzene (S)	81	%	69-130		1		03/25/11 17:32	460-00-4		
Dibromofluoromethane (S)	99	%	70-134		1		03/25/11 17:32	1868-53-7		
Toluene-d8 (S)	93	%	70-130		1		03/25/11 17:32	2037-26-5		

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# **REPORT OF LABORATORY ANALYSIS**

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EPA 8260

8260 MSV

Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4043586

QC Batch:	MSV/10742
QC Batch Method:	EPA 8260

Analysis Method: Analysis Description:

Associated Lab Samples: 4043586001, 4043586002, 4043586003, 4043586004, 4043586005, 4043586006

METHOD BLANK: 427144

Matrix: Water

Associated Lab Samples: 4043586001, 4043586002, 4043586003, 4043586004, 4043586005, 4043586006

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.92	1.0	03/25/11 08:48	
1,1,1-Trichloroethane	ug/L	<0.90	1.0	03/25/11 08:48	
1,1,2,2-Tetrachloroethane	ug/L	<0.20	1.0	03/25/11 08:48	
1,1,2-Trichloroethane	ug/L	<0.42	1.0	03/25/11 08:48	
1,1-Dichloroethane	ug/L	<0.75	1.0	03/25/11 08:48	
1,1-Dichloroethene	ug/L	<0.57	1.0	03/25/11 08:48	
1,1-Dichloropropene	ug/L	<0.75	1.0	03/25/11 08:48	
1,2,3-Trichlorobenzene	ug/L	<0.74	1.0	03/25/11 08:48	
1,2,3-Trichloropropane	ug/L	<0.99	1.0	03/25/11 08:48	
1,2,4-Trichlorobenzene	ug/L	<0.97	1.0	03/25/11 08:48	
1,2,4-Trimethylbenzene	ug/L	<0.97	1.0	03/25/11 08:48	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	5.0	03/25/11 08:48	
1,2-Dibromoethane (EDB)	ug/L	<0.56	1.0	03/25/11 08:48	
1,2-Dichlorobenzene	ug/L	<0.83	1.0	03/25/11 08:48	
1,2-Dichloroethane	ug/L	<0.36	1.0	03/25/11 08:48	
1,2-Dichloropropane	ug/L	<0.49	1.0	03/25/11 08:48	
1,3,5-Trimethylbenzene	ug/L	<0.83	1.0	03/25/11 08:48	
1,3-Dichlorobenzene	ug/L	<0.87	1.0	03/25/11 08:48	
1,3-Dichloropropane	ug/L	<0.61	1.0	03/25/11 08:48	
1,4-Dichlorobenzene	ug/L	<0.95	1.0	03/25/11 08:48	
2,2-Dichloropropane	ug/L	<0.62	1.0	03/25/11 08:48	
2-Chlorotoluene	ug/L	<0.85	1.0	03/25/11 08:48	
4-Chlorotoluene	ug/L	<0.74	1.0	03/25/11 08:48	
Benzene	ug/L	<0.41	1.0	03/25/11 08:48	
Bromobenzene	ug/L	<0.82	1.0	03/25/11 08:48	
Bromochloromethane	ug/L	<0.97	1.0	03/25/11 08:48	
Bromodichloromethane	ug/L	<0.56	1.0	03/25/11 08:48	
Bromoform	ug/L	<0.94	1.0	03/25/11 08:48	
Bromomethane	ug/L	<0.91	1.0	03/25/11 08:48	
Carbon tetrachloride	ug/L	<0.49	1.0	03/25/11 08:48	
Chlorobenzene	ug/L	<0.41	1.0	03/25/11 08:48	
Chloroethane	ug/L	<0.97	1.0	03/25/11 08:48	
Chloroform	ug/L	<1.3	5.0	03/25/11 08:48	
Chloromethane	ug/L	<0.24	1.0	03/25/11 08:48	
cis-1,2-Dichloroethene	ug/L	<0.83	1.0	03/25/11 08:48	
cis-1,3-Dichloropropene	ug/L	<0.20	1.0	03/25/11 08:48	
Dibromochloromethane	ug/L	<0.81	1.0	03/25/11 08:48	
Dibromomethane	ug/L	<0.60	1.0	03/25/11 08:48	
Dichlorodifluoromethane	ug/L	<0.99	1.0	03/25/11 08:48	
Diisopropyl ether	ug/L	<0.76	1.0	03/25/11 08:48	
Ethylbenzene	ug/L	<0.54	1.0	03/25/11 08:48	
Hexachloro-1,3-butadiene	ug/L	<0.67	5.0	03/25/11 08:48	
Isopropylbenzene (Cumene)	ug/L	<0.59	1.0	03/25/11 08:48	

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# **REPORT OF LABORATORY ANALYSIS**

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Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4043586

 METHOD BLANK:
 427144
 Matrix:
 Water

 Associated Lab Samples:
 4043586001, 4043586002, 4043586003, 4043586004, 4043586005, 4043586006
 Departure

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	<1.8	2.0	03/25/11 08:48	
Methyl-tert-butyl ether	ug/L	<0.61	1.0	03/25/11 08:48	
Methylene Chloride	ug/L	<0.43	1.0	03/25/11 08:48	
n-Butylbenzene	ug/L	<0.93	1.0	03/25/11 08:48	
n-Propylbenzene	ug/L	<0.81	1.0	03/25/11 08:48	
Naphthalene	ug/L	<0.89	5.0	03/25/11 08:48	
o-Xylene	ug/L	<0.83	1.0	03/25/11 08:48	
p-Isopropyltoluene	ug/L	<0.67	1.0	03/25/11 08:48	
sec-Butylbenzene	ug/L	<0.89	5.0	03/25/11 08:48	
Styrene	ug/L	<0.86	1.0	03/25/11 08:48	
tert-Butylbenzene	ug/L	<0.97	1.0	03/25/11 08:48	
Tetrachloroethene	ug/L	<0.45	1.0	03/25/11 08:48	
Toluene	ug/L	<0.67	1.0	03/25/11 08:48	
trans-1,2-Dichloroethene	ug/L	<0.89	1.0	03/25/11 08:48	
trans-1,3-Dichloropropene	ug/L	<0.19	1.0	03/25/11 08:48	
Trichloroethene	ug/L	<0.48	1.0	03/25/11 08:48	
Trichlorofluoromethane	ug/L	<0.79	1.0	03/25/11 08:48	
Vinyl chloride	ug/L	<0.18	1.0	03/25/11 08:48	
4-Bromofluorobenzene (S)	%	82	69-130	03/25/11 08:48	
Dibromofluoromethane (S)	%	94	70-134	03/25/11 08:48	
Toluene-d8 (S)	%	92	70-130	03/25/11 08:48	

_ABORATORY CONTROL SAMPLE & LCSD: 427145 427146										
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	58.7	58.5	117	117	70-132	.3	20	
1,1,2,2-Tetrachloroethane	ug/L	50	49.9	50.8	100	102	63-130	2	20	
1,1,2-Trichloroethane	ug/L	50	51.4	52.8	103	106	70-130	3	20	
1,1-Dichloroethane	ug/L	50	60.3	60.6	121	121	70-132	.5	20	
1,1-Dichloroethene	ug/L	50	59.3	59.5	119	119	70-137	.4	20	
1,2-Dichloroethane	ug/L	50	56.0	56.7	112	113	70-130	1	20	
1,2-Dichloropropane	ug/L	50	54.9	54.2	110	108	70-130	1	20	
Benzene	ug/L	50	59.5	59.2	119	118	70-130	.5	20	
Bromodichloromethane	ug/L	50	53.8	54.2	108	108	70-131	.7	20	
Bromoform	ug/L	50	48.4	50.1	97	100	70-130	3	20	
Bromomethane	ug/L	50	72.2	73.9	144	148	53-160	2	20	
Carbon tetrachloride	ug/L	50	60.8	61.4	122	123	70-130	1	20	
Chlorobenzene	ug/L	50	54.2	55.0	108	110	70-130	1	20	
Chloroethane	ug/L	50	61.4	60.7	123	121	70-147	1	20	
Chloroform	ug/L	50	55.3	56.3	111	113	70-130	2	20	
Chloromethane	ug/L	50	59.9	60.5	120	121	41-137	1	20	
cis-1,2-Dichloroethene	ug/L	50	55.4	54.9	111	110	70-130	.8	20	
cis-1,3-Dichloropropene	ug/L	50	53.6	53.2	107	106	70-130	.8	20	
Dibromochloromethane	ug/L	50	50.9	50.9	102	102	70-130	.05	20	
Ethylbenzene	ug/L	50	56.4	56.2	113	112	70-130	.4	20	

