# SITE INVESTIGATION AND CLOSURE REPORT

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN
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ARCADIS
*Infrastructure, buildings, environment, communications*

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# Site Investigation and Closure Report

Hoffman's Valet Cleaners
7215 West Center Street
Wauwatosa, Wisconsin


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## Introduction

ARCADIS has completed site investigation activities at the Hoffman's Valet Cleaners facility located at 7215 West Center Street in Wauwatosa, Wisconsin (site). Based on the investigation results, limited impacts are present, and do not warrant active remediation. No volatile organic compounds were detected in the groundwater samples collected from the three monitoring wells installed on the property. This report has been prepared to document the results of the site investigation in accordance with Chapter NR 716, Wis. Admin. Code, and to request closure per the requirements set forth in Chapter NR 726.

The report summarizes the site background and the results of the previous site activities, describes the investigation activities completed at the site, and presents the findings and recommendations. An evaluation of the NR 726 site closure criteria is also presented along with recommendations that the site be closed in accordance with Chapter NR 726.

## Property Description

Hoffman's Valet Cleaners is located at 7215 West Center Street in the city of Wauwatosa, Wisconsin. The property is located in the northeast quarter of the southwest quarter, Section 15, Township 7 North, Range 21 East in Milwaukee County. The location of the property is illustrated on Figure 1.

The property is developed with a two-story building of masonry construction, which occupies almost the entire property. A driveway is located along the east side of the building, and a parking area is located on the south side of the building. The building has a partial basement, in which the dry cleaning machine is located. Dry cleaning operations are still currently conducted on-site. Tetrachloroethene (PCE) has historically been used as the dry cleaning solvent throughout the operating life of the dry cleaners. The building layout is illustrated on Figure 2.

The subject property is located in a mixed residential and commercial area. The property is bordered to the north by West Center Street and to the south by an alley. Residential dwellings are located to the east and south. A commercial building is located on the west adjacent property. It is understood that a tailor previously occupied the west adjacent building, and that the east adjacent residence formerly housed a beauty salon. The layout of the property and adjoining properties is depicted on Figure 3.

The property and its vicinity are serviced by municipal water supply and sewerage systems. Overhead lines are located along the south side of the property. The locations of the site utilities are depicted on Figure 3.

## Investigation Activities

ARCADIS has completed soil and groundwater investigation activities at the Hoffman's Valet Cleaners property. The work was completed in three phases. The details of these activities are described in the following sections.

### February 2002 Investigation

The initial scope of work was completed in accordance with a work plan dated September 27, 2001. Two interior soil borings (GP-1 and GP-2) were advanced inside the building in the vicinity of the dry cleaning machine on February 7, 2002 using portable coring equipment. The soil boring locations are illustrated on Figure 3. The interior borings were advanced to a depth of 10 feet below land surface (ft bls), the maximum depth that could be attained given the limitations of the portable equipment. Soil samples were collected from each boring, screened with a flame ionization detector (FID), and logged in the field by ARCADIS. Groundwater was not encountered in the borings. Copies of the soil boring logs are included in Appendix A.

Based on the FID screening results, one soil sample was collected from each boring for laboratory analysis. Each sample was placed into clean, laboratory-supplied containers with the appropriate preservative, and placed in a cooler with ice. The samples were transported on-ice to EnChem under standard chain-of-custody procedures for chemical analysis. The soil samples were analyzed for Volatile Organic Compounds (VOC)s using United States Environmental Protection Agency (US EPA) Method 8260. Groundwater was not encountered in the interior soil borings.

After the soil sampling activities were completed, the borings were abandoned in accordance with NR 141. Copies of the borehole abandonment forms are included in Appendix A.

### September 2002 Investigation

The analytical results from the February 2002 sampling activities detected PCE in the soil at concentrations ranging from 51 to 240 micrograms per kilogram (µg/kg). At the

request of Mr. Ralph Hoffmann, ARCADIS reported the release to the Wisconsin Department of Natural Resources (WDNR) in a letter dated May 30, 2002.

Based on the February 2002 results, additional investigation was necessary to evaluate the limits of impacted soil and to evaluate groundwater quality. Five additional soil borings were advanced at the property on September 12, 2002 in accordance with the September 2001 work plan. Four borings (GP-101, GP-102, GP-103 and GP-105) were advanced on the exterior of the building using a truck-mounted Geoprobe® drilling unit. One boring (GP-104) was advanced inside the building to the south of Soil Borings GP-1 and GP-2, using portable equipment. The boring locations are illustrated on Figure 3. Soil samples were collected from each boring, screened with an FID, and logged in the field by ARCADIS. Copies of the soil boring logs are included in Appendix A.

The exterior borings were advanced to depths ranging from 22.5 to 30.5 ft bls. The interior boring was advanced using a hand probe until refusal was encountered at a depth of 9 ft bls. Based on the FID screening results, one to two soil samples were collected from each boring for laboratory analysis. Each sample was placed into clean, laboratory-supplied containers with the appropriate preservative, and placed in a cooler with ice. The samples were transported on-ice to EnChem under standard chain-of-custody procedures for chemical analysis. The soil samples were analyzed for VOCs using US EPA Method 8260.

Temporary monitoring wells were installed in all exterior borings to provide preliminary groundwater quality data. To maximize the potential for groundwater recovery in the temporary wells, 15-foot screens were used. Groundwater samples were collected from Temporary Wells GP-102, GP-103 and GP-105. Temporary Well GP-101 did not yield any groundwater over a period of 8 hours. Groundwater was not encountered in the interior soil boring. Groundwater samples were collected using a disposable bailer, placed into laboratory-supplied containers with preservative, and placed into a cooler with ice. The samples were submitted to EnChem for analysis of VOCs.

After the sampling activities were completed, the temporary wells were removed and the borings were abandoned in accordance with NR 141. Copies of the borehole abandonment forms are included in Appendix A.

**January 2005 Investigation**

Based on the results of the 2002 investigation, supplemental investigation was necessary to further evaluate soil and groundwater conditions at the property and off-site. ARCADIS submitted a work plan for the supplemental investigation to Gina Keenan of the WDNR on March 28, 2003. The work plan recommended the advancement of four additional Geoprobe borings for the collection of soil and groundwater samples. In a letter dated July 13, 2003, Ms. Keenan provided conditional approval of the work plan. The conditional approval letter requested that monitoring wells be installed instead of Geoprobe borings, and also reduced the number of sampling points to three. Because costs associated with the investigation are eligible for reimbursement through the DERP, ARCADIS submitted a revised work plan and cost estimate to Ms. Keenan on September 17, 2003. Ms. Keenan approved the revised work plan in an electronic mail message dated January 13, 2004.

Monitoring Well Installation and Development

Two of the monitoring well locations were potentially in the right-of-way; therefore, ARCADIS obtained an access permit from the City of Wauwatosa. The permit was issued on December 10, 2004. The three monitoring wells (MW-1, MW-2, and MW-3) were installed on January 19, 2005. The wells were installed by Giles Engineering Associates using hollow-stem auger drilling techniques. Monitoring Well MW-1 was installed to a depth of 24 feet, and MW-2 and MW-3 were each installed to a depth of 20 feet. Each well was installed with a 10-foot section of well screen. Soil cuttings generated during the drilling activities were stored on-site in 55-gallon drums pending identification of a disposal facility.

Monitoring Well MW-1 was installed along the north side of the property to evaluate the northern extent of impacted soil and groundwater, MW-2 was installed near GP-103 to further evaluate groundwater quality in the eastern portion of the property, and MW-3 was installed south of GP-101 to evaluate soil and groundwater conditions south of the property. Monitoring Well MW-3 was initially planned for installation further south. However, its location was moved in the field due to the presence of underground and overhead utilities. The well locations are illustrated on Figure 3.

Following the installation of the soil borings and collection of soil samples, the monitoring wells were installed. Each monitoring well consists of a 2-inch diameter Schedule 40 polyvinyl chloride (PVC) riser and a 10-foot length of 2-inch diameter Schedule 40 PVC well screen. Upon positioning the well screen and riser within the borehole, the annular space between the well screen and borehole was filled with a

silica sand filter pack and filter pack seal. The remainder of the annular space was sealed with bentonite, and a flush-mount well vault was installed at the ground surface.

After construction, the monitoring wells were developed on January 28, 2005 in accordance with the requirements of NR 141. Since the monitoring wells did not yield a significant amount of groundwater, well development consisted of bailing the monitoring wells dry several times during the day. Groundwater generated during development and sampling activities was also stored on-site in a 55-gallon drum pending identification of a disposal facility. Monitoring well construction and well development forms are included in Appendix A.

### Soil Sample Collection

Soil samples were collected from the borings at 2-foot vertical intervals to provide a continuous profile of the subsurface materials. Logs were prepared for each boring and monitoring well in accordance with WDNR requirements and are included in Appendix A. The soils were also screened with an FID to provide a qualitative assessment of impacts. The work plan included provisions for the collection of two soil samples from each boring for analysis. However, none of the soil samples exhibited elevated FID readings. As a result, one soil sample was collected from the depth interval nearest the water table at each boring (10 to 12 ft bls) for analysis. The soil samples were placed into clean, laboratory supplied containers with the appropriate preservative and placed in a cooler with ice. The samples were shipped on ice to TestAmerica under standard chain-of-custody protocol for analysis of VOCs.

### Surveying

ARCADIS surveyed the elevation of the ground surface at each well location and the elevation of the top of each well casing on February 15, 2005. Elevations were measured relative to a benchmark set at 100 feet. The survey information was used to evaluate the direction of groundwater flow at the property.

### Collection of Groundwater Samples

Following the development of the monitoring wells, groundwater samples were collected on January 28, 2005. Due to drawdown in the monitoring wells and the lack of sufficient groundwater recharge, conventional bailer sampling methods were used, instead of low flow sampling techniques, to sample the wells. Groundwater elevations were measured in the wells prior development and sampling. The monitoring wells

were developed using disposable bailers and allowed to recharge prior to sampling. Groundwater samples were collected for VOCs and submitted to EnChem for analysis.

#### Evaluation of Regulatory Standards

The WDNR has not developed soil cleanup standards for PCE or its related biodegradation daughter products. The US EPA has developed a website for calculating soil screening levels (SSLs) for the ingestion, inhalation, and groundwater pathways. The WDNR has developed a guidance document, entitled "Determining Residual Contaminant Levels Using the EPA Soil Screening Level Web Site" for using the US EPA website with WDNR default input parameters that are based on NR 700 and associated Wisconsin State Statutes. ARCADIS used the US EPA website and WDNR guidance document to calculate SSLs for the VOCs detected in soil samples at the site.

The site is currently zoned for commercial land use. However, if industrial-based SSLs are used to support closure, a soil deed restriction is required as a condition for closure. ARCADIS calculated the SSLs using the residential land use default parameters to develop SSLs that can be used without a soil deed restriction. The results of the calculations are summarized in Table 1, and the calculations are included in Appendix B.

The groundwater analytical results were compared to the groundwater quality standards promulgated in NR 140.

#### Investigative-Derived Waste Management

Soil cuttings generated during the drilling activities were stored on-site in 55-gallon drums prior to disposal. Groundwater generated during development and sampling activities was also stored on-site in a 55-gallon drum prior to disposal. The analytical results were reviewed to characterize the waste. The soil VOC concentrations were less than the industrial direct contact SSLs, and none of the groundwater samples contained detectable VOCs. As a result, the investigative-derived waste will be managed as a solid waste.

In accordance with the DERP requirements bids were solicited from three disposal firms. The investigative derived waste will be transported by Badger Disposal to the Environmental Quality Company facility in Wayne, Michigan for disposal. A copy of the disposal documentation is included in Appendix C.

## Results

### Hydrogeology

ARCADIS prepared geologic cross sections for the property based on the boring log data. The cross section locations are illustrated on Figure 4, and the cross sections are presented on Figures 5 and 6. Soils at the site consist of clays to a depth of approximately 7 feet, overlying a sand layer that is approximately 4 to 6 feet thick. A second clay layer was encountered beneath the sand layer, and extended to a depth of at least 20 feet. Discontinuous seams of sand and silty sand were observed within the clay units.

Groundwater was encountered at a depth of approximately 14 ft bls, within the lower clay unit. Groundwater elevations are presented in Table 2. Groundwater flow data for the January 2005 sampling event is presented on Figure 7. The direction of groundwater flow at the site was to the north-northeast.

### Analytical Results

The following sections present the soil and groundwater analytical data collected during the investigation activities performed at the site.

#### Soil Analytical Results

Sixteen soil samples were collected during the investigation for VOC analysis. The analytical results are presented in Table 1, and summarized on Figure 8. A copy of the laboratory report is included in Appendix D.

In general, low concentrations of VOCs were detected in the soil samples. The primary constituent of interest was PCE. During the 2002 investigation, the PCE analytical results ranged from nondetect to 400 micrograms per kilogram (µg/kg), suggesting the presence of limited soil impacts. One of the purposes of the 2005 investigation was to define the lateral extent of these low-level concentrations. However, higher concentrations of PCE were detected in the soil samples collected in January 2005. The soil sample collected from MW-1, located on the north side of the property, contained PCE at a concentration of 2,800 µg/kg. The soil sample collected from MW-2 contained PCE at a concentration of 3,700 µg/kg, the highest concentration detected at the property. The soil sample collected from MW-3, along the south side of the property did not contain detectable VOCs, defining the lateral extent of impacted soil to the south.

The soil analytical results from MW-1 and MW-2 were unexpected, given the low VOC concentrations detected in 2002 and the locations of the 2005 borings. Monitoring Well MW-1 is located near the storefront entrance; dry cleaning solvent is delivered to the south side of the building. Monitoring Well MW-2 was installed approximately 10 feet from GP-103, yet the PCE concentration at in the soil sample from MW-2 is nearly an order of magnitude higher than was detected at GP-103. Further, the soil samples collected from adjacent to the dry cleaning equipment contained among the lowest PCE concentrations detected at the property. The soil analytical results indicate that PCE is present in sporadic locations across the property, and is not indicative of a definitive source area. Further investigation is not warranted, as the soil data indicates that the concentrations detected at MW-1 and MW-2 are limited in extent.

The soil analytical data was also compared to the SSLs. The results of the comparison are presented in Table 1. In summary, all but two of the soil samples contained VOCs at concentrations less than the ingestion or inhalation SSLs. The soil samples collected from MW-1 and MW-2 contained PCE at concentrations higher than the ingestion and inhalation SSLs. It is noted that these samples were collected at a depth of 10 to 12 ft bls. Soil impacts located at depths greater than 4 ft bls are not considered a direct contact risk. Further, the soil samples collected from beneath the building contained VOCs at concentrations well below the inhalation SSLs. Although the land use at the property is commercial, the SSLs were calculated using residential default input parameters. It is noted that none of the samples contain VOCs at concentrations exceeding the industrial SSLs for ingestion and inhalation. Based on the VOC results and sample depths, the affected soils at the property do not pose an ingestion or inhalation risk. Thus, active remediation or the use of engineered barriers is not warranted to address these potential exposure pathways.

Eleven soil samples contained PCE at concentrations exceeding the groundwater migration SSL of 4.1 µg/kg. As described in the following section, the groundwater data was used to access the soil-to-groundwater migration risk.

### Groundwater Analytical Results

Groundwater samples were collected from the temporary wells on September 12, 2002 and from the monitoring wells on January 28, 2005. A summary of the groundwater sample analytical results is presented in Table 3. The laboratory analytical results are attached in Appendix D.

Three groundwater samples were collected during the September 2002 sampling event. Only one sample, from GP-103, contained detectable VOCs. The groundwater sample collected from GP-103 contained one compound, PCE. The detected concentration of PCE was 2.9 micrograms per liter (µg/L), which is less than the NR 140 Enforcement Standard (ES) but greater than the NR 140 Preventive Action Limit (PAL).

None of the groundwater samples collected from the monitoring wells in January 2005 contained detectable VOCs. It is noted that Monitoring well MW-3 was installed approximately 15 feet to the south and east of GP-103. The groundwater data indicates that the lateral extent of groundwater impacts is defined, and is limited to the immediate area of GP-103.

As discussed earlier, the soil samples collected from MW-1 and MW-2 contained PCCE at concentrations exceeding the groundwater migration SSL. Even though the soil samples collected from these locations contained PCE at concentrations up to 3,720 µg/kg, the groundwater samples from MW-1 and MW-2 did not contain detectable concentrations of VOCs. These results indicate that the VOCs in soil are limited in extent and are not partitioning from soil to groundwater. The groundwater data demonstrates that the VOC concentrations in soil are protective of groundwater quality.

#### Evaluation of Utility Corridors

The locations of the utilities near the property are depicted on Figure 3. Natural gas and water enter the building from the north, from mains beneath Center Street. The sewer lateral extends south from the building to the sewer main that runs beneath the alley. Electrical and communication service enters the building from an overhead line along the south of the building.

The underground utilities are expected to be present at a depth of 4 to 6 feet. These utilities are located above the water table, and are not expected to serve as migration conduits. It is also noted that no groundwater impacts were identified at the property, further limiting the potential for off-site migration.

## Summary of Findings

The following summarizes the activities conducted at the site, and the results of the investigation:

- Soil and groundwater investigation activities have been performed at the site by ARCADIS during 2002 and 2005.

- The soil analytical data indicates that low-level PCE impacts are generally present at the property. Two soil samples collected in January 2005 contained higher than anticipated concentrations of PCE, as these samples were collected to define the lateral extent of soil impacts. In contrast, soil samples collected from adjacent to the dry cleaning equipment did not contain elevated concentrations of PCE. The soil data suggests that VOCs are sporadically distributed across the property, and are not indicative of a definitive source area.

- Only two of the soil samples contained PCE at concentrations exceeding the inhalation or ingestion SSLs. These samples were collected at a depth greater than 4 ft bls, and should therefore not pose a direct contact risk. Thus, the lateral extent of impacted soil is defined with respect to these SSLs. Active remediation or engineered barriers is not warranted based on these SSLs. Eleven soil samples contained PCE at concentrations exceeding the groundwater migration SSL. The groundwater data was used to further assess this pathway.

- The extent of impacted groundwater has been defined. One sample collected from a temporary well contained PCE at a concentration above the NR 140 PAL. None of the samples collected from the monitoring wells contained detectable VOCs.

- Based on the groundwater monitoring data, the PCE-affected soils are not adversely affecting groundwater quality. Based on the absence of VOCs in groundwater, the existing VOC concentrations in soil are sufficiently protective of groundwater.

Based on the absence of detectable VOCs in groundwater and the generally low concentrations of VOCs in soil, sufficient investigation has been completed at the property.

## Evaluation of Closure Criteria

As discussed above, the VOC concentrations in soil do not exceed the inhalation or ingestion SSLs, and are not affecting groundwater quality. VOCs are not present in the groundwater. Based on these results, active remediation is not warranted and sufficient data exists to evaluate pursuit of project closure. Because there are no NR 140 ES exceedances, the requirements of NR 726.05(2)(b) are not applicable. The site conditions were evaluated using the closure criteria for groundwater established in NR

726.05(3)(a), and the closure criteria for soil established in NR 726.05(3)(b). The following sections present an evaluation of the site activities with respect to the NR 726 closure requirements.

#### Compliance with Groundwater Standards

The following closure criteria for groundwater are established in NR 726.05(3)(a)1, 2, 3 and 4:

- Demonstration that the site investigation has been completed.
- Documentation of remedial action.
- Completion of quarterly sampling, where applicable.
- Registration of the site on the Geographic Information System (GIS) of closed remedial sites, where applicable.

Only one of three groundwater samples collected from the temporary wells contained a constituent at a concentration above the NR 140 PALs, and none of the groundwater samples collected from the three monitoring wells contained detectable VOCs. The groundwater data supports the conclusion that the site investigation has been completed with respect to evaluating groundwater quality. No interim or remedial actions are warranted, as NR 140 groundwater quality exceedances are not present. Quarterly groundwater monitoring is also not warranted, as these were no detected VOCs in the groundwater samples from the monitoring wells. Registration of the site on the GIS registry of closed remediation sites is also not warranted, since there are no NR 140 groundwater quality exceedances.

In summary, the investigation results demonstrate that groundwater at the site is in compliance with NR 140 groundwater quality standards. The groundwater at the site meets the closure criteria established in NR 726.05(3)(a).

#### Compliance with Soil Standards

The following closure criteria for soil are established in NR 726.05(3)(b)1, 2, 3, and 4:

- Demonstration that the site investigation has been completed.
- Documentation of remedial action.

- Demonstration that the remedial action taken satisfies the requirements of NR 720 and NR 722.

- Registration of the site on the GIS of closed remedial sites, where applicable

The following sections provide a description of how these criteria have been satisfied at the site.

### Completeness of Site Investigation

During the site investigation activities, low-level PCE was detected in most of the soil samples collected from the site. Only two soil samples contained VOCs at concentrations over the ingestion or inhalation SSLs, and both samples were collected from a depth greater than 4 ft bls. Although the land use at the property is commercial, the SSLs were calculated using residential default input parameters. It is noted that none of the samples contain VOCs at concentrations exceeding the industrial SSLs for ingestion and inhalation.

Eleven soil samples contained VOCs at concentrations greater than the groundwater migration SSL, which is independent of land use. As noted above, none of the groundwater samples collected from the monitoring wells contained detectable VOCs, including two wells that were installed in areas with the highest concentrations of PCE.

The groundwater monitoring results indicate that the concentrations of VOCs present at the property are not adversely impacting groundwater quality. Thus, the detected soil concentrations are in compliance with the groundwater migration pathway. Further, groundwater is not used as a potable water source at the property. Based on the SSL calculations and the groundwater monitoring data, the investigation activities performed to date have sufficiently defined the extent of the soil impacts at the site.

### Summary of Remedial Actions

Because the VOC concentrations in soil do represent a risk based on their depth and concentrations, active remedial measures are not warranted. There are no exceedances of the ingestion or inhalation SSLs at depths of 4 ft bls or less. Thus, engineered barriers or institutional controls are not warranted. Natural attenuation should be effective at addressing the identified soil impacts.

### Compliance with NR 720

As previously discussed, an Residual Contaminant Level has not been established by the WDNR in NR 720 for the detected constituents. SSLs were developed for the site utilizing the US EPA website and WDNR guidance document. The concentration of PCE detected in eleven samples exceeded the groundwater migration SSL. Only two of the soil sample concentrations exceeded the ingestion or inhalation SSLs. However, these samples are located at a depth greater than 4 ft bls.

NR 720 allows the use of performance standards for addressing impacted soil. The identified soil impacts are limited in extent, and contain relatively low concentrations of PCE. Further, none of the groundwater samples collected from the monitoring wells contained detectable VOCs. Natural attenuation will be used as the performance-based standard for addressing the soil impacts. The use of this performance standard is based on the absence of PCE at concentrations above the ingestion and inhalation SSLs within the 0 to 4 foot depth interval, and the absence of groundwater concentrations above the ESs. Natural attenuation should be effective at managing the limited soil impacts and be protective of human health and the environment.

### Geographic Information System Registry

Although the groundwater samples from the monitoring wells did not contain detectable concentrations of VOCs, soil samples collected from the property did exceed the groundwater migration SSL, and two soil samples did exceed the ingestion and inhalation SSLs. In accordance with NR 726.05(3)(b)4, the site will be recorded in the Soil GIS registry for closed remediation sites.

## Recommendations

In summary, no groundwater impacts are present at the property, and the residual soil constituents at the site do not present a significant threat to human health, safety, welfare, or the environment. Therefore, the closure criteria established in NR 726 have been satisfied.

Based upon the data presented in this report, ARCADIS recommends closure of the site in accordance with NR 726. ARCADIS has completed a WDNR "*Case Summary and Close Out Form*" (WDNR Form 4400-202) for this project. A copy of the completed form was enclosed as a separate attachment to this report, using documentation (i.e., tables and figures) included in this report. A soil GIS registry packet has also been completed, and is enclosed as a separate document.

This report has been prepared in accordance with NR 700. A submittal certification, prepared in accordance with NR 712, is enclosed in Appendix E.

**Table 1. Soil Analytical Results, Hoffman's Valet Cleaners, 7215 W. Center Street, Wauwatosa, Wisconsin.**

| Sample ID | GP-1 | GP-2 | GP-101 | | GP-102 | | GP-103 | |
|---|---|---|---|---|---|---|---|---|
| Sample Depth (ft bls) | 6-8 | 4-6 | 7-11 | 11-15 | 4-8 | 12-16 | 8-12 | 12-16 |
| Sample Date | 02/07/02 | 02/07/02 | 09/12/02 | 09/12/02 | 09/12/02 | 09/12/02 | 09/12/02 | 09/12/02 |
| **VOCs** | | | | | | | | |
| cis-1,2-Dichloroethene | 53 | <10 | <25 | <25 | <25 | <25 | <25 | <25 |
| Fluorotrichloromethane | NA | NA | <25 | <25 | <25 | <25 | <25 | <25 |
| Methylene Chloride | 21 Q | 14 Q | <25 | <25 | <25 | <25 | <25 | <25 |
| Naphthalene | NA | NA | 50 Q | <25 | <25 | <25 | <25 | <25 |
| Tetrachloroethene | 51 | 240 | <25 | <25 | 150 | <25 | 400 | <25 |

Constituent concentrations are reported in micrograms per kilogram (µg/kg).

| | |
|---|---|
| [ ] | Concentration exceeds the Soil Screening Level for the protection of groundwater. |
| *italics* | Concentration exceeds the soil screening level for vapor inhalation. |
| **Bold** | Concentration exceeds the soil screening level for ingestion. |
| ft bls | Feet below land surface. |
| ID | Identification. |
| NA | Not analyzed. |
| SSL | Soil Screening Level. |
| Q | Analyte detected between the Limit of Detection and the Limit of Quantitation. |
| VOCs | Volatile organic compounds. |

**Table 1. Soil Analytical Results, Hoffman's Valet Cleaners, 7215 W. Center Street, Wauwatosa, Wisconsin.**

| Sample ID | GP-104 | | GP-105 | | MW-1 | MW-2 | MW-3 | |
|---|---|---|---|---|---|---|---|---|
| Sample Depth (ft bls) | 4-6 | 8-9 | 8-12 | 12-16 | 10-12 | 10-12 | 10-12 | SSL |
| Sample Date | 09/12/02 | 09/12/02 | 09/12/02 | 09/12/02 | 01/19/05 | 01/19/05 | 01/19/05 | Ingestion |
| **VOCs** | | | | | | | | |
| cis-1,2-Dichloroethene | <25 | <25 | <25 | <25 | <29 | <28 | <31 | 156,000 |
| Fluorotrichloromethane | 61 | <25 | <25 | <25 | <29 | <28 | <31 | 4,690,000 |
| Methylene Chloride | <25 | <25 | <25 | <25 | 72 | 96 | <62 | 8,520 |
| Naphthalene | <25 | <25 | <25 | <25 | <29 | <28 | <31 | 313,000 |
| Tetrachloroethene | 41 Q | 45 Q | 130 | <25 | *2,800* | *3,720* | <31 | 1,230 |