Date: 03/28/2011 05:19 PM

# **REPORT OF LABORATORY ANALYSIS**

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#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4043586

LABORATORY CONTROL SAMPLE & LCSD: 427145 427146										
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
m&p-Xylene	ug/L	100	114	114	114	114	70-130	.08	20	
Methylene Chloride	ug/L	50	55.2	56.0	110	112	70-130	1	20	
o-Xylene	ug/L	50	55.5	55.8	111	112	70-130	.6	20	
Styrene	ug/L	50	55.9	56.3	112	113	70-130	.7	20	
Tetrachloroethene	ug/L	50	53.6	53.5	107	107	70-130	.2	20	
Toluene	ug/L	50	56.4	56.4	113	113	70-130	.03	20	
trans-1,2-Dichloroethene	ug/L	50	58.5	58.4	117	117	70-130	.2	20	
trans-1,3-Dichloropropene	ug/L	50	52.5	52.4	105	105	70-130	.1	20	
Trichloroethene	ug/L	50	56.8	57.1	114	114	70-130	.4	20	
Vinyl chloride	ug/L	50	55.3	56.4	111	113	47-131	2	20	
4-Bromofluorobenzene (S)	%				86	88	69-130			
Dibromofluoromethane (S)	%				93	96	70-134			
Toluene-d8 (S)	%				95	96	70-130			

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# **REPORT OF LABORATORY ANALYSIS**

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# QUALIFIERS

Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4043586

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

**RPD** - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

#### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

#### ANALYTE QUALIFIERS

Z3 Methylene chloride is a common laboratory contaminant. Results for this analyte should be considered estimated unless the amount found in the sample is 3 to 5 times higher than that found in the method blank.

## **REPORT OF LABORATORY ANALYSIS**

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Pace Analytical Services, Inc. 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

August 16, 2012

Chad Fradette Mach IV Engineering & Surveying 211 N. Broadway Suite 114 Green Bay, WI 54303

# RE: Project: 0315-01-10 MILLER PROPERTY Pace Project No.: 4065017

Dear Chad Fradette:

Enclosed are the analytical results for sample(s) received by the laboratory on August 09, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten

brian.basten@pacelabs.com Project Manager

Enclosures



# **REPORT OF LABORATORY ANALYSIS**



## CERTIFICATIONS

Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

#### **Green Bay Certification IDs**

1241 Bellevue Street, Green Bay, WI 54302 Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334

New York Certification #: 11888 North Carolina Certification #: 503 North Dakota Certification #: R-150 South Carolina Certification #: 83006001 US Dept of Agriculture #: S-76505 Wisconsin Certification #: 405132750

# **REPORT OF LABORATORY ANALYSIS**



# SAMPLE SUMMARY

#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4065017001	E2711 KROK RD	Water	08/09/12 11:15	08/09/12 15:15
4065017002	MW-1	Water	08/09/12 14:30	08/09/12 15:15
4065017003	MW-2	Water	08/09/12 14:00	08/09/12 15:15
4065017004	MW-3	Water	08/09/12 11:45	08/09/12 15:15
4065017005	MW-4	Water	08/09/12 13:15	08/09/12 15:15
4065017006	MW-5	Water	08/09/12 12:15	08/09/12 15:15

# **REPORT OF LABORATORY ANALYSIS**



# SAMPLE ANALYTE COUNT

Project:0315-01-10 MILLER PROPERTYPace Project No.:4065017

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4065017001	E2711 KROK RD	EPA 6010	DLB	1	PASI-G
		EPA 8260	SMT	64	PASI-G
4065017002	MW-1	WI MOD GRO	LCM	9	PASI-G
		EPA 6010	DLB	1	PASI-G
4065017003	MW-2	WI MOD GRO	LCM	9	PASI-G
		EPA 6010	DLB	1	PASI-G
4065017004	MW-3	WI MOD GRO	LCM	9	PASI-G
		EPA 6010	DLB	1	PASI-G
4065017005	MW-4	WI MOD GRO	LCM	9	PASI-G
		EPA 6010	DLB	1	PASI-G
4065017006	MW-5	WI MOD GRO	LCM	9	PASI-G
		EPA 6010	DLB	1	PASI-G

# **REPORT OF LABORATORY ANALYSIS**



Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

#### Method: WI MOD GRO

Description:WIGRO GCVClient:Mach IV EngineeringDate:August 16, 2012

#### General Information:

5 samples were analyzed for WI MOD GRO. All samples were received in acceptable condition with any exceptions noted below.

#### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

#### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

#### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

#### **Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

#### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

#### Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

## QC Batch: GCV/8832

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 4065008004

- M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
  - MS (Lab ID: 652404)
    - Benzene
  - MSD (Lab ID: 652405)
    - Benzene

#### Additional Comments:

# **REPORT OF LABORATORY ANALYSIS**



Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

# Method:EPA 6010Description:6010 MET ICPClient:Mach IV EngineeringDate:August 16, 2012

#### General Information:

6 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

#### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

#### Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

#### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

#### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

#### Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

#### Additional Comments:

# **REPORT OF LABORATORY ANALYSIS**



Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

#### Method: EPA 8260

Description:8260 MSVClient:Mach IV EngineeringDate:August 16, 2012

#### General Information:

1 sample was analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

#### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):** All criteria were within method requirements with any exceptions noted below.

#### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

#### **Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

#### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

#### Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

#### **Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

# **REPORT OF LABORATORY ANALYSIS**



#### Project: 0315-01-10 MILLER PROPERTY

#### Pace Project No.: 4065017

Sample: E2711 KROK RD	Lab ID:	4065017001	Collected	d: 08/09/12	2 11:15	Received: 08/	09/12 15:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytica	I Method: EPA 6	6010 Prepai	ration Methe	od: EP/	A 3010			
Lead	<b>&lt;1.4</b> u	ug/L	7.5	1.4	1	08/12/12 17:50	08/13/12 20:49	7439-92-1	
8260 MSV	Analytica	I Method: EPA 8	3260						
Benzene	<b>&lt;0.41</b> (	ug/L	1.0	0.41	1		08/14/12 19:15	71-43-2	
Bromobenzene	<b>&lt;0.82</b> ເ	ug/L	1.0	0.82	1		08/14/12 19:15	108-86-1	
Bromochloromethane	<b>&lt;0.97</b> u	ug/L	1.0	0.97	1		08/14/12 19:15	74-97-5	
Bromodichloromethane	<b>&lt;0.56</b> ເ	ug/L	1.0	0.56	1		08/14/12 19:15	75-27-4	
Bromoform	<b>&lt;0.94</b> ເ	ug/L	1.0	0.94	1		08/14/12 19:15	75-25-2	
Bromomethane	<b>&lt;0.91</b> ເ	ug/L	1.0	0.91	1		08/14/12 19:15	74-83-9	
n-Butylbenzene	<b>&lt;0.93</b> u	ug/L	1.0	0.93	1		08/14/12 19:15	104-51-8	
sec-Butylbenzene	< <b>0.89</b> (	ug/L	5.0	0.89	1		08/14/12 19:15	135-98-8	
tert-Butylbenzene	<b>&lt;0.97</b> u	ug/L	1.0	0.97	1		08/14/12 19:15	98-06-6	
Carbon tetrachloride	< <b>0.49</b> (	ug/L	1.0	0.49	1		08/14/12 19:15	56-23-5	
Chlorobenzene	<b>&lt;0.41</b> ເ	ug/L	1.0	0.41	1		08/14/12 19:15	108-90-7	
Chloroethane	<b>&lt;0.97</b> ເ	ug/L	1.0	0.97	1		08/14/12 19:15	75-00-3	
Chloroform	<b>&lt;1.3</b> ເ	ug/L	5.0	1.3	1		08/14/12 19:15	67-66-3	
Chloromethane	<b>0.80J</b> ເ	ug/L	1.0	0.24	1		08/14/12 19:15	74-87-3	
2-Chlorotoluene	<b>&lt;0.85</b> ເ	ug/L	1.0	0.85	1		08/14/12 19:15	95-49-8	
4-Chlorotoluene	<b>&lt;0.74</b> u	ug/L	1.0	0.74	1		08/14/12 19:15	106-43-4	
1,2-Dibromo-3-chloropropane	<b>&lt;1.7</b> u	ug/L	5.0	1.7	1		08/14/12 19:15	96-12-8	
Dibromochloromethane	<b>&lt;0.81</b> u	ug/L	1.0	0.81	1		08/14/12 19:15	124-48-1	
1,2-Dibromoethane (EDB)	<b>&lt;0.56</b> (	ug/L	1.0	0.56	1		08/14/12 19:15	106-93-4	
Dibromomethane	<b>&lt;0.60</b> u	ug/L	1.0	0.60	1		08/14/12 19:15	74-95-3	
1,2-Dichlorobenzene	<b>&lt;0.83</b> u	ug/L	1.0	0.83	1		08/14/12 19:15	95-50-1	
1,3-Dichlorobenzene	<b>&lt;0.87</b> u	ug/L	1.0	0.87	1		08/14/12 19:15	541-73-1	
1,4-Dichlorobenzene	<b>&lt;0.95</b> (	ug/L	1.0	0.95	1		08/14/12 19:15	106-46-7	
Dichlorodifluoromethane	< <b>0.99</b> (	ug/L	1.0	0.99	1		08/14/12 19:15	75-71-8	
1,1-Dichloroethane	<b>&lt;0.75</b> u	ug/L	1.0	0.75	1		08/14/12 19:15	75-34-3	
1,2-Dichloroethane	< <b>0.36</b> (	ug/L	1.0	0.36	1		08/14/12 19:15	107-06-2	
1,1-Dichloroethene	< <b>0.57</b> u	ug/L	1.0	0.57	1		08/14/12 19:15	75-35-4	
cis-1,2-Dichloroethene	< <b>0.83</b> (	ug/L	1.0	0.83	1		08/14/12 19:15	156-59-2	
trans-1,2-Dichloroethene	< <b>0.89</b> (	ug/L	1.0	0.89	1		08/14/12 19:15	156-60-5	
1,2-Dichloropropane	< <b>0.49</b> (	ug/L	1.0	0.49	1		08/14/12 19:15	78-87-5	
1,3-Dichloropropane	<b>&lt;0.61</b> u	ug/L	1.0	0.61	1		08/14/12 19:15	142-28-9	
2,2-Dichloropropane	<b>&lt;0.62</b> ເ	ug/L	1.0	0.62	1		08/14/12 19:15	594-20-7	
1,1-Dichloropropene	<b>&lt;0.75</b> ເ	ug/L	1.0	0.75	1		08/14/12 19:15	563-58-6	
cis-1,3-Dichloropropene	< <b>0.20</b> u	ug/L	1.0	0.20	1		08/14/12 19:15	10061-01-5	
trans-1,3-Dichloropropene	<b>&lt;0.19</b> ເ	ug/L	1.0	0.19	1		08/14/12 19:15	10061-02-6	
Diisopropyl ether	<b>&lt;0.76</b> ເ	ug/L	1.0	0.76	1		08/14/12 19:15	108-20-3	
Ethylbenzene	<0.54	ug/L	1.0	0.54	1		08/14/12 19:15	100-41-4	
Hexachloro-1,3-butadiene	< <b>0.67</b> u	ug/L	5.0	0.67	1		08/14/12 19:15	87-68-3	
Isopropylbenzene (Cumene)	< <b>0.59</b> u	ug/L	1.0	0.59	1		08/14/12 19:15	98-82-8	
p-lsopropyltoluene	< <b>0.67</b> u	ug/L	1.0	0.67	1		08/14/12 19:15	99-87-6	
Methylene Chloride	< <b>0.43</b> u	ug/L	1.0	0.43	1		08/14/12 19:15	75-09-2	
Methyl-tert-butyl ether	<0.61	ua/L	1.0	0.61	1		08/14/12 19:15	1634-04-4	
Naphthalene	<0.89	ug/L	5.0	0.89	1		08/14/12 19:15	91-20-3	

Date: 08/16/2012 02:50 PM

# **REPORT OF LABORATORY ANALYSIS**

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#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

Sample: E2711 KROK RD	Lab ID:	4065017001	Collecte	d: 08/09/1	2 11:15	Received: 08	3/09/12 15:15 Ma	atrix: Water			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
8260 MSV	Analytical	Method: EPA	8260								
n-Propylbenzene	<b>&lt;0.81</b> u	g/L	1.0	0.81	1		08/14/12 19:15	103-65-1			
Styrene	<b>&lt;0.86</b> u	g/L	1.0	0.86	1		08/14/12 19:15 100-42-5				
1,1,1,2-Tetrachloroethane	<b>&lt;0.92</b> u	g/L	1.0	0.92	1		08/14/12 19:15	630-20-6			
1,1,2,2-Tetrachloroethane	<b>&lt;0.20</b> u	g/L	1.0	0.20	1		08/14/12 19:15	79-34-5			
Tetrachloroethene	<b>&lt;0.45</b> u	g/L	1.0	0.45	1		08/14/12 19:15	127-18-4			
Toluene	<b>&lt;0.67</b> u	g/L	1.0	0.67	1		08/14/12 19:15	108-88-3			
1,2,3-Trichlorobenzene	<b>&lt;0.74</b> u	g/L	1.0	0.74	1		08/14/12 19:15	87-61-6			
1,2,4-Trichlorobenzene	<b>&lt;0.97</b> u	g/L	5.0	0.97	1		08/14/12 19:15	120-82-1			
1,1,1-Trichloroethane	<b>&lt;0.90</b> u	g/L	1.0	0.90	1		08/14/12 19:15	71-55-6			
1,1,2-Trichloroethane	<b>&lt;0.42</b> u	g/L	1.0	0.42	1		08/14/12 19:15	79-00-5			
Trichloroethene	<b>&lt;0.48</b> u	g/L	1.0	0.48	1		08/14/12 19:15	79-01-6			
Trichlorofluoromethane	< <b>0.79</b> u	a/L	1.0	0.79	1		08/14/12 19:15	75-69-4			
1,2,3-Trichloropropane	< <b>0.99</b> u	g/L	1.0	0.99	1		08/14/12 19:15 96-18-4				
1,2,4-Trimethylbenzene	<b>&lt;0.97</b> u	g/L	1.0	0.97	1		08/14/12 19:15	95-63-6			
1,3,5-Trimethylbenzene	<b>&lt;0.83</b> u	g/L	1.0	0.83	1		08/14/12 19:15	108-67-8			
Vinyl chloride	<b>&lt;0.18</b> u	g/L	1.0	0.18	1		08/14/12 19:15	75-01-4			
m&p-Xylene	<b>&lt;1.8</b> u	a/L	2.0	1.8	1		08/14/12 19:15	179601-23-1			
o-Xylene	< <b>0.83</b> u	a/L	1.0	0.83	1		08/14/12 19:15	95-47-6			
Surrogates		0									
4-Bromofluorobenzene (S)	87 %	6.	43-137		1		08/14/12 19:15	460-00-4			
Dibromofluoromethane (S)	95 %	6.	70-130		1		08/14/12 19:15	1868-53-7			
Toluene-d8 (S)	102 %	6.	55-137		1		08/14/12 19:15	2037-26-5			
Sample: MW-1	Lab ID:	4065017002	Collecte	d: 08/09/1	2 14:30	Received: 08	3/09/12 15:15 M	atrix: Water			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
WIGRO GCV	Analytical	Method: WI M	OD GRO								
Benzene	<b>134</b> u	g/L	2.0	0.78	2		08/10/12 12:57	71-43-2			
Ethylbenzene	<b>193</b> u	g/L	2.0	0.83	2		08/10/12 12:57	100-41-4			
Methyl-tert-butyl ether1.5Jug/L2.0		0.76	2		08/10/12 12:57	1634-04-4					
Naphthalene         33.0 ug/L         2.0         0.81         2         08/10/12 12:57         1034-04-4				91-20-3							
Toluene	<b>134</b> u	g/L	2.0	0.83	2		08/10/12 12:57	108-88-3			

Lead	<b>&lt;1.4</b> ug/L	7.5	1.4	1	08/12/12 17:50	08/13/12 20:55	7439-92-1
6010 MET ICP	Analytical Method: E	PA 6010 Preparatio	on Metho	d: EP/	A 3010		
a,a,a-Trifluorotoluene (S)	105 %.	80-120		2		08/10/12 12:57	98-08-8
Xylene (Total)	<b>105</b> ug/L	6.0	2.5	2		08/10/12 12:57	1330-20-7
1,3,5-Trimethylbenzene	<b>50.6</b> ug/L	2.0	0.79	2		08/10/12 12:57	108-67-8
1,2,4-Trimethylbenzene	<b>77.1</b> ug/L	2.0	0.86	2		08/10/12 12:57	95-63-6
Toluene	134 ug/L	2.0	0.83	2		08/10/12 12:57	108-88-3