Constituent concentrations are reported in micrograms per kilogram (µg/kg).

| | |
|---|---|
| [ ] | Concentration exceeds the Soil Screening Level for the protection of groundwater. |
| *italics* | Concentration exceeds the soil screening level for vapor inhalation. |
| **Bold** | Concentration exceeds the soil screening level for ingestion. |
| ft bls | Feet below land surface. |
| ID | Identification. |
| NA | Not analyzed. |
| SSL | Soil Screening Level. |
| Q | Analyte detected between the Limit of Detection and the Limit of Quantitation. |
| VOCs | Volatile organic compounds. |

**Table 1. Soil Analytical Results, Hoffman's Valet Cleaners, 7215 W. Center Street, Wauwatosa, Wisconsin.**

| Sample ID<br>Sample Depth (ft bls)<br>Sample Date | SSL<br>Vapor<br>Inhalation | SSL<br>Groundwater<br>Protection |
|---|---|---|
| **VOCs** | | |
| cis-1,2-Dichloroethene | 1,300,000 | 27 |
| Fluorotrichloromethane | 410,000 | 9,200 |
| Methylene Chloride | 2,700 | 0.98 |
| Naphthalene | 68,000 | 340 |
| Tetrachloroethene | 2,100 | 4.1 |

Constituent concentrations are reported in micrograms per kilogram (µg/kg).

| | |
|---|---|
| | Concentration exceeds the Soil Screening Level for the protection of groundwater. |
| *italics* | Concentration exceeds the soil screening level for vapor inhalation. |
| **Bold** | Concentration exceeds the soil screening level for ingestion. |
| ft bls | Feet below land surface. |
| ID | Identification. |
| NA | Not analyzed. |
| SSL | Soil Screening Level. |
| Q | Analyte detected between the Limit of Detection and the Limit of Quantitation. |
| VOCs | Volatile organic compounds. |

ARCADIS

**Table 2. Static Groundwater Elevation Data, Hoffman's Valet Cleaners, 7215 W. Center Street, Wauwatosa,**

| Monitoring Well | Ground Surface Elevation (ft msl) | Top-of-Casing Elevation (ft msl) | Screened Interval (ft msl) | Measurement Date | Depth to Water (feet) | Water Level Elevation (ft msl) |
|---|---|---|---|---|---|---|
| MW-1 | 734.85 | 733.91 | 723.85 - 713.85 | 1/28/05 | 16.53 | 717.38 |
| MW-2 | 733.73 | 733.01 | 723.73 - 713.73 | 1/28/05 | 14.42 | 718.59 |
| MW-3 | 733.49 | 733.13 | 723.49 - 713.49 | 1/28/05 | 14.61 | 718.52 |

* Ground surface elevation is based USGS elevation datum and standard leveling techniques.
ft msl Feet above mean sea level.

ARCADIS

**Table 3. Groundwater Analytical Results, Hoffman's Valet Cleaners, 7215 W. Center Street, Wauwatosa, Wisconsin.**

| Sample ID | GP-102 | GP-103 | GP-105 | MW-1 | MW-2 | MW-3 | NR 140 | NR 140 |
|---|---|---|---|---|---|---|---|---|
| Sample Date | 09/12/02 | 09/12/02 | 09/12/02 | 01/28/05 | 01/28/05 | 01/28/05 | PAL | ES |
| **VOCs** | | | | | | | | |
| Tetrachloroethene | <0.63 | 2.9 | <0.63 | <0.50 | <0.50 | <0.50 | 0.5 | 5 |

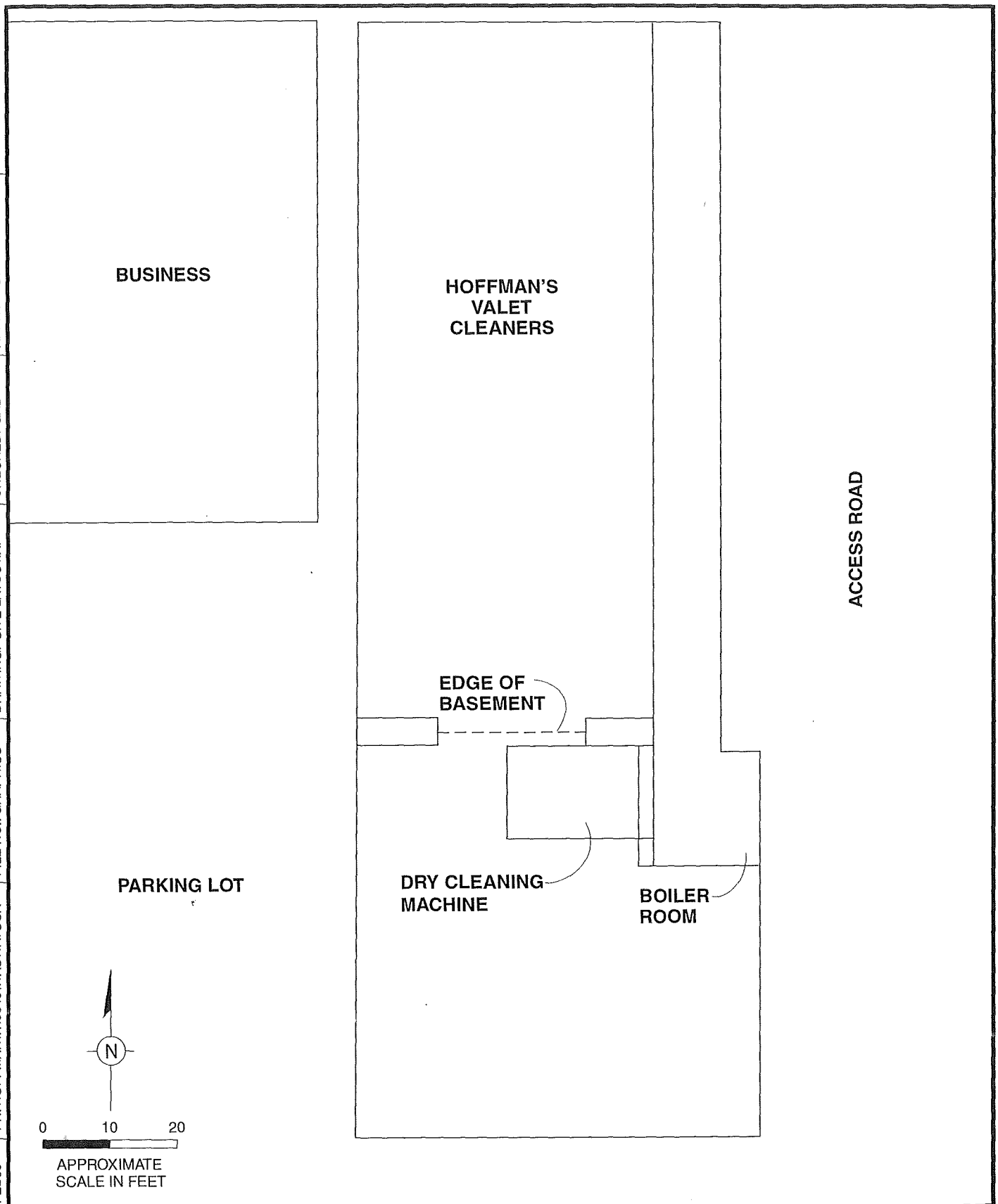
Constituent concentrations are reported in micrograms per liter (µg/L).

[ ] Concentration exceeds the NR 140 PAL.

ID Identification.

ES NR 140 Enforcement Standard.

PAL NR 140 Preventive Action Limit.




DRAFTER: LMB | APPROVED: | CHECKED: EAB | DRAWING: SITE LAYOUT.AI | FILE NO.: GRAPHICS | PN: HOFFMAN\WI0943\WAUWATOSA | DWG DATE: 11FEB05

ARCADIS

## SITE LAYOUT

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE
2

| DWG DATE: 23MAR05 | PN: HOFFMAN\WI0943\WAUWATOSA | FILE NO.: GRAPHICS | DRAWING: UTILITIES.AI | CHECKED: EAB | APPROVED: | DRAFTER: LMB |
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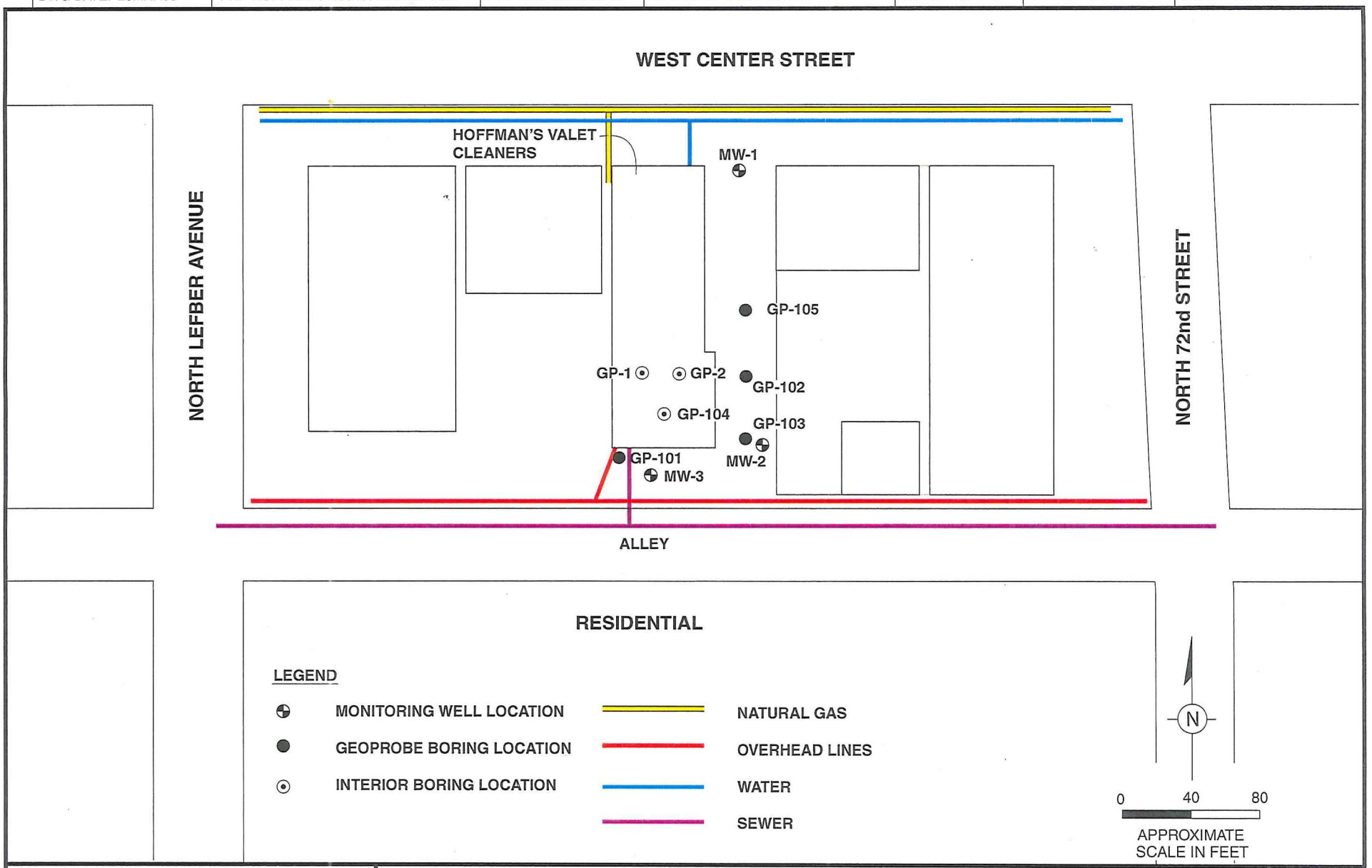


ARCADIS

# SOIL BORING AND MONITORING WELL LOCATIONS

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE
3

ARCADIS

Table 3. Groundwater Analytical Results, Hoffman's Valet Cleaners, 7215 W. Center Street, Wauwatosa, Wisconsin.

| Sample ID | GP-102 | GP-103 | GP-105 | MW-1 | MW-2 | MW-3 | NR 140 | NR 140 |
|---|---|---|---|---|---|---|---|---|
| Sample Date | 09/12/02 | 09/12/02 | 09/12/02 | 01/28/05 | 01/28/05 | 01/28/05 | PAL | ES |
| **VOCs** | | | | | | | | |
| Tetrachloroethene | <0.63 | 2.9 | <0.63 | <0.50 | <0.50 | <0.50 | 0.5 | 5 |

Constituent concentrations are reported in micrograms per liter (µg/L).

Concentration exceeds the NR 140 PAL.

ID Identification.

ES NR 140 Enforcement Standard.

PAL NR 140 Preventive Action Limit.

ARCADIS

Table 2. Static Groundwater Elevation Data, Hoffman's Valet Cleaners, 7215 W. Center Street, Wauwatosa,

| Monitoring Well | Ground Surface Elevation (ft msl) | Top-of-Casing Elevation (ft msl) | Screened Interval (ft msl) | Measurement Date | Depth to Water (feet) | Water Level Elevation (ft msl) |
|---|---|---|---|---|---|---|
| MW-1 | 734.85 | 733.91 | 723.85 - 713.85 | 1/28/05 | 16.53 | 717.38 |
| MW-2 | 733.73 | 733.01 | 723.73 - 713.73 | 1/28/05 | 14.42 | 718.59 |
| MW-3 | 733.49 | 733.13 | 723.49 - 713.49 | 1/28/05 | 14.61 | 718.52 |

* Ground surface elevation is based USGS elevation datum and standard leveling techniques.
ft msl Feet above mean sea level.