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# **REPORT OF LABORATORY ANALYSIS**

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#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

Sample: MW-2	Lab ID:	4065017003	Collected	: 08/09/12	2 14:00	Received: 08/	09/12 15:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytica	I Method: WI M	OD GRO						
Benzene	<0.39	ua/L	1.0	0.39	1		08/13/12 09:53	71-43-2	
Ethylbenzene	<0.41	ua/L	1.0	0.41	1		08/13/12 09:53	100-41-4	
Methyl-tert-butyl ether	<0.38	ua/L	1.0	0.38	1		08/13/12 09:53	1634-04-4	
Naphthalene	<0.40	ua/L	1.0	0.40	1		08/13/12 09:53	91-20-3	
Toluene	0.81J	ua/L	1.0	0.42	1		08/13/12 09:53	108-88-3	
1.2.4-Trimethylbenzene	<0.43	ua/L	1.0	0.43	1		08/13/12 09:53	95-63-6	
1.3.5-Trimethylbenzene	<0.40	ua/L	1.0	0.40	1		08/13/12 09:53	108-67-8	
Xvlene (Total)	<1.3	ua/L	3.0	1.3	1		08/13/12 09:53	1330-20-7	
Surrogates			0.0		•		00,10,1200100		
a,a,a-Trifluorotoluene (S)	101	%.	80-120		1		08/13/12 09:53	98-08-8	
6010 MET ICP	Analytica	I Method: EPA 6	010 Prepara	ation Meth	od: EPA	3010			
Lead	<1.4	ug/L	7.5	1.4	1	08/12/12 17:50	08/13/12 20:57	7439-92-1	
Sample: MW-3	Lab ID:	4065017004	Collected	: 08/09/12	2 11:45	Received: 08/	09/12 15:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytica	I Method: WI M	OD GRO						
Benzene	<0.39	ug/L	1.0	0.39	1		08/10/12 11:39	71-43-2	
Ethylbenzene	<0.41	ug/L	1.0	0.41	1		08/10/12 11:39	100-41-4	
Methyl-tert-butyl ether	<0.38	ug/L	1.0	0.38	1		08/10/12 11:39	1634-04-4	
Naphthalene	<0.40	ug/L	1.0	0.40	1		08/10/12 11:39	91-20-3	
Toluene	1.9	ug/L	1.0	0.42	1		08/10/12 11:39	108-88-3	
1,2,4-Trimethylbenzene	<0.43	ug/L	1.0	0.43	1		08/10/12 11:39	95-63-6	
1,3,5-Trimethylbenzene	<0.40	ug/L	1.0	0.40	1		08/10/12 11:39	108-67-8	
Xylene (Total)	<1.3	ug/L	3.0	1.3	1		08/10/12 11:39	1330-20-7	
Surrogates		0							
a,a,a-Trifluorotoluene (S)	103	%.	80-120		1		08/10/12 11:39	98-08-8	
6010 MET ICP	Analytica	I Method: EPA 6	6010 Prepara	ation Meth	od: EPA	3010			
Lead	<1.4	ug/L	7.5	1.4	1	08/12/12 17:50	08/13/12 20:59	7439-92-1	
Sample: MW-4	Lab ID:	4065017005	Collected	: 08/09/12	2 13:15	Received: 08/	09/12 15:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytica	I Method: WI M	OD GRO						
Benzene	<0.39	ug/L	1.0	0.39	1		08/10/12 12:05	71-43-2	
Ethylbenzene	<0.41	ug/L	1.0	0.41	1		08/10/12 12:05	100-41-4	
Methyl-tert-butyl ether	<0.38	ug/L	1.0	0.38	1		08/10/12 12:05	1634-04-4	
Naphthalene	<0.40	ug/L	1.0	0.40	1		08/10/12 12:05	91-20-3	

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# **REPORT OF LABORATORY ANALYSIS**

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#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

Sample: MW-4	Lab ID:	4065017005	Collected	d: 08/09/12	2 13:15	Received: 08/	/09/12 15:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytica	Method: WI M	OD GRO						
Toluene	0.70J u	ıg/L	1.0	0.42	1		08/10/12 12:05	108-88-3	
1,2,4-Trimethylbenzene	<b>&lt;0.43</b> ເ	ıg/L	1.0	0.43	1		08/10/12 12:05	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;0.40</b> ເ	ıg/L	1.0	0.40	1		08/10/12 12:05	108-67-8	
Xylene (Total) <b>Surrogates</b>	<b>&lt;1.3</b> u	ıg/L	3.0	1.3	1		08/10/12 12:05	1330-20-7	
a,a,a-Trifluorotoluene (S)	100 9	%.	80-120		1		08/10/12 12:05	98-08-8	
6010 MET ICP	Analytica	Method: EPA 6	6010 Prepa	ration Meth	od: EP/	A 3010			
Lead	<1.4 \	ıg/L	7.5	1.4	1	08/12/12 17:50	08/13/12 21:01	7439-92-1	
Sample: MW-5	Lab ID:	4065017006	Collected	d: 08/09/12	2 12:15	Received: 08/	/09/12 15:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytica	Method: WI M	OD GRO						
Benzene	< <b>0.39</b> (	ıg/L	1.0	0.39	1		08/10/12 12:31	71-43-2	
Ethylbenzene	<b>&lt;0.41</b> ເ	ıg/L	1.0	0.41	1		08/10/12 12:31	100-41-4	
Methyl-tert-butyl ether	<b>&lt;0.38</b> ເ	ıg/L	1.0	0.38	1		08/10/12 12:31	1634-04-4	
Naphthalene	<b>&lt;0.40</b> u	ıg/L	1.0	0.40	1		08/10/12 12:31	91-20-3	
Toluene	<b>0.61J</b> ເ	ıg/L	1.0	0.42	1		08/10/12 12:31	108-88-3	
1,2,4-Trimethylbenzene	<b>&lt;0.43</b> ເ	ıg/L	1.0	0.43	1		08/10/12 12:31	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;0.40</b> u	ıg/L	1.0	0.40	1		08/10/12 12:31	108-67-8	
Xylene (Total) <b>Surrogates</b>	<b>&lt;1.3</b> u	ıg/L	3.0	1.3	1		08/10/12 12:31	1330-20-7	
a,a,a-Trifluorotoluene (S)	101 9	%.	80-120		1		08/10/12 12:31	98-08-8	
6010 MET ICP	Analytica	Method: EPA 6	6010 Prepa	ration Meth	od: EP/	A 3010			
Lead	<b>&lt;1.4</b> u	ıg/L	7.5	1.4	1	08/12/12 17:50	08/13/12 21:03	7439-92-1	

# **REPORT OF LABORATORY ANALYSIS**



Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

QC Batch:	GCV	/8832
QC Batch Method:	WI M	IOD GRO
Associated Lab Sam	oles:	4065017002,

D GRO Analysis Description: WIGRO GCV Water 4065017002, 4065017003, 4065017004, 4065017005, 4065017006

Analysis Method:

WI MOD GRO

METHOD BLANK: 65227	Matrix: Water	
Associated Lab Samples:	4065017002, 4065017003, 4065017004, 4065017005, 40650	17006

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.43	1.0	08/10/12 09:00	
1,3,5-Trimethylbenzene	ug/L	<0.40	1.0	08/10/12 09:00	
Benzene	ug/L	<0.39	1.0	08/10/12 09:00	
Ethylbenzene	ug/L	<0.41	1.0	08/10/12 09:00	
Methyl-tert-butyl ether	ug/L	<0.38	1.0	08/10/12 09:00	
Naphthalene	ug/L	<0.40	1.0	08/10/12 09:00	
Toluene	ug/L	<0.42	1.0	08/10/12 09:00	
Xylene (Total)	ug/L	<1.3	3.0	08/10/12 09:00	
a,a,a-Trifluorotoluene (S)	%.	101	80-120	08/10/12 09:00	

LABORATORY CONTROL SAMPLE	& LCSD: 652278		65	2279						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	19.9	19.7	99	98	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	20.0	19.9	100	100	80-120	0	20	
Benzene	ug/L	20	20.9	21.0	105	105	80-120	0	20	
Ethylbenzene	ug/L	20	20.1	20.1	101	100	80-120	0	20	
Methyl-tert-butyl ether	ug/L	20	19.4	19.5	97	98	80-120	0	20	
Naphthalene	ug/L	20	18.4	18.3	92	92	80-120	1	20	
Toluene	ug/L	20	20.4	20.4	102	102	80-120	0	20	
Xylene (Total)	ug/L	60	60.2	60.3	100	100	80-120	0	20	
a,a,a-Trifluorotoluene (S)	%.				100	100	80-120			

MATRIX SPIKE & MATRIX SI	PIKE DUPLICAT	E: 65240	4		652405							
Parameter	4 Linite	065008004 Result	MS Spike	MSD Spike	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec	PPD	Max	Qual
i alametei			Conc.	Conc.	Result	Result	70 Kec	70 1100	Linito			Quai
1,2,4-Trimethylbenzene	ug/L	200	500	500	729	739	106	108	10-200	1	20	
1,3,5-Trimethylbenzene	ug/L	64.7	500	500	586	590	104	105	56-169	1	20	
Benzene	ug/L	8220	500	500	9350	9300	226	217	33-173	1	20	M1
Ethylbenzene	ug/L	428	500	500	974	973	109	109	49-158	0	20	
Methyl-tert-butyl ether	ug/L	436	500	500	912	884	95	90	80-130	3	20	
Naphthalene	ug/L	49.5	500	500	487	489	87	88	67-141	0	20	
Toluene	ug/L	40.9	500	500	558	547	103	101	79-132	2	20	
Xylene (Total)	ug/L	347	1500	1500	1890	1880	103	102	42-173	1	20	
a,a,a-Trifluorotoluene (S)	%.						96	94	80-120			

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# **REPORT OF LABORATORY ANALYSIS**



Project:	0315-01-10 N	/ILLER PRO	PERTY										
Pace Project No.:	4065017												
QC Batch:	MPRP/7332	2		Analys	is Method:	E	PA 6010						
QC Batch Method:	EPA 3010			Analys	is Descript	ion: 6	010 MET						
Associated Lab Sar	mples: 4065	017001, 406	5017002, 4	065017003	, 40650170	004, 40650	017005, 4065	5017006					
METHOD BLANK:	653595			N	latrix: Wat	ter							
Associated Lab Sar	mples: 4065	017001, 406	5017002, 4	065017003	, 40650170	004, 40650	017005, 4065	5017006					
				Blank	R	eporting							
Parar	neter		Units	Result	t	Limit	Analyz	ed	Qualifiers				
Lead		ug/L			<1.4	7.5	5 08/13/12	20:02					
LABORATORY CO	NTROL SAMP	LE: 65359	6										
				Spike	LCS	;	LCS	% Red	;				
Parar	neter	I	Units	Conc.	Resu	lt	% Rec	Limits	Qı	alifiers			
Lead		ug/L		100		98.3	98	80	-120		-		
MATRIX SPIKE & N	ATRIX SPIKE	DUPLICATE	65359	7		653598							
				MS	MSD								
		40	64989001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parame	ter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Lead		ug/L	3.9J	100	100	95.4	95.0	91	91	75-125	0	20	

# **REPORT OF LABORATORY ANALYSIS**



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Project: (	0315-01-10 MILLE	R PROPERTY					
Pace Project No.:	4065017						
,							
QC Batch:	Batch: MSV/16241			nod: EP	A 8260		
QC Batch Method:	QC Batch Method: EPA 8260			cription: 82	60 MSV		
Associated Lab Samp	oles: 406501700	01					
METHOD BLANK: 653573			Matrix:	Water			
Associated Lab Samp	oles: 406501700	01					
			Blank	Reporting			
Parame	eter	Units	Result	Limit	Analyzed	Qualifiers	
1 1 1 2 Totrachloroothano				1.0	08/14/12 17:20		
1 1 1-Trichloroethane		ug/L	<0.90	1.0	08/14/12 17:20		
1 1 2 2-Tetrachloroethane		ug/L	<0.20	1.0	08/14/12 17:20		
1 1 2-Trichloroethane		ug/L	< 0.42	1.0	08/14/12 17:20		
1.1-Dichloroethane		ug/L	<0.75	1.0	08/14/12 17:20		
1.1-Dichloroethene		ug/L	<0.57	1.0	08/14/12 17:20		
1,1-Dichloropropene ug/L		ug/L	<0.75	1.0	08/14/12 17:20		
1,2,3-Trichlorobenzene		ug/L	<0.74	1.0	08/14/12 17:20		
1,2,3-Trichloropropane		ug/L	<0.99	1.0	08/14/12 17:20		
1,2,4-Trichlorobenzene ug/L		ug/L	<0.97	5.0	08/14/12 17:20		
1,2,4-Trimethylbenzene ug/L		ug/L	<0.97	1.0	08/14/12 17:20		
1,2-Dibromo-3-chloropropane		ug/L	<1.7	5.0	08/14/12 17:20		
1,2-Dibromoethane (E	EDB)	ug/L	<0.56	1.0	08/14/12 17:20		
1,2-Dichlorobenzene		ug/L	<0.83	1.0	08/14/12 17:20		
1,2-Dichloroethane		ug/L	<0.36	1.0	08/14/12 17:20		
1,2-Dichloropropane		ug/L	<0.49	1.0	08/14/12 17:20		
1,3,5-Trimethylbenzene		ug/L	<0.83	1.0	08/14/12 17:20		
1,3-Dichlorobenzene		ug/L	<0.87	1.0	08/14/12 17:20		
1,3-Dichloropropane		ug/L	<0.61	1.0	08/14/12 17:20		
1,4-Dichlorobenzene u		ug/L	<0.95	1.0	08/14/12 17:20		
2,2-Dichloropropane		ug/L	<0.62	1.0	08/14/12 17:20		
2-Chlorotoluene ug/L		ug/L	<0.85	1.0	08/14/12 17:20		
4-Chlorotoluene ug/L		<0.74	1.0	08/14/12 17:20			
Benzene ug/L		ug/L	<0.41	1.0	08/14/12 17:20		
Bromobenzene ug/L		ug/L	<0.82	1.0	08/14/12 17:20		
Bromochloromethane ug/L		ug/L	<0.97	1.0	08/14/12 17:20		
Bromodichloromethane ug/L		ug/L	<0.56	1.0	08/14/12 17:20		
Bromoform ug/L		ug/L	<0.94	1.0	08/14/12 17:20		

<0.91

<0.49

<0.41

<0.97

<1.3

<0.24

<0.83

<0.20

<0.81

< 0.60

<0.99

ug/L

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Bromomethane

Chlorobenzene

Chloromethane

Dibromomethane

Chloroethane

Chloroform

Carbon tetrachloride

cis-1,2-Dichloroethene

cis-1,3-Dichloropropene

Dibromochloromethane

Dichlorodifluoromethane

# **REPORT OF LABORATORY ANALYSIS**

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1.0

1.0 08/14/12 17:20

1.0 08/14/12 17:20

1.0 08/14/12 17:20

5.0 08/14/12 17:20

1.0 08/14/12 17:20

1.0 08/14/12 17:20

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1.0 08/14/12 17:20

1.0 08/14/12 17:20

1.0 08/14/12 17:20

1.0 08/14/12 17:20

1.0 08/14/12 17:20

5.0 08/14/12 17:20

08/14/12 17:20

1.0

08/14/12 17:20

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Matrix: Water

#### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

# METHOD BLANK: 653573

Associated Lab Samples: 4065017001

Parameter	l Inite	Blank Result	Reporting	Analyzed	Qualifiers
				Analyzeu	Quainers
m&p-Xylene	ug/L	<1.8	2.0	08/14/12 17:20	
Methyl-tert-butyl ether	ug/L	<0.61	1.0	08/14/12 17:20	
Methylene Chloride	ug/L	<0.43	1.0	08/14/12 17:20	
n-Butylbenzene	ug/L	<0.93	1.0	08/14/12 17:20	
n-Propylbenzene	ug/L	<0.81	1.0	08/14/12 17:20	
Naphthalene	ug/L	<0.89	5.0	08/14/12 17:20	
o-Xylene	ug/L	<0.83	1.0	08/14/12 17:20	
p-Isopropyltoluene	ug/L	<0.67	1.0	08/14/12 17:20	
sec-Butylbenzene	ug/L	<0.89	5.0	08/14/12 17:20	
Styrene	ug/L	<0.86	1.0	08/14/12 17:20	
tert-Butylbenzene	ug/L	<0.97	1.0	08/14/12 17:20	
Tetrachloroethene	ug/L	<0.45	1.0	08/14/12 17:20	
Toluene	ug/L	<0.67	1.0	08/14/12 17:20	
trans-1,2-Dichloroethene	ug/L	<0.89	1.0	08/14/12 17:20	
trans-1,3-Dichloropropene	ug/L	<0.19	1.0	08/14/12 17:20	
Trichloroethene	ug/L	<0.48	1.0	08/14/12 17:20	
Trichlorofluoromethane	ug/L	<0.79	1.0	08/14/12 17:20	
Vinyl chloride	ug/L	<0.18	1.0	08/14/12 17:20	
4-Bromofluorobenzene (S)	%.	88	43-137	08/14/12 17:20	
Dibromofluoromethane (S)	%.	92	70-130	08/14/12 17:20	
Toluene-d8 (S)	%.	103	55-137	08/14/12 17:20	