Table 1. Soil Analytical Results, Hoffman's Valet Cleaners, 7215 W. Center Street, Wauwatosa, Wisconsin.

| Sample ID<br>Sample Depth (ft bls)<br>Sample Date | SSL<br>Vapor<br>Inhalation | SSL<br>Groundwater<br>Protection |
|---|---|---|
| **VOCs** | | |
| cis-1,2-Dichloroethene | 1,300,000 | 27 |
| Fluorotrichloromethane | 410,000 | 9,200 |
| Methylene Chloride | 2,700 | 0.98 |
| Naphthalene | 68,000 | 340 |
| Tetrachloroethene | 2,100 | 4.1 |

Constituent concentrations are reported in micrograms per kilogram (µg/kg).

| | |
|---|---|
| | Concentration exceeds the Soil Screening Level for the protection of groundwater. |
| *italics* | Concentration exceeds the soil screening level for vapor inhalation. |
| **Bold** | Concentration exceeds the soil screening level for ingestion. |
| ft bls | Feet below land surface. |
| ID | Identification. |
| NA | Not analyzed. |
| SSL | Soil Screening Level. |
| Q | Analyte detected between the Limit of Detection and the Limit of Quantitation. |
| VOCs | Volatile organic compounds. |

Table 1. Soil Analytical Results, Hoffman's Valet Cleaners, 7215 W. Center Street, Wauwatosa, Wisconsin.

| Sample ID | GP-104 | | GP-105 | | MW-1 | MW-2 | MW-3 | |
|---|---|---|---|---|---|---|---|---|
| Sample Depth (ft bls) | 4-6 | 8-9 | 8-12 | 12-16 | 10-12 | 10-12 | 10-12 | SSL |
| Sample Date | 09/12/02 | 09/12/02 | 09/12/02 | 09/12/02 | 01/19/05 | 01/19/05 | 01/19/05 | Ingestion |
| VOCs | | | | | | | | |
| cis-1,2-Dichloroethene | <25 | <25 | <25 | <25 | <29 | <28 | <31 | 156,000 |
| Fluorotrichloromethane | 61 | <25 | <25 | <25 | <29 | <28 | <31 | 4,690,000 |
| Methylene Chloride | <25 | <25 | <25 | <25 | 72 | 96 | <62 | 8,520 |
| Naphthalene | <25 | <25 | <25 | <25 | <29 | <28 | <31 | 313,000 |
| Tetrachloroethene | 41 Q | 45 Q | 130 | <25 | *2,800* | *3,720* | <31 | 1,230 |

Constituent concentrations are reported in micrograms per kilogram (µg/kg).

| | |
|---|---|
| [ ] | Concentration exceeds the Soil Screening Level for the protection of groundwater. |
| *italics* | Concentration exceeds the soil screening level for vapor inhalation. |
| **Bold** | Concentration exceeds the soil screening level for ingestion. |
| ft bls | Feet below land surface. |
| ID | Identification. |
| NA | Not analyzed. |
| SSL | Soil Screening Level. |
| Q | Analyte detected between the Limit of Detection and the Limit of Quantitation. |
| VOCs | Volatile organic compounds. |

Table 1. Soil Analytical Results, Hoffman's Valet Cleaners, 7215 W. Center Street, Wauwatosa, Wisconsin.

| Sample ID | GP-1 | GP-2 | GP-101 | | GP-102 | | GP-103 | |
|---|---|---|---|---|---|---|---|---|
| Sample Depth (ft bls) | 6-8 | 4-6 | 7-11 | 11-15 | 4-8 | 12-16 | 8-12 | 12-16 |
| Sample Date | 02/07/02 | 02/07/02 | 09/12/02 | 09/12/02 | 09/12/02 | 09/12/02 | 09/12/02 | 09/12/02 |
| VOCs | | | | | | | | |
| cis-1,2-Dichloroethene | 53 | <10 | <25 | <25 | <25 | <25 | <25 | <25 |
| Fluorotrichloromethane | NA | NA | <25 | <25 | <25 | <25 | <25 | <25 |
| Methylene Chloride | 21 Q | 14 Q | <25 | <25 | <25 | <25 | <25 | <25 |
| Naphthalene | NA | NA | 50 Q | <25 | <25 | <25 | <25 | <25 |
| Tetrachloroethene | 51 | 240 | <25 | <25 | 150 | <25 | 400 | <25 |

Constituent concentrations are reported in micrograms per kilogram (µg/kg).

| | |
|---|---|
| [ ] | Concentration exceeds the Soil Screening Level for the protection of groundwater. |
| *italics* | Concentration exceeds the soil screening level for vapor inhalation. |
| **Bold** | Concentration exceeds the soil screening level for ingestion. |
| ft bls | Feet below land surface. |
| ID | Identification. |
| NA | Not analyzed. |
| SSL | Soil Screening Level. |
| Q | Analyte detected between the Limit of Detection and the Limit of Quantitation. |
| VOCs | Volatile organic compounds. |

| DWG DATE: 11FEB05 | PN: HOFFMAN\WI0943\WAUWATOSA | FILE NO.: GRAPHICS | DRAWING: SOIL ANALY RESULTS.AI | CHECKED: EAB | APPROVED: | DRAFTER: LMB |
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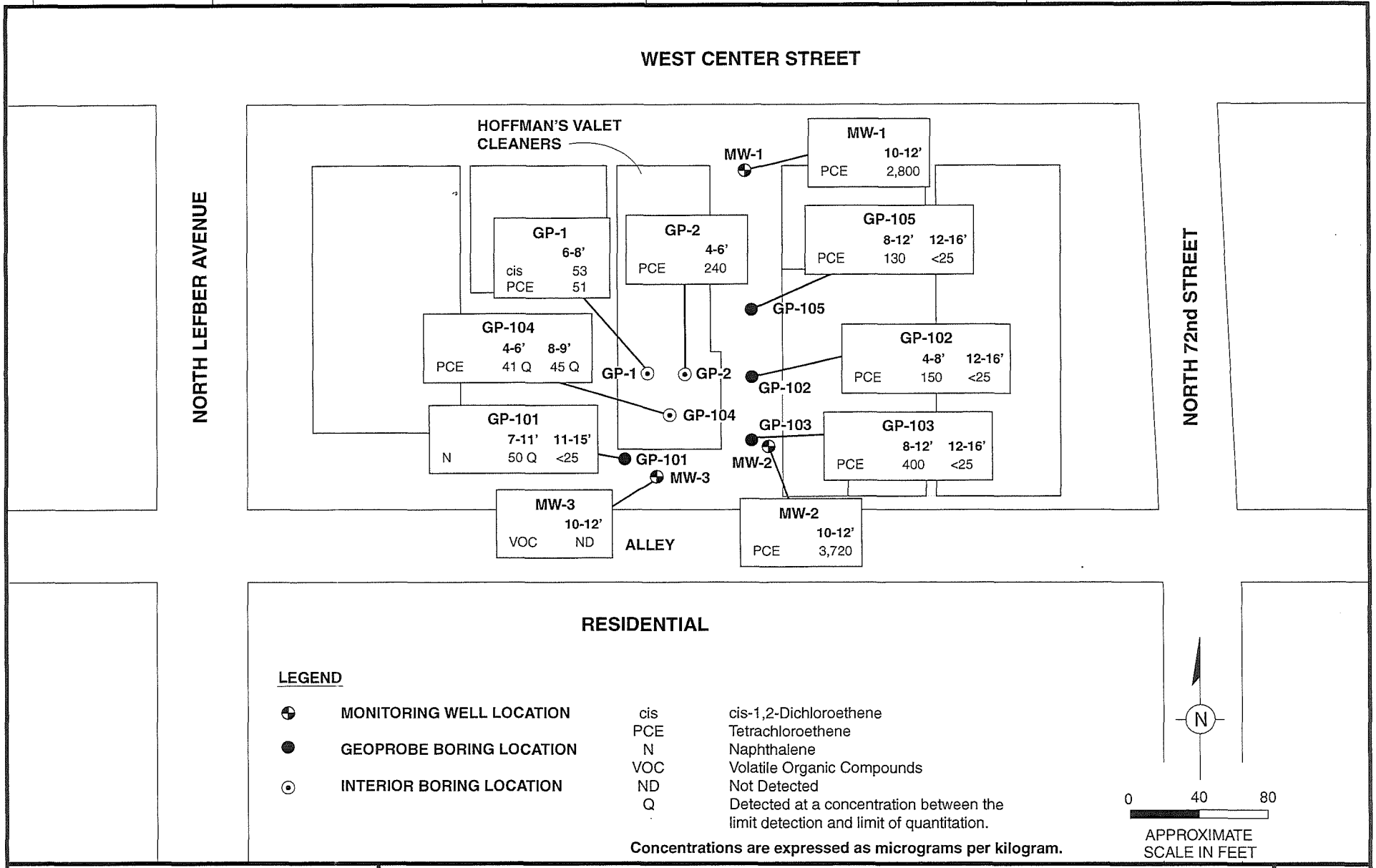


LEGEND

- MONITORING WELL LOCATION
- GEOPROBE BORING LOCATION
- INTERIOR BORING LOCATION

| | |
|---|---|
| cis | cis-1,2-Dichloroethene |
| PCE | Tetrachloroethene |
| N | Naphthalene |
| VOC | Volatile Organic Compounds |
| ND | Not Detected |
| Q | Detected at a concentration between the limit detection and limit of quantitation. |

**Concentrations are expressed as micrograms per kilogram.**

N

0 40 80

APPROXIMATE SCALE IN FEET

ARCADIS

# SOIL ANALYTICAL RESULTS

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE 8

| DWG DATE: 22MAR05 | PN: HOFFMAN\WI0943\WAUWATOSA | FILE NO.: GRAPHICS | DRAWING: GW_CONTOUR.AI | CHECKED: BJM | APPROVED: | DRAFTER: LMB |
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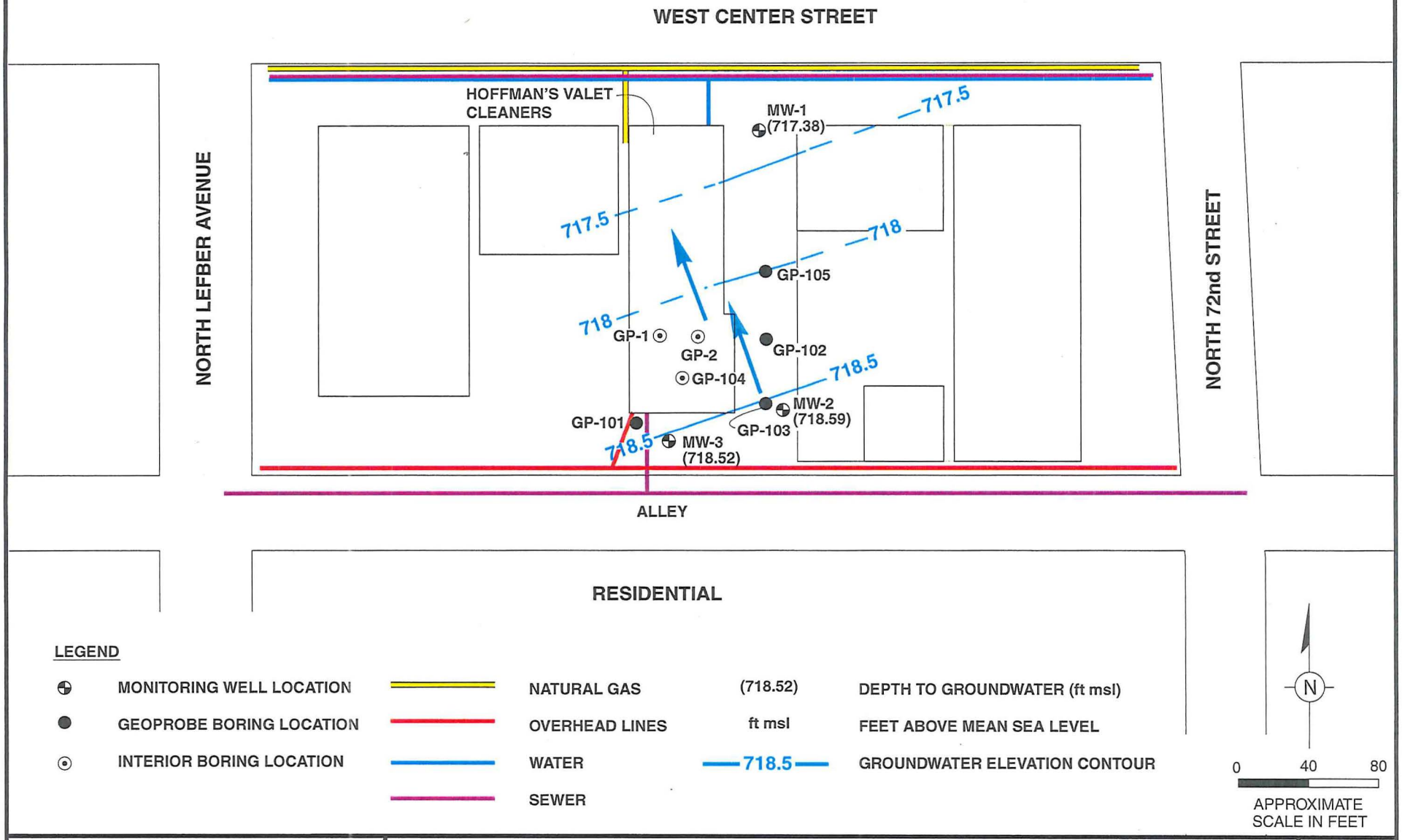
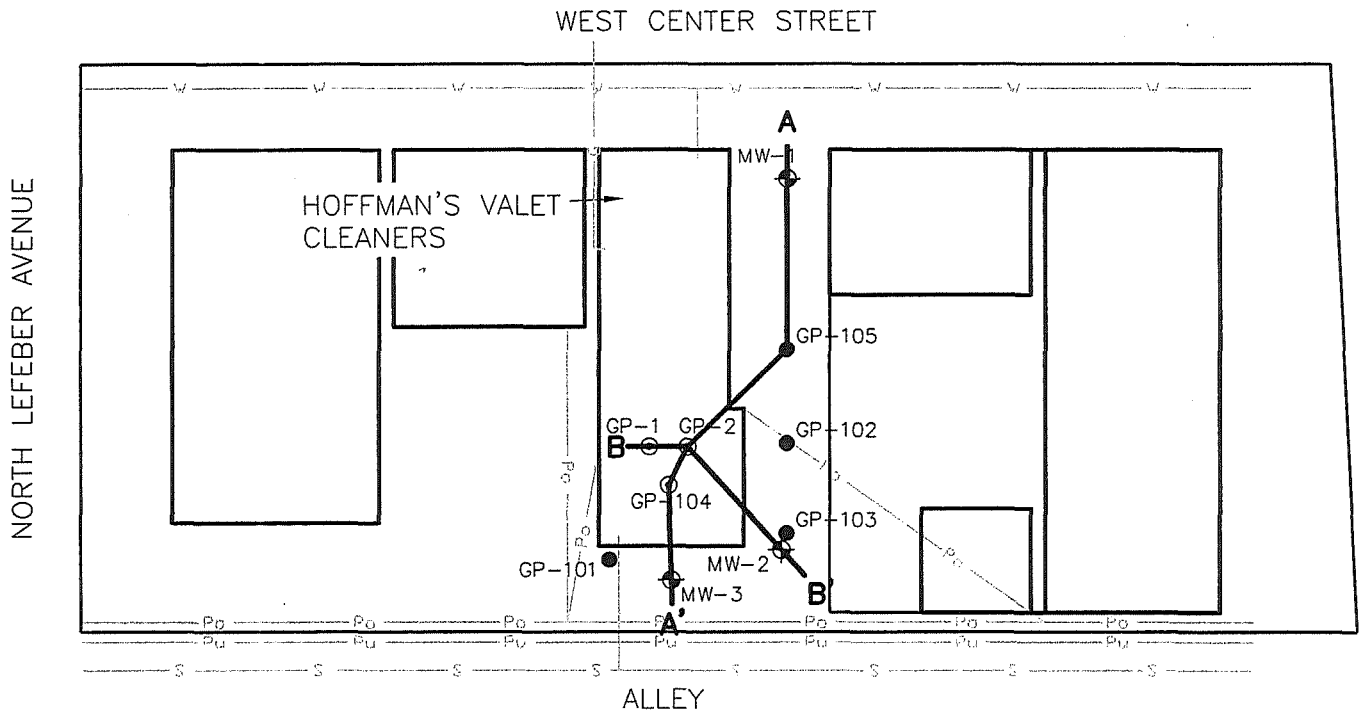