LABORATORY CONTROL SAMPLE & LCSD: 653574 653575										
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	39.2	49.8	78	100	70-136	24	20	D6
1,1,2,2-Tetrachloroethane	ug/L	50	41.1	52.5	82	105	70-130	24	20	D6
1,1,2-Trichloroethane	ug/L	50	42.7	54.4	85	109	70-130	24	20	D6
1,1-Dichloroethane	ug/L	50	40.7	52.0	81	104	70-146	25	20	D6
1,1-Dichloroethene	ug/L	50	41.4	51.0	83	102	70-130	21	20	D6
1,2,4-Trichlorobenzene	ug/L	50	38.9	51.4	78	103	70-130	28	20	D6
1,2-Dibromo-3-chloropropane	ug/L	50	33.0	41.7	66	83	46-150	23	20	D6
1,2-Dibromoethane (EDB)	ug/L	50	42.7	54.9	85	110	70-130	25	20	D6
1,2-Dichlorobenzene	ug/L	50	39.6	51.0	79	102	70-130	25	20	D6
1,2-Dichloroethane	ug/L	50	42.4	52.6	85	105	70-144	21	20	D6
1,2-Dichloropropane	ug/L	50	41.8	51.7	84	103	70-136	21	20	D6
1,3-Dichlorobenzene	ug/L	50	38.2	48.8	76	98	70-130	24	20	D6
1,4-Dichlorobenzene	ug/L	50	39.5	49.8	79	100	70-130	23	20	D6
Benzene	ug/L	50	44.8	55.6	90	111	70-137	21	20	D6
Bromodichloromethane	ug/L	50	41.1	52.3	82	105	70-133	24	20	D6
Bromoform	ug/L	50	39.2	50.1	78	100	59-130	25	20	D6
Bromomethane	ug/L	50	29.5	38.7	59	77	41-148	27	20	D6
Carbon tetrachloride	ug/L	50	42.2	52.7	84	105	70-154	22	20	D6
Chlorobenzene	ug/L	50	42.2	52.2	84	104	70-130	21	20	D6
Chloroethane	ug/L	50	39.5	48.8	79	98	70-139	21	20	D6

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# **REPORT OF LABORATORY ANALYSIS**

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# **QUALITY CONTROL DATA**

### Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

LABORATORY CONTROL SAM	ABORATORY CONTROL SAMPLE & LCSD: 653574 653575									
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Chloroform	ug/L	50	42.9	54.5	86	109	70-130	24	20	D6
Chloromethane	ug/L	50	30.0	37.6	60	75	45-154	23	20	D6
cis-1,2-Dichloroethene	ug/L	50	43.0	54.5	86	109	70-130	23	20	D6
cis-1,3-Dichloropropene	ug/L	50	35.1	44.3	70	89	70-136	23	20	D6
Dibromochloromethane	ug/L	50	42.0	52.7	84	105	70-130	22	20	D6
Dichlorodifluoromethane	ug/L	50	22.7	27.9	45	56	20-157	20	20	
Ethylbenzene	ug/L	50	44.3	55.4	89	111	70-130	22	20	D6
Isopropylbenzene (Cumene)	ug/L	50	44.2	55.5	88	111	70-130	23	20	D6
m&p-Xylene	ug/L	100	90.3	114	90	114	70-130	23	20	D6
Methyl-tert-butyl ether	ug/L	50	38.3	47.7	77	95	59-141	22	20	D6
Methylene Chloride	ug/L	50	43.6	54.5	87	109	70-130	22	20	D6
o-Xylene	ug/L	50	45.2	56.9	90	114	70-130	23	20	D6
Styrene	ug/L	50	39.7	50.1	79	100	70-130	23	20	D6
Tetrachloroethene	ug/L	50	39.9	48.7	80	97	70-130	20	20	
Toluene	ug/L	50	45.2	57.1	90	114	70-130	23	20	D6
trans-1,2-Dichloroethene	ug/L	50	42.7	53.5	85	107	70-130	22	20	D6
trans-1,3-Dichloropropene	ug/L	50	37.2	46.5	74	93	55-135	22	20	D6
Trichloroethene	ug/L	50	44.3	54.7	89	109	70-130	21	20	D6
Trichlorofluoromethane	ug/L	50	41.7	51.0	83	102	50-150	20	20	
Vinyl chloride	ug/L	50	35.7	44.9	71	90	61-143	23	20	D6
4-Bromofluorobenzene (S)	%.				98	98	43-137			
Dibromofluoromethane (S)	%.				93	95	70-130			
Toluene-d8 (S)	%.				104	104	55-137			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 654786 654787												
Devenuetor	4(	065017001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	Qual
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Quai
1,1,1-Trichloroethane	ug/L	<0.90	50	50	52.1	50.4	104	101	70-136	3	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.20	50	50	53.1	52.8	106	106	70-130	1	20	
1,1,2-Trichloroethane	ug/L	<0.42	50	50	54.4	54.7	109	109	70-130	1	20	
1,1-Dichloroethane	ug/L	<0.75	50	50	52.5	51.2	105	102	70-146	3	20	
1,1-Dichloroethene	ug/L	<0.57	50	50	51.2	50.9	102	102	70-130	1	20	
1,2,4-Trichlorobenzene	ug/L	<0.97	50	50	50.9	50.5	101	100	70-130	1	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	41.5	41.8	83	84	46-150	1	20	
1,2-Dibromoethane (EDB)	ug/L	<0.56	50	50	54.8	53.8	110	108	70-130	2	20	
1,2-Dichlorobenzene	ug/L	<0.83	50	50	50.9	50.2	101	100	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.36	50	50	53.4	52.0	107	104	70-146	3	20	
1,2-Dichloropropane	ug/L	<0.49	50	50	52.1	52.4	104	105	70-136	1	20	
1,3-Dichlorobenzene	ug/L	<0.87	50	50	48.4	48.1	97	96	70-130	1	20	
1,4-Dichlorobenzene	ug/L	<0.95	50	50	49.6	48.8	99	98	70-130	2	20	
Benzene	ug/L	<0.41	50	50	56.5	55.4	113	111	70-137	2	20	
Bromodichloromethane	ug/L	<0.56	50	50	53.1	52.2	106	104	70-133	2	20	
Bromoform	ug/L	<0.94	50	50	50.8	50.2	102	100	57-130	1	20	
Bromomethane	ug/L	<0.91	50	50	38.0	37.2	75	73	41-148	2	20	
Carbon tetrachloride	ug/L	<0.49	50	50	54.0	53.4	108	107	70-154	1	20	
Chlorobenzene	ug/L	<0.41	50	50	52.5	52.2	105	104	70-130	1	20	

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# **REPORT OF LABORATORY ANALYSIS**

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# **QUALITY CONTROL DATA**

Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 654786 654787												
	4	065017001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloroethane	ug/L	<0.97	50	50	46.7	45.6	93	91	70-140	2	20	
Chloroform	ug/L	<1.3	50	50	55.1	54.4	109	108	70-130	1	20	
Chloromethane	ug/L	0.80J	50	50	34.8	32.6	68	64	45-154	6	20	
cis-1,2-Dichloroethene	ug/L	<0.83	50	50	54.7	53.6	109	107	70-130	2	20	
cis-1,3-Dichloropropene	ug/L	<0.20	50	50	45.0	44.9	90	90	70-136	0	20	
Dibromochloromethane	ug/L	<0.81	50	50	53.0	52.9	106	106	70-130	0	20	
Dichlorodifluoromethane	ug/L	<0.99	50	50	22.7	20.8	45	42	10-157	9	20	
Ethylbenzene	ug/L	<0.54	50	50	56.1	55.5	112	111	70-130	1	20	
Isopropylbenzene (Cumene)	ug/L	<0.59	50	50	56.8	56.0	114	112	70-130	1	20	
m&p-Xylene	ug/L	<1.8	100	100	114	113	114	113	70-130	1	20	
Methyl-tert-butyl ether	ug/L	<0.61	50	50	48.2	47.1	96	94	59-141	2	20	
Methylene Chloride	ug/L	<0.43	50	50	54.1	53.4	108	107	70-130	1	20	
o-Xylene	ug/L	<0.83	50	50	57.3	56.9	115	114	70-130	1	20	
Styrene	ug/L	<0.86	50	50	50.8	50.1	102	100	35-164	1	20	
Tetrachloroethene	ug/L	<0.45	50	50	49.6	49.2	99	98	70-130	1	20	
Toluene	ug/L	<0.67	50	50	57.3	56.3	114	112	70-130	2	20	
trans-1,2-Dichloroethene	ug/L	<0.89	50	50	53.9	52.4	108	105	70-130	3	20	
trans-1,3-Dichloropropene	ug/L	<0.19	50	50	47.6	46.6	95	93	55-137	2	20	
Trichloroethene	ug/L	<0.48	50	50	54.9	54.6	110	109	70-130	1	20	
Trichlorofluoromethane	ug/L	<0.79	50	50	51.2	50.0	102	100	50-150	2	20	
Vinyl chloride	ug/L	<0.18	50	50	42.3	40.7	85	81	59-144	4	20	
4-Bromofluorobenzene (S)	%.						97	97	43-137			
Dibromofluoromethane (S)	%.						96	96	70-130			
Toluene-d8 (S)	%.						104	106	55-137			



### QUALIFIERS

Project: 0315-01-10 MILLER PROPERTY

Pace Project No.: 4065017

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### ANALYTE QUALIFIERS

- D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:0315-01-10 MILLER PROPERTYPace Project No.:4065017

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4065017002	MW-1	WI MOD GRO	GCV/8832		
4065017003	MW-2	WI MOD GRO	GCV/8832		
4065017004	MW-3	WI MOD GRO	GCV/8832		
4065017005	MW-4	WI MOD GRO	GCV/8832		
4065017006	MW-5	WI MOD GRO	GCV/8832		
4065017001	E2711 KROK RD	EPA 3010	MPRP/7332	EPA 6010	ICP/6372
4065017002	MW-1	EPA 3010	MPRP/7332	EPA 6010	ICP/6372
4065017003	MW-2	EPA 3010	MPRP/7332	EPA 6010	ICP/6372
4065017004	MW-3	EPA 3010	MPRP/7332	EPA 6010	ICP/6372
4065017005	MW-4	EPA 3010	MPRP/7332	EPA 6010	ICP/6372
4065017006	MW-5	EPA 3010	MPRP/7332	EPA 6010	ICP/6372
4065017001	E2711 KROK RD	EPA 8260	MSV/16241		

# **REPORT OF LABORATORY ANALYSIS**



Pace Analytical Services, Inc. 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

January 31, 2013

Chad Fradette Mach IV Engineering & Surveying 211 N. Broadway Suite 114 Green Bay, WI 54303

RE: Project: 0315-0211 MILLER PROPERTY Pace Project No.: 4073362

Dear Chad Fradette:

Enclosed are the analytical results for sample(s) received by the laboratory on January 29, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

AVM

Steven Mleczko for Brian Basten brian.basten@pacelabs.com Project Manager

Enclosures



# **REPORT OF LABORATORY ANALYSIS**



Pace Analytical Services, Inc. 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

### CERTIFICATIONS

Project: 0315-0211 MILLER PROPERTY

Pace Project No.: 4073362

#### **Green Bay Certification IDs**

1241 Bellevue Street, Green Bay, WI 54302 Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334

New York Certification #: 11888 North Dakota Certification #: R-150 South Carolina Certification #: 83006001 US Dept of Agriculture #: S-76505 Wisconsin Certification #: 405132750

### **REPORT OF LABORATORY ANALYSIS**



### SAMPLE SUMMARY

### Project: 0315-0211 MILLER PROPERTY

Pace Project No.: 4073362

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4073362001	MW-5	Water	01/29/13 12:10	01/29/13 15:07
4073362002	MW-4	Water	01/29/13 12:40	01/29/13 15:07
4073362003	MW-3	Water	01/29/13 13:10	01/29/13 15:07
4073362004	MW-2	Water	01/29/13 13:45	01/29/13 15:07
4073362005	MW-1	Water	01/29/13 14:30	01/29/13 15:07
4073362006	TRIP	Water	01/29/13 00:00	01/29/13 15:07

# **REPORT OF LABORATORY ANALYSIS**



# SAMPLE ANALYTE COUNT

Project:0315-0211 MILLER PROPERTYPace Project No.:4073362

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4073362001	MW-5	WI MOD GRO	LCF	9	PASI-G
4073362002	MW-4	WI MOD GRO	LCF	9	PASI-G
4073362003	MW-3	WI MOD GRO	LCF	9	PASI-G
4073362004	MW-2	WI MOD GRO	LCF	9	PASI-G
4073362005	MW-1	WI MOD GRO	LCF	9	PASI-G
4073362006	TRIP	WI MOD GRO	LCF	9	PASI-G

# **REPORT OF LABORATORY ANALYSIS**



### **PROJECT NARRATIVE**

Project: 0315-0211 MILLER PROPERTY

Pace Project No.: 4073362

#### Method: WI MOD GRO

Description:WIGRO GCVClient:Mach IV EngineeringDate:January 31, 2013

### General Information:

6 samples were analyzed for WI MOD GRO. All samples were received in acceptable condition with any exceptions noted below.

#### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

#### **Initial Calibrations (including MS Tune as applicable):** All criteria were within method requirements with any exceptions noted below.

#### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

#### **Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

#### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### **Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

# **REPORT OF LABORATORY ANALYSIS**



### **ANALYTICAL RESULTS**

#### Project: 0315-0211 MILLER PROPERTY

Pace Project No.: 4073362

Sample: MW-5	Lab ID:	4073362001	Collecte	d: 01/29/13	3 12:10	Received: 01	/29/13 15:07 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytica	I Method: WI M	OD GRO						
Benzene	<0.39	ug/L	1.0	0.39	1		01/30/13 22:01	71-43-2	
Ethylbenzene	<0.41	ug/L	1.0	0.41	1		01/30/13 22:01	100-41-4	
Methyl-tert-butyl ether	<0.38	ug/L	1.0	0.38	1		01/30/13 22:01	1634-04-4	
Naphthalene	<0.40	ug/L	1.0	0.40	1		01/30/13 22:01	91-20-3	
Toluene	<0.42	ug/L	1.0	0.42	1		01/30/13 22:01	108-88-3	
1,2,4-Trimethylbenzene	<0.43	ug/L	1.0	0.43	1		01/30/13 22:01	95-63-6	
1,3,5-Trimethylbenzene	<0.40	ug/L	1.0	0.40	1		01/30/13 22:01	108-67-8	
Xylene (Total)	<1.3	ug/L	3.0	1.3	1		01/30/13 22:01	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101 '	%.	80-120		1		01/30/13 22:01	98-08-8	
Sample: MW-4	Lab ID:	4073362002	Collecte	d: 01/29/13	3 12:40	Received: 01	/29/13 15:07 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytica	I Method: WI M	OD GRO						
Benzene	<0.39	ug/L	1.0	0.39	1		01/31/13 04:26	71-43-2	
Ethylbenzene	<b>&lt;0.41</b> U	ug/L	1.0	0.41	1		01/31/13 04:26	100-41-4	
Methyl-tert-butyl ether	<0.38	ug/L	1.0	0.38	1		01/31/13 04:26	1634-04-4	
Naphthalene	<0.40	ug/L	1.0	0.40	1		01/31/13 04:26	91-20-3	
Toluene	<0.42	ug/L	1.0	0.42	1		01/31/13 04:26	108-88-3	
1,2,4-Trimethylbenzene	<0.43	ug/L	1.0	0.43	1		01/31/13 04:26	95-63-6	
1,3,5-Trimethylbenzene	<0.40	ug/L	1.0	0.40	1		01/31/13 04:26	108-67-8	
Xylene (Total)	<1.3	ug/L	3.0	1.3	1		01/31/13 04:26	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	100 9	%.	80-120		1		01/31/13 04:26	98-08-8	
Sample: MW-3	Lab ID:	4073362003	Collecte	d: 01/29/13	3 13:10	Received: 01	/29/13 15:07 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytica	I Method: WI M	OD GRO						
Benzene	<0.39	ua/L	1.0	0.39	1		01/31/13 03:35	71-43-2	
Ethylbenzene	<0.41	ug/L	1.0	0.41	1		01/31/13 03:35	100-41-4	
Methyl-tert-butyl ether	<0.38	ug/L	1.0	0.38	1		01/31/13 03:35	1634-04-4	
Naphthalene	<0.40	ug/L	1.0	0.40	1		01/31/13 03:35	91-20-3	
Toluene	<0.42	ug/L	1.0	0.42	1		01/31/13 03:35	108-88-3	
1,2,4-Trimethylbenzene	<0.43	ug/L	1.0	0.43	1		01/31/13 03:35	95-63-6	
1,3,5-Trimethylbenzene	<0.40	ug/L	1.0	0.40	1		01/31/13 03:35	108-67-8	
Xylene (Total)	<1.3	ug/L	3.0	1.3	1		01/31/13 03:35	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101 9	%.	80-120		1		01/31/13 03:35	98-08-8	