ARCADIS

# POTENTIOMETRIC SURFACE MAP
# JANUARY 28, 2005

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE
7




## LEGEND

- GEOPROBE BORING LOCATION
- INTERIOR BORING LOCATION
- MONITORING WELL LOCATION
- GAS UTILITY LINE
- POWER OVERHEAD LINE
- POWER UNDERGROUND LINE
- STORM SEWER LINE
- WATER MAIN LINE
- A——A' GEOLOGIC CROSS-SECTION LOCATION

0 20 40
SCALE IN FEET

CROSS-SECTION LOCATIONS

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

ARCADIS
126 North Jefferson Street, Suite 400
Milwaukee, Wisconsin 53202
Tel: 414-276-7742 Fax: 414-276-7603
www.arcadis-us.com

| | |
|---|---|
| Area Manager | M. MAIERLE |
| Project Director | E. BUC |
| Task Manager | B. MAILLET |
| Technical Review | A. MUMPY |
| Project Number | WI000943.0002 |
| Drawing Date | 3/11/05 |
| Figure | 1 |



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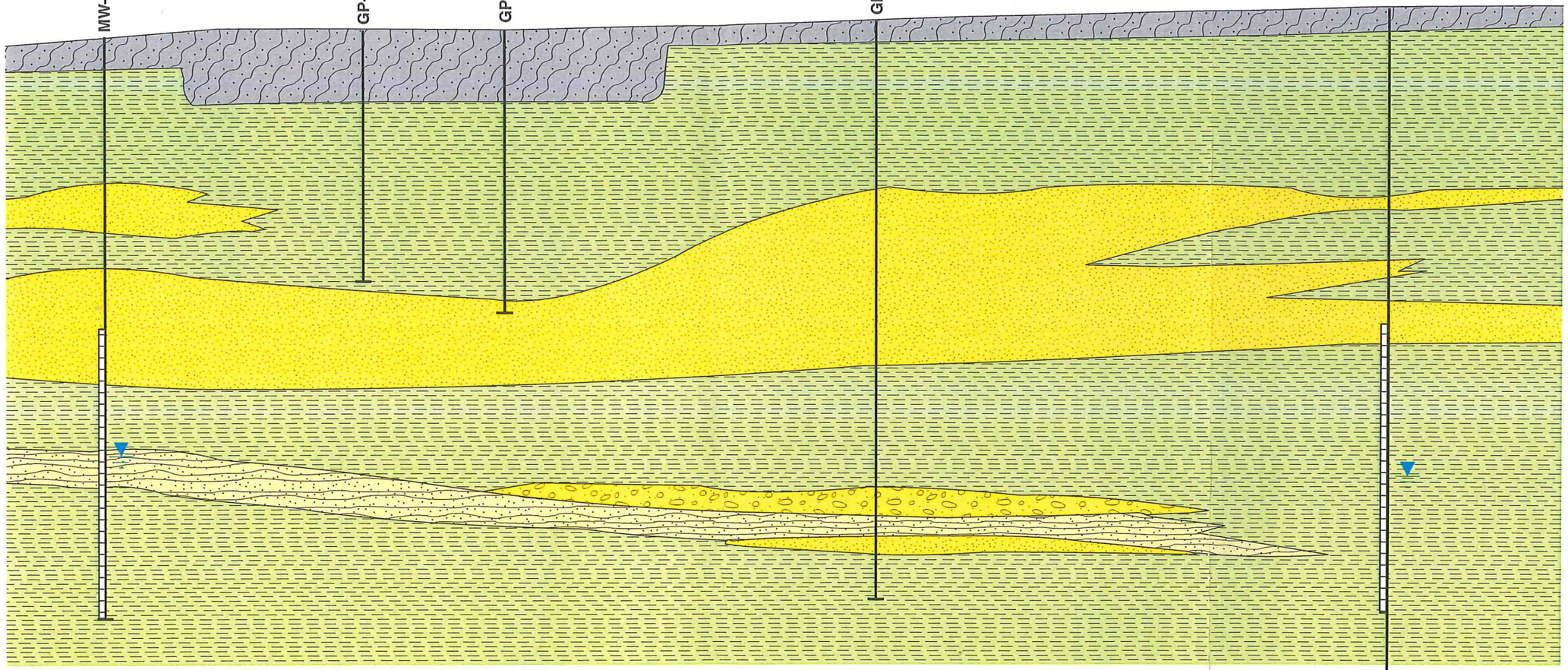
SOUTH
A'

NORTH
A

MW-3 GP-104 GP-2 GP-105 MW-1

736
732
728
724
720
716
712
708

FEET MEAN SEA LEVEL



## EXPLANATION

- CLAY - with variable silt content, traces of sand.
- SAND - (predominantly fine) silty in places.
- SAND & GRAVEL
- FILL/CONCRETE
- SANDY SILT
- WELL/BORING LOCATION

0 8 16
APPROXIMATE SCALE IN FEET
VERTICAL EXAGGERATION = 2x

ARCADIS

# NORTH/SOUTH GEOLOGIC CROSS-SECTION

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

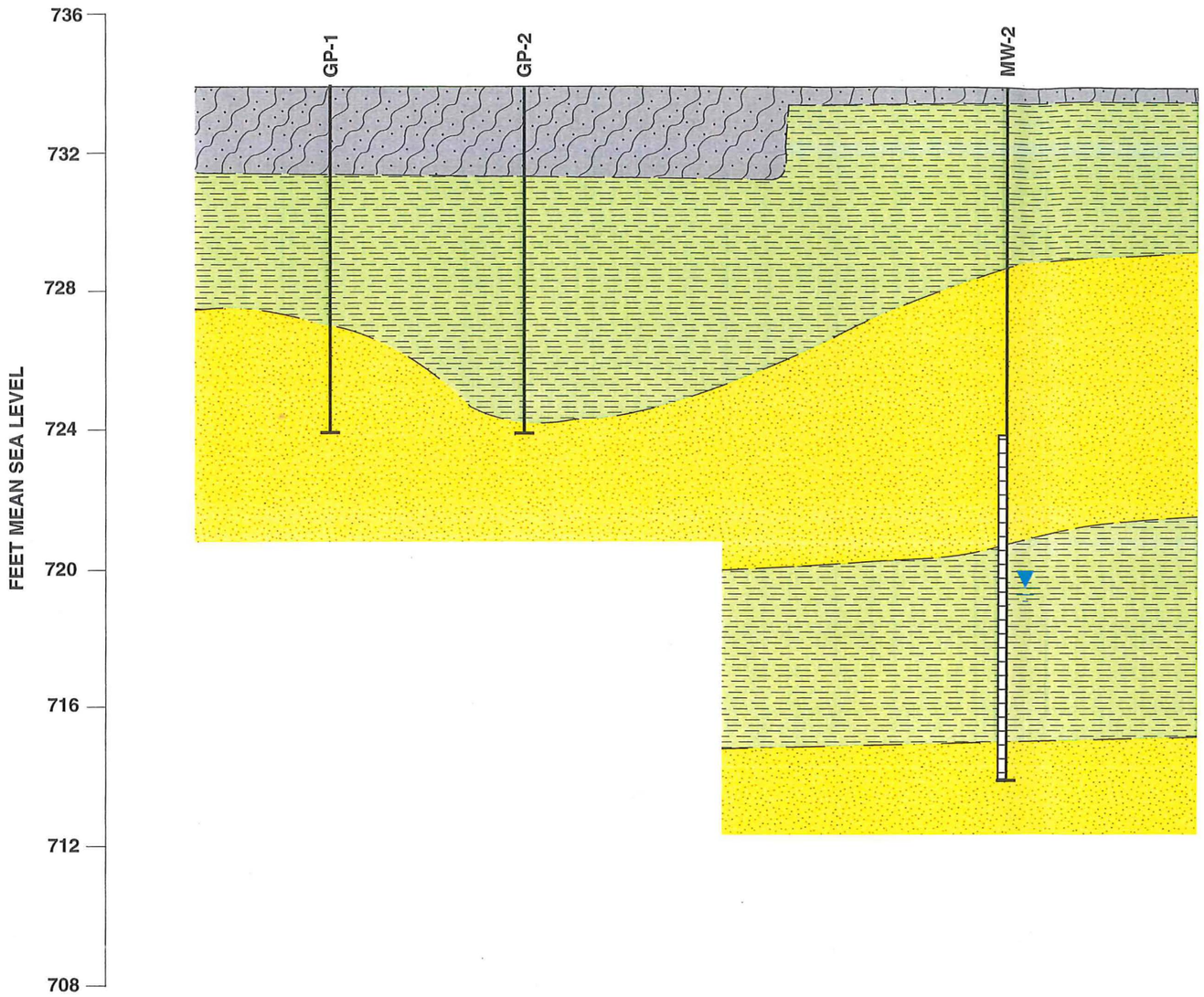
FIGURE
5

DRAFTER: LMB | APPROVED: | CHECKED: BMJ | DRAWING: XSEC_A'A.AI | FILE NO.: GRAPHICS | PN: HOFFMANWI0943WAUWATOSA | DWG DATE: 21MA405

DRAFTER: LMB | APPROVED: | CHECKED: BMJ | DRAWING: XSEC_BB.AI | FILE NO.: GRAPHICS | PN: HOFFMANWI0943WAUWATOSA | DWG DATE: 11MA405

WEST
B

EAST
B'




**EXPLANATION**

- CLAY - with variable silt content, traces of sand.
- SAND - (predominantly fine) silty in places.
- SAND & GRAVEL
- FILL/CONCRETE
- SANDY SILT
- WELL/BORING LOCATION

0 4 8

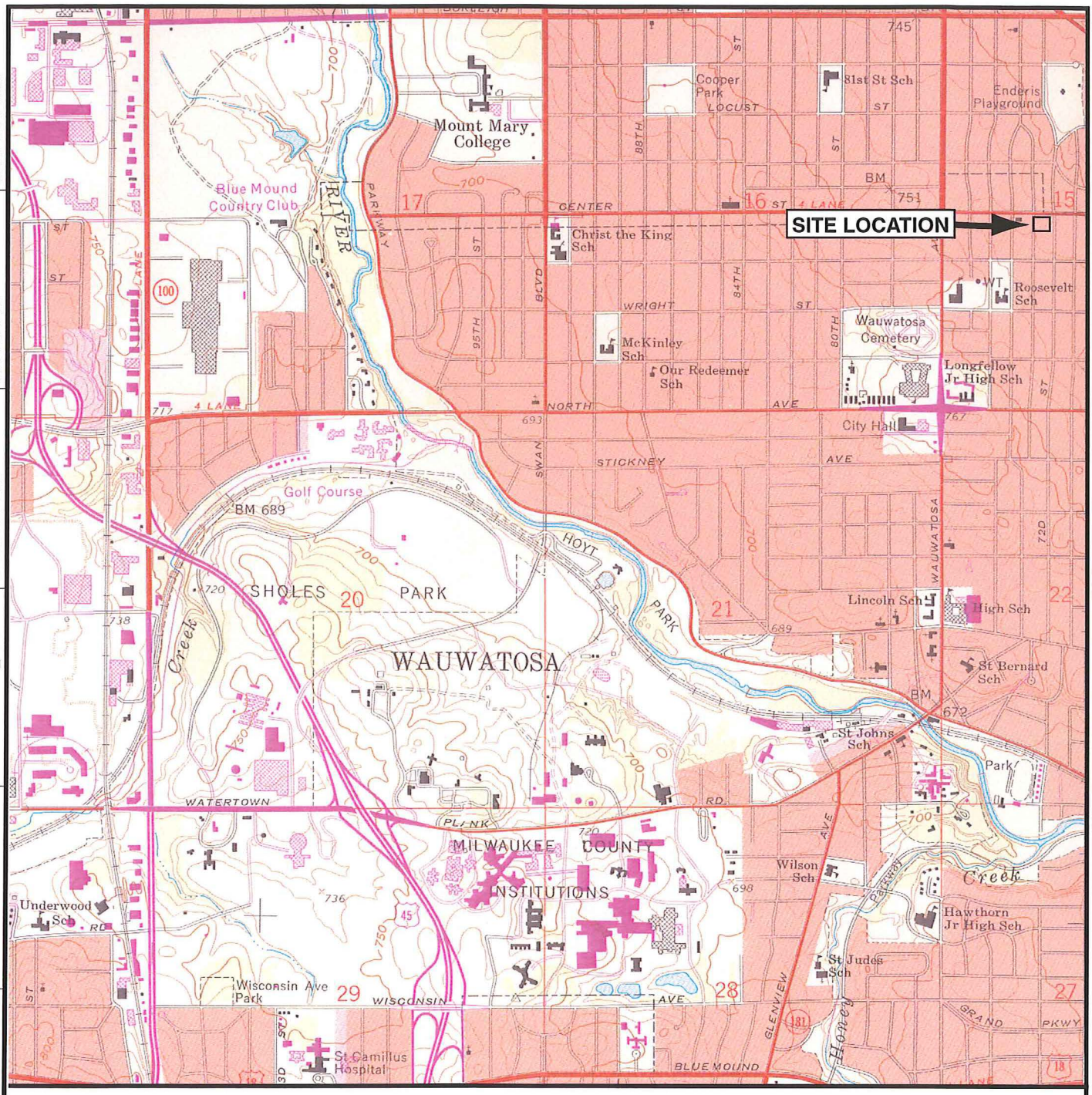
APPROXIMATE SCALE IN FEET
VERTICAL EXAGGERATION = 2x

ARCADIS

**WEST/EAST GEOLOGIC CROSS-SECTION**

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE
**6**




SOURCE: USGS 7.5 Minute Topographic Map, WAUWATOSA, WISCONSIN Quadrangle, 1994

N

0 1000 2000 4000

SCALE IN FEET

WISCONSIN

DRAFTER: LMB | APPROVED: | CHECKED: EAB | DRAWING: SITE_LOC.AI | FILE NO.: GRAPHICS | PN: HOFFMAN\WI0943\WAUWATOSA | DWG DATE: 11FEB05

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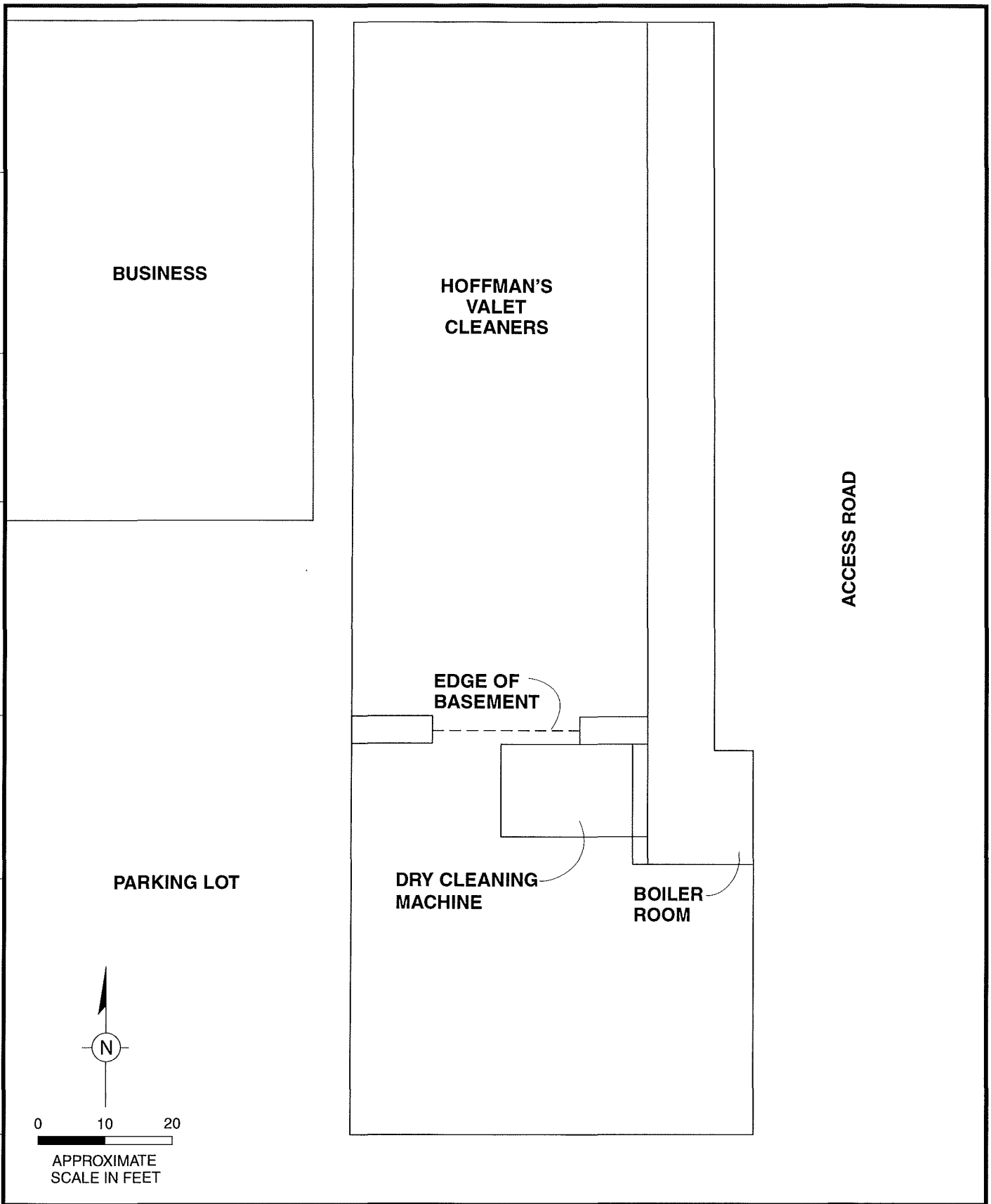
# SITE LOCATION MAP

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE

1

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## SITE LAYOUT

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE
**2**

| DWG DATE: 23MAR05 | PN: HOFFMAN\WI0943\WAUWATOSA | FILE NO.: GRAPHICS | DRAWING: UTILITIES.AI | CHECKED: EAB | APPROVED: | DRAFTER: LMB |
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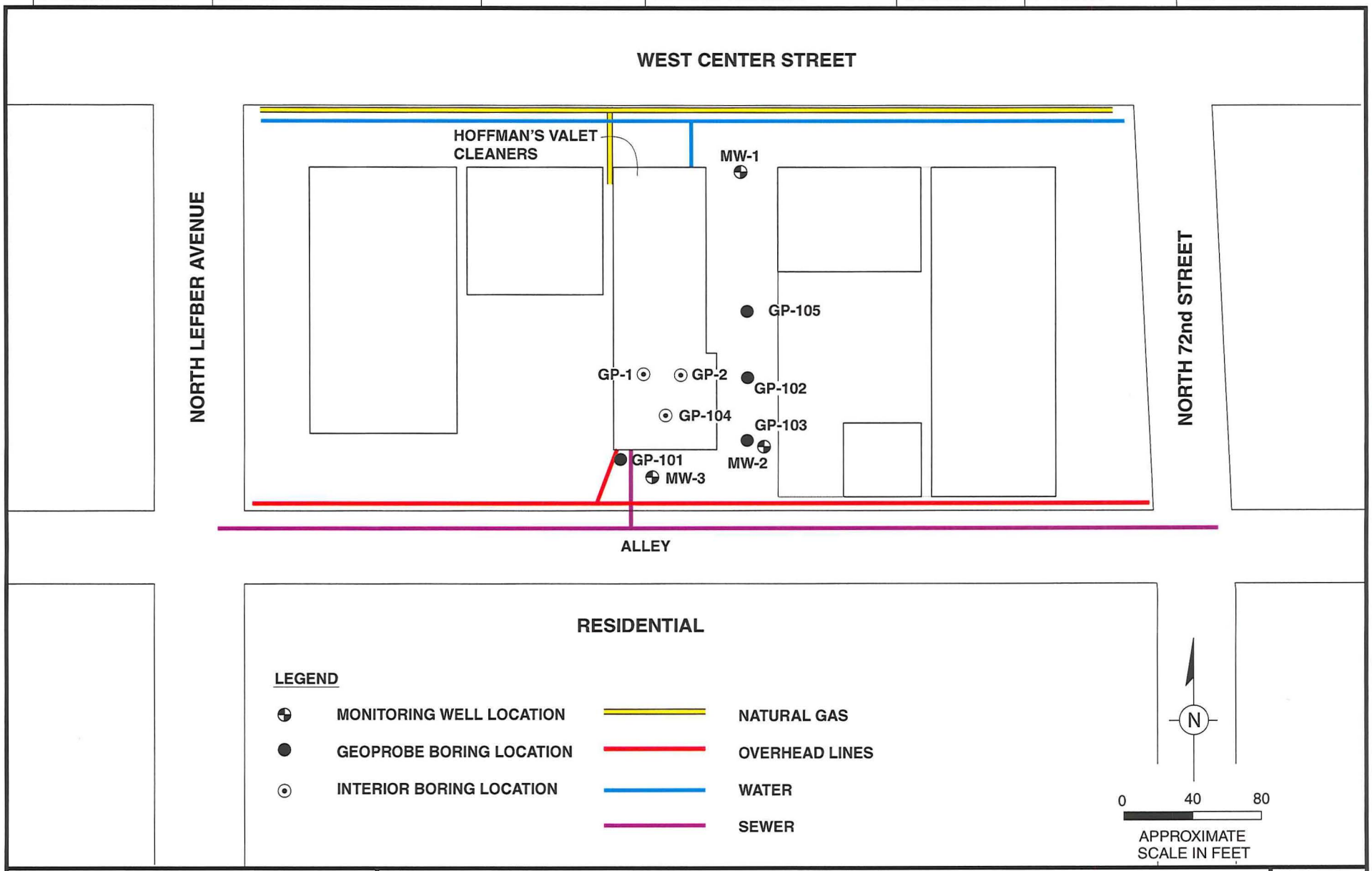
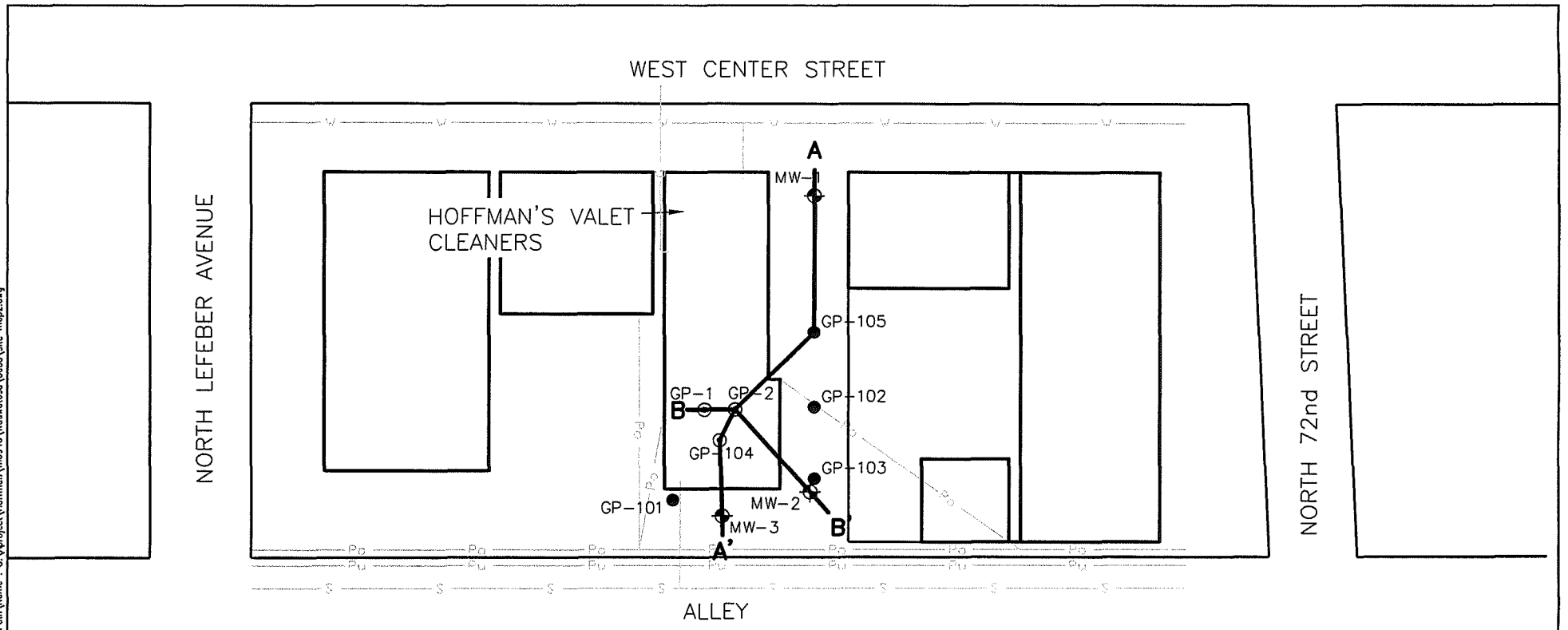