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# **REPORT OF LABORATORY ANALYSIS**

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## **ANALYTICAL RESULTS**

#### Project: 0315-0211 MILLER PROPERTY

Pace Project No.: 4073362

Sample: MW-2	Lab ID:	4073362004	Collecte	d: 01/29/1:	3 13:45	Received: 01	/29/13 15:07 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical	Method: WI Mo	DD GRO						
Benzene	<b>4.3</b> υ	ıg/L	1.0	0.39	1		01/31/13 04:00	71-43-2	
Ethylbenzene	<b>10.4</b> υ	ig/L	1.0	0.41	1		01/31/13 04:00	100-41-4	
Methyl-tert-butyl ether	<b>&lt;0.38</b> ເ	ıg/L	1.0	0.38	1		01/31/13 04:00	1634-04-4	
Naphthalene	<b>2.7</b> ເ	ıg/L	1.0	0.40	1		01/31/13 04:00	91-20-3	
Toluene	<b>3.3</b> ເ	ıg/L	1.0	0.42	1		01/31/13 04:00	108-88-3	
1,2,4-Trimethylbenzene	7.7 u	ıg/L	1.0	0.43	1		01/31/13 04:00	95-63-6	
1,3,5-Trimethylbenzene	<b>5.5</b> υ	ıg/L	1.0	0.40	1		01/31/13 04:00	108-67-8	
Xylene (Total)	<b>5.2</b> ι	ıg/L	3.0	1.3	1		01/31/13 04:00	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	104 %	6.	80-120		1		01/31/13 04:00	98-08-8	
Sample: MW-1	Lab ID:	4073362005	Collecte	d: 01/29/1:	3 14:30	Received: 01	/29/13 15:07 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical	Method: WI M	DD GRO						
Benzene	69.0 u	ıq/L	2.0	0.78	2		01/31/13 01:27	71-43-2	
Ethylbenzene	<b>169</b> ເ	ig/L	2.0	0.83	2		01/31/13 01:27	100-41-4	
Methyl-tert-butyl ether	<b>2.1</b> ເ	ig/L	2.0	0.76	2		01/31/13 01:27	1634-04-4	
Naphthalene	<b>44.7</b> υ	ig/L	2.0	0.81	2		01/31/13 01:27	91-20-3	
Toluene	<b>63.4</b> ι	ig/L	2.0	0.83	2		01/31/13 01:27	108-88-3	
1,2,4-Trimethylbenzene	<b>80.2</b> ι	ıg/L	2.0	0.86	2		01/31/13 01:27	95-63-6	
1,3,5-Trimethylbenzene	<b>60.1</b> ι	ıg/L	2.0	0.79	2		01/31/13 01:27	108-67-8	
Xylene (Total)	<b>84.8</b> ι	ıg/L	6.0	2.5	2		01/31/13 01:27	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	106 %	6.	80-120		2		01/31/13 01:27	98-08-8	
Sample: TRIP	Lab ID:	4073362006	Collecte	d: 01/29/1:	3 00:00	Received: 01	/29/13 15:07 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical	Method: WI M	DD GRO						
Benzene	<b>&lt;0.39</b> ເ	ıa/L	1.0	0.39	1		01/30/13 22:27	71-43-2	
Ethylbenzene	<b>&lt;0.41</b> L	ig/L	1.0	0.41	1		01/30/13 22:27	100-41-4	
Methyl-tert-butyl ether	<b>&lt;0.38</b> ເ	īg/L	1.0	0.38	1		01/30/13 22:27	1634-04-4	
Naphthalene	<b>&lt;0.40</b> ເ	ig/L	1.0	0.40	1		01/30/13 22:27	91-20-3	
Toluene	<b>&lt;0.42</b> ປ	ig/L	1.0	0.42	1		01/30/13 22:27	108-88-3	
1,2,4-Trimethylbenzene	<b>&lt;0.43</b> ເ	ig/L	1.0	0.43	1		01/30/13 22:27	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;0.40</b> ປ	ig/L	1.0	0.40	1		01/30/13 22:27	108-67-8	
Xylene (Total)	<b>&lt;1.3</b> ເ	ıg/L	3.0	1.3	1		01/30/13 22:27	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102 %	6.	80-120		1		01/30/13 22:27	98-08-8	

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# **REPORT OF LABORATORY ANALYSIS**

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## **QUALITY CONTROL DATA**

Project: 0315-0211 MILLER PROPERTY

Pace Project No.: 4073362

QC Batch:	GCV	/9722	Ar	nalysis Method:	WI MOD (	GRO
QC Batch Method:	WI M	OD GRO	Ar	nalysis Description:	WIGRO G	SCV Water
Associated Lab Sam	ples:	4073362001, 407	3362002, 4073362	2003, 4073362004,	4073362005, 4	1073362006

 METHOD BLANK:
 743302
 Matrix:
 Water

 Associated Lab Samples:
 4073362001, 4073362002, 4073362003, 4073362004, 4073362005, 4073362006

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.43	1.0	01/30/13 18:10	
1,3,5-Trimethylbenzene	ug/L	<0.40	1.0	01/30/13 18:10	
Benzene	ug/L	<0.39	1.0	01/30/13 18:10	
Ethylbenzene	ug/L	<0.41	1.0	01/30/13 18:10	
Methyl-tert-butyl ether	ug/L	<0.38	1.0	01/30/13 18:10	
Naphthalene	ug/L	<0.40	1.0	01/30/13 18:10	
Toluene	ug/L	<0.42	1.0	01/30/13 18:10	
Xylene (Total)	ug/L	<1.3	3.0	01/30/13 18:10	
a,a,a-Trifluorotoluene (S)	%.	100	80-120	01/30/13 18:10	

LABORATORY CONTROL SAM	IPLE & LCSD: 743303		74	3304						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.0	19.3	100	97	80-120	3	20	
1,3,5-Trimethylbenzene	ug/L	20	20.1	19.3	100	97	80-120	4	20	
Benzene	ug/L	20	22.1	21.1	111	106	80-120	5	20	
Ethylbenzene	ug/L	20	20.5	19.6	103	98	80-120	5	20	
Methyl-tert-butyl ether	ug/L	20	22.5	22.1	112	111	80-120	1	20	
Naphthalene	ug/L	20	20.4	21.2	102	106	80-120	4	20	
Toluene	ug/L	20	21.0	20.1	105	101	80-120	4	20	
Xylene (Total)	ug/L	60	61.5	59.0	102	98	80-120	4	20	
a,a,a-Trifluorotoluene (S)	%.				101	101	80-120			



### QUALIFIERS

Project: 0315-0211 MILLER PROPERTY

Pace Project No.: 4073362

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:0315-0211 MILLER PROPERTYPace Project No.:4073362

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4073362001	MW-5	WI MOD GRO	GCV/9722		
4073362002	MW-4	WI MOD GRO	GCV/9722		
4073362003	MW-3	WI MOD GRO	GCV/9722		
4073362004	MW-2	WI MOD GRO	GCV/9722		
4073362005	MW-1	WI MOD GRO	GCV/9722		
4073362006	TRIP	WI MOD GRO	GCV/9722		

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# **REPORT OF LABORATORY ANALYSIS**