ARCADIS

# SOIL BORING AND MONITORING WELL LOCATIONS

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE
3




## LEGEND

- GEOPROBE BORING LOCATION
- INTERIOR BORING LOCATION
- MONITORING WELL LOCATION
- GAS UTILITY LINE
- POWER OVERHEAD LINE
- POWER UNDERGROUND LINE
- STORM SEWER LINE
- WATER MAIN LINE
- A——A' GEOLOGIC CROSS-SECTION LOCATION

N

0 20 40

SCALE IN FEET

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User Name : mhull
Acad Version : R16.1s (LMS Tech)



| | |
|---|---|
| Area Manager | M. MAIERLE |
| Project Director | E. BUC |
| Task Manager | B. MAILLET |
| Technical Review | A. MUMPY |

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Milwaukee, Wisconsin 53202
Tel: 414-276-7742 Fax: 414-276-7603
www.arcadis-us.com

**CROSS-SECTION LOCATIONS**

**HOFFMAN'S VALET CLEANERS**
**WAUWATOSA, WISCONSIN**

| | |
|---|---|
| Project Number | WI000943.0002 |
| Drawing Date | 3/11/05 |
| Figure | 1 |

SOUTH
A'

NORTH
A

MW-3 GP-104 GP-2 GP-105 MW-1

736
732
728
724
720
716
712
708

FEET MEAN SEA LEVEL

## EXPLANATION

- CLAY - with variable silt content, traces of sand.
- SAND - (predominantly fine) silty in places.
- SAND & GRAVEL
- FILL/CONCRETE
- SANDY SILT
- WELL/BORING LOCATION

0 8 16
APPROXIMATE SCALE IN FEET
VERTICAL EXAGGERATION = 2x

ARCADIS

# NORTH/SOUTH GEOLOGIC CROSS-SECTION

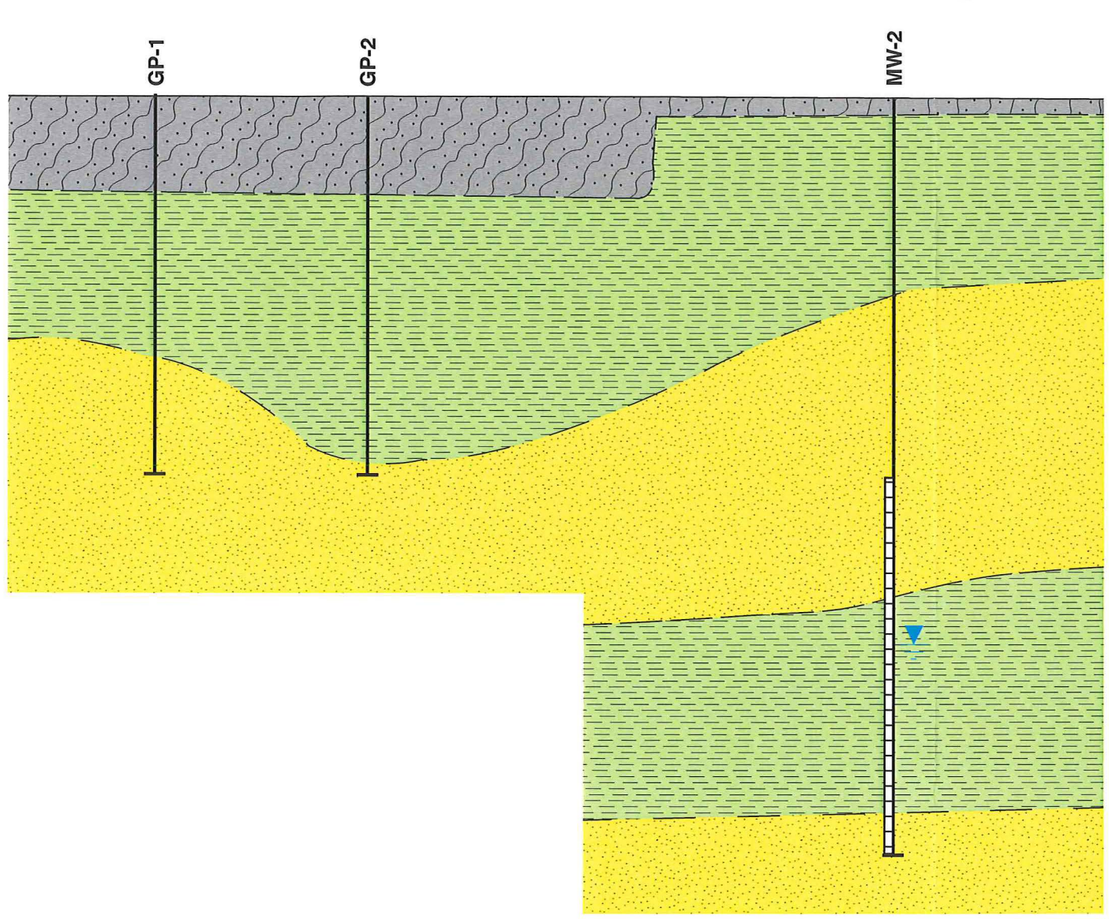
HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE
5

DRAFTER: LMB | APPROVED: | CHECKED: BMJ | DRAWING: XSEC_A'A.AI | FILE NO.: GRAPHICS | PN: HOFFMAN\WI0943\WAUWATOSA | DWG DATE: 21MA405

WEST
B

EAST
B'




DRAFTER: LMB | APPROVED: | CHECKED: BMJ | DRAWING: XSEC_BB.AI | FILE NO.: GRAPHICS | PN: HOFFMAN\WI0943\WAUWATOSA | DWG DATE: 11MA405

**EXPLANATION**

- CLAY - with variable silt content, traces of sand.
- SAND - (predominantly fine) silty in places.
- SAND & GRAVEL
- FILL/CONCRETE
- SANDY SILT
- WELL/BORING LOCATION

0 4 8

APPROXIMATE SCALE IN FEET
VERTICAL EXAGGERATION = 2x

ARCADIS

**WEST/EAST GEOLOGIC CROSS-SECTION**

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE
**6**

| DWG DATE: 22MAR05 | PN: HOFFMAN\WI0943\WAUWATOSA | FILE NO.: GRAPHICS | DRAWING: GW_CONTOUR.AI | CHECKED: BJM | APPROVED: | DRAFTER: LMB |
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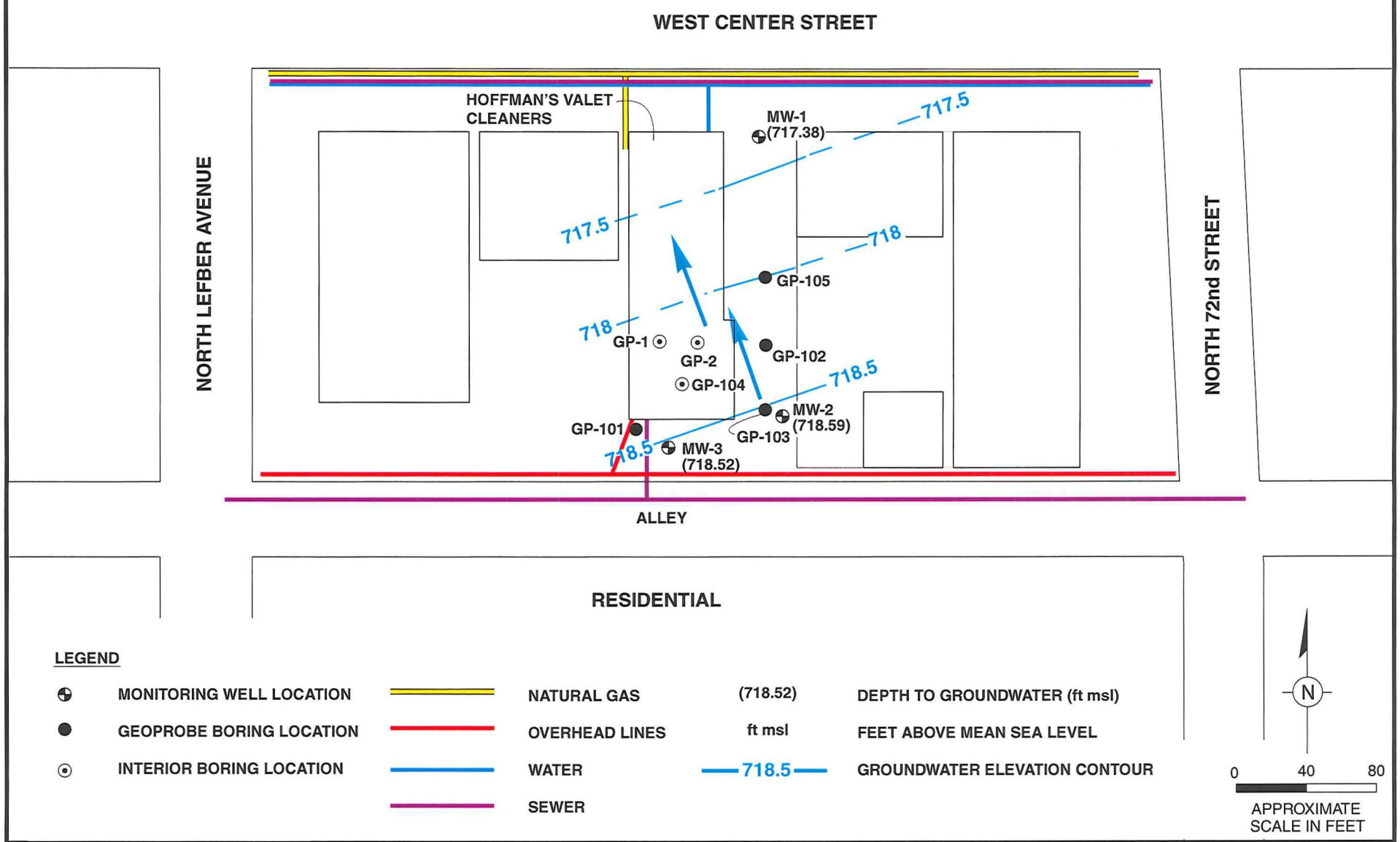


ARCADIS

# POTENTIOMETRIC SURFACE MAP
# JANUARY 28, 2005

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE
7

| DWG DATE: 11FEB05 | PN: HOFFMAN\WI0943\WAUWATOSA | FILE NO.: GRAPHICS | DRAWING: SOIL ANALY RESULTS.AI | CHECKED: EAB | APPROVED: | DRAFTER: LMB |
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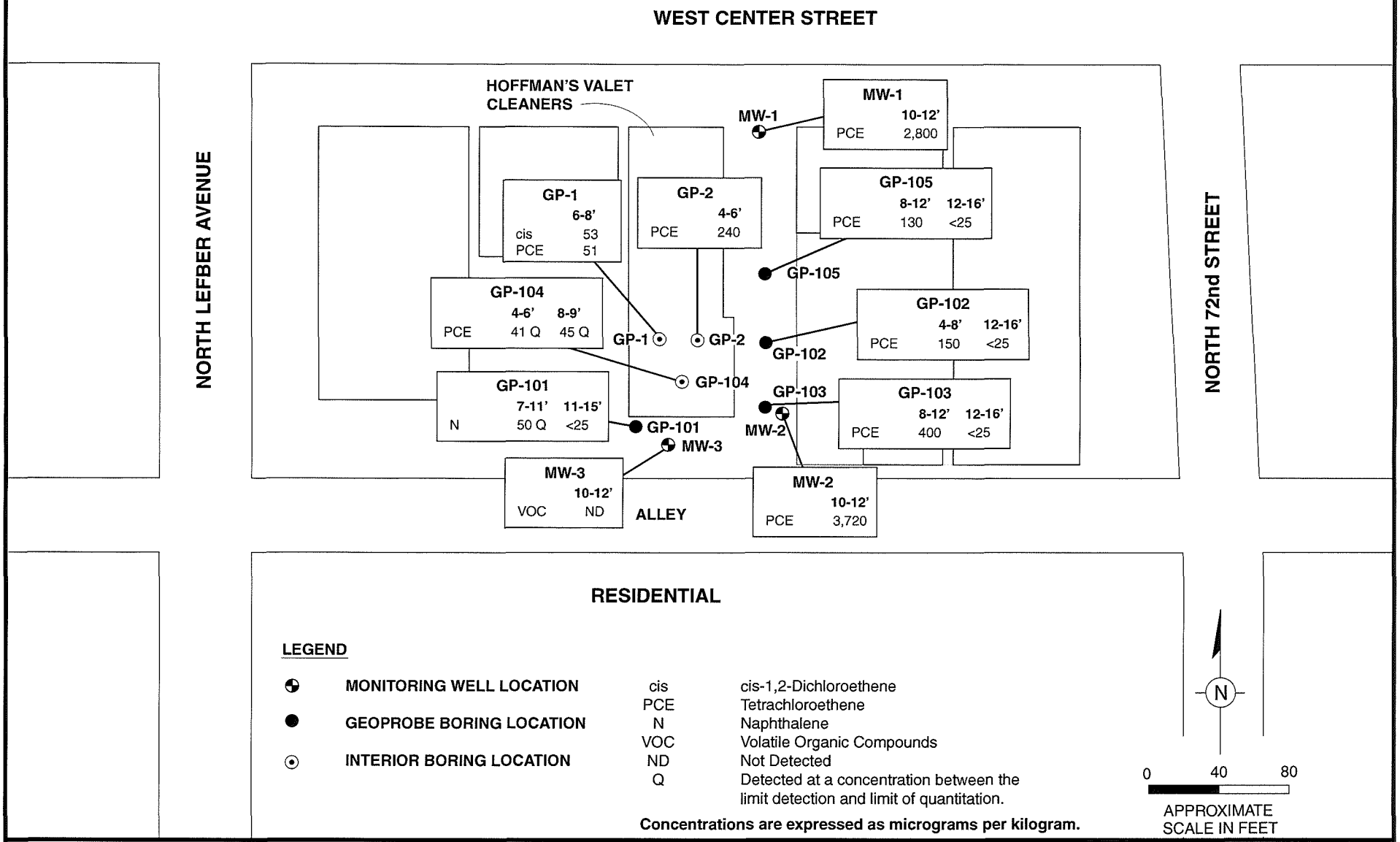


**LEGEND**

- MONITORING WELL LOCATION
- GEOPROBE BORING LOCATION
- INTERIOR BORING LOCATION

| | |
|---|---|
| cis | cis-1,2-Dichloroethene |
| PCE | Tetrachloroethene |
| N | Naphthalene |
| VOC | Volatile Organic Compounds |
| ND | Not Detected |
| Q | Detected at a concentration between the limit detection and limit of quantitation. |

**Concentrations are expressed as micrograms per kilogram.**

N

0 40 80

APPROXIMATE SCALE IN FEET

ARCADIS

# SOIL ANALYTICAL RESULTS

HOFFMAN'S VALET CLEANERS
WAUWATOSA, WISCONSIN

FIGURE
8

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## Appendix A

Soil Boring and Monitoring Well Construction and Development Forms

State of Wisconsin
Department of Natural Resources

# Soil Boring Log Information

Form 4400-122 Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ 7215 W. Center Street



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| Hoffman's Valet | | MW-1 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| First Name Ryan/Ted Last Name<br>Firm Giles Engineering Associates | 1/19/05 | 1/19/05 | Hollow Stem Auger |

| WI Unique Well No. | DNR Well ID No. | Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | Feet | NA Feet MSL | 8 inches |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐ /N☐ ☒ E ☐ W
Lat _____ Long _____
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W
_____ 1/4 of SW 1/4 of Section 15 ,T 7 N,R 21

| Facility ID | County | County Code | Civil Town/City/or Village |
|---|---|---|---|
| | Milwaukee | 41 | Wauwatosa |

| Sample Number and Type | Sample Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12 | 19 23 | 0 | 0-2/<br>0-1' Concrete.<br><br>1-2' Silt and Clay: Yellowish brown (10 YR 6/4), frozen, trace fine to coarse sand, crumbly, fissle, medium dense, no odor. | | | | 0.0 | | | | | | |
| 2 | 24 | 10 11<br>11 17 | 2 | 2-4/<br>0-2.0' Clay: Color as above, small silt nodules with strong brown color, trace coarse sand, silt in places, somehwat cohesive to crumbly, moist, no odor, till. | | | | 0.0 | | | | | | |
| 3 | 24 | 6 4 8 8 | 4 | 4-6/<br>0-2.0' Clay: As above, but color changes to dark yellowish brown (10 YR 4/3) downward, also trace angular gravel up to 0.5", sweet, plastic-like odor, odor may be natural. | | | | 0.0 | | | | | | |
| 4 | 24 | 6 8 9 14 | 6 | 6-8/<br>0-0.3' Clay: As above.<br>0.3-2.0' Clay: Dark grayish brown (10 YR 4/2), trace silt, trace coarse sand, trace fine angular gravel, medium dense, somewhat plastic, fairly uniform, moist, odor as above. | | | | 0.0 | | | | | | |
| 5 | 21.6 | 8 8 9 10 | 8 | 8-10/<br>0-1.8' Clay: As above, but two sand lenses at 1.4 and 1.6, lenses contain very fine to medium sand and silt, poorly sorted, loose, moist, lenses are thin (<0.25"), odor as above. | | | | 0.0 | | | | | | |
| | | | 10 | 10-12/<br>0-0.2' Clay: As above. | | | | | | | | | | |

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

Signature

Firm ARCADIS
126 N. Jefferson St, Suite 400
Milwaukee, WI (414)276-7742

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.

| Sample Number and Type | Sample Length All. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Soil Properties: Moisture Content | Soil Properties: Liquid Limit | Soil Properties: Plastic Limit | Soil Properties: P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 18 | | 12 | 0.2-1.3' Sand: Yellowish brown (10 YR 5/6), very fine to very coarse grain, predominately fine, silty, very poorly sorted, loose, damp, slight odor as above.<br>1.3-1.5' Clay: As above. | | | | 0.0 | | | | | | |
| 7 | 15.6 | 3 6 3 2 | 14 | 12-14/<br>0-1.3' Clay: Brown (10 YR 5/3), little silt, trace medium to coarse sand, trace fine gravel subround to angular, cohesive, plastic, wet no odor, till. | | | | 0.0 | | | | | | |
| 8 | 18 | 5 3 5 5 | 16 | 14-16/<br>0-1.5' Clay: As above, with slight odor as above. | | | | 0.0 | | | | | | |
| 9 | 24 | 3 3 5 6 | 18 | 16-18/<br>0-2.0' Clay: As above, wet, with slight odor as above, odor may be natural. | | | | 0.0 | | | | | | |
| 10 | 18 | 3 3 5 6 | 20 | 18-20/<br>0-1.5' Clay: As above. | | | | 0.0 | | | | | | |
| 11 | 9.6 | 3 3 5 0 | 22 | 20-22/<br>0-0.8' Clay: As above. | | | | 0.0 | | | | | | |
| 12 | 24 | 3 3 5 6 | 24 | 22-24/<br>0-2.0' Clay: As above, brown, trace to little silt, trace fine to coarse sand, trace gravel angular to subround up to 1", cohesive, plastic, wet, no odor. | | | | 0.0 | | | | | | |
| | | | 26 | **END OF BORING AT 24'** | | | | | | | | | | |
| | | | 28 | | | | | | | | | | | |

State of Wisconsin
Department of Natural Resources

# Soil Boring Log Information

Form 4400-122 Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ 7215 W. Center Street



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| Hoffman's Valet | | MW-2 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| First Name Ryan/Ted Last Name<br>Firm Giles Engineering Associates | 1/19/05 | 1/19/05 | Hollow Stem Auger |

| WI Unique Well No. | DNR Well ID No. | Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | Feet | NA Feet MSL | 8 inches |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐ /N☐ ☒ E ☐ W
1/4 of SW 1/4 of Section 15 ,T 7 N,R 21 Lat _____ Long _____
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

| Facility ID | County | County Code | Civil Town/City/or Village |
|---|---|---|---|
| | Milwaukee | 41 | Wauwatosa |

| Sample Number and Type | Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15.6 | 16 8 | 0 | 0-2/<br>0-0.7' Concrete.<br>0.7-1.3' Clay: Yellowish brown (10 YR 5/6), some silt, trace fine to coarse sand, trace gravel subangular to angular up to 1", frozen, crumbly, no odor. | | | | 0.0 | | | | | | |
| 2 | 24 | 8 12 16 18 | 2 | 2-4/<br>0-2.0' Clay: Yellowish brown as above, some silt, strong brown mottling where silty, trace fine to coarse sand, sand seam at 0.4 very fine to medium, poorly sorted, 0.25" thick, trace gravel subround to angular up to 1", cohesive, damp, till, no odor. | | | | 0.0 | | | | | | |
| 3 | 24 | 5 7 7 9 | 4 | 4-6/<br>0-1.4' Clay: As above, but color changes to brown (10 YR 5/3).<br>1.4-2.0' Sand: Yellowish brown (10 YR 5/6), very fine to fine grain, well sorted, loose, damp, slight odor. | | | | 0.0 | | | | | | |
| 4 | 12 | 6 7 8 9 | 6 | 6-8/<br>0-1.0' Sand: As above, odor, damp. | | | | 0.0 | | | | | | |
| 5 | 9.6 | pushed | 8 | 8-10/<br>0-0.8' Sand: As above, moist. | | | | 0.0 | | | | | | |
| | | | 10 | 10-12/<br>0-0.3' Sand: Grayish brown (10 YR 5/2), | | | | | | | | | | |

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

Signature

Firm ARCADIS
126 N. Jefferson St, Suite 400
Milwaukee, WI (414)276-7742

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.

| Sample Number and Type | Length All. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 3.5 | 8 9 10 12 | 12 | very fine to medium, predominately fine, little silt, poorly sorted, loose, moist, no odor. | | | | 0.0 | | | | | | |
| 7 | 18 | 5 8 5 5 | 14 | 12-14/<br>0-0.6' Sand: As above.<br>0.6-1.0' Sand: Dark grayish brown (10 YR 4/2), very fine to very coarse, poorly sorted, predominately fine to medium, loose, moist wet, slight odor. | | | | 0.0 | | | | | | |
| 8 | 24 | 3 3 4 4 | 16 | 14-16/<br>0-2.0' Clay: As above. | | | | 0.0 | | | | | | |
| 9 | 21.6 | 3 4 5 4 | 18 | 16-18/<br>0-1.8' Clay: As above, but contains interbedded silt/sand layers, silty sand interbeds are thin (1-5 mm thick), with very fine to fine sand, moderately sorted, cohesive, plastic, saturated, no odor. | | | | 0.0 | | | | | | |
| 10 | 15.6 | 3 3 6 7 | 20 | 18-20/<br>0-0.8' Clay: With silty sand interbeds as above.<br>0.8-1.3' Silty Sand: Grayish brown as above, very fine to very coarse, predominately very fine, loose, saturated, no odor. | | | | 0.0 | | | | | | |
| | | | 22 | **END OF BORING AT 20'** | | | | | | | | | | |
| | | | 24 | | | | | | | | | | | |
| | | | 26 | | | | | | | | | | | |
| | | | 28 | | | | | | | | | | | |

State of Wisconsin
Department of Natural Resources

# Soil Boring Log Information

Form 4400-122 Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ 7215 W. Center Street



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| Hoffman's Valet | | MW-3 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| First Name Ryan/Ted Last Name<br>Firm Giles Engineering Associates | 1/19/05 | 1/19/05 | Hollow Stem Auger |

| WI Unique Well No. | DNR Well ID No. | Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | Feet | NA Feet MSL | 8 inches |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐ /N☐ ☒ E ☐ W
_____ 1/4 of SW 1/4 of Section 15 ,T 7 N,R 21
Lat _____ Long _____
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

| Facility ID | County | County Code | Civil Town/City/or Village |
|---|---|---|---|
| | Milwaukee | 41 | Wauwatosa |

| Sample Number and Type | Sample Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12 | 15 10 | 0 | 0-2/<br>0-1.0' Concrete.<br>1-2' Silty Clay: Yellowish brown (10 YR 5/4), trace medium to coarse sand, trace gravel angular to subangular up to 1", strong brown mottling associated with silt, frozen, crumbly, no odor. | | | | 0.0 | | | | | | |
| 2 | 24 | 5 8 14 12 | 2 | 2-4/<br>0-2.0' Silty Clay: As above, but not frozen, damp, no odor. | | | | 0.0 | | | | | | |
| 3 | 24 | 8 9 10 15 | 4 | 4-6/<br>0-1.1' Silty Clay: As above, glacial till.<br>1.1-1.7' Sand: Dark yellowish brown (10 YR 4/6), very fine grain, approaching silt size, well sorted, loose, damp, no odor, contains a few minor silt lenses.<br>1.7-2.0' Silty Clay: As above. | | | | 0.0 | | | | | | |
| 4 | 8.4 | 6 6 7 8 | 6 | 6-8/<br>0-0.7' Sand: As above. | | | | 0.0 | | | | | | |
| 5 | 19.2 | 6 6 7 8 | 8 | 8-10/<br>0-1.6' Sand: Yellowish brown (10 YR 5/6), fine grain, very well sorted, loose, damp, no odor. | | | | 0.0 | | | | | | |
| | | | 10 | 10-12/<br>0-0.4' Sand: As above. | | | | | | | | | | |

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

Signature

Firm **ARCADIS**
**126 N. Jefferson St, Suite 400**
**Milwaukee, WI (414)276-7742**

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| Sample Number and Type | Length All. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 14.4 | 6 9 7 11 | | 0.4-1.2' Sand: Brown (10 YR 5/3), very fine to medium predominately fine, moderately sorted, loose, damp, no odor. | | | | 0.0 | | | | | | |
| | | | 12 | | | | | | | | | | | |
| 7 | 24 | 2 2 3 5 | | 12-14/<br>0-2.0' Clay: Grayish brown (10 YR 5/2), cohesive, soft, plastic, uniform, little sand and silt content below 1.6 very fine to coarse, wet to saturated, no odor. | | | | 0.0 | | | | | | |
| | | | 14 | | | | | | | | | | | |
| 8 | 14.4 | 2 3 4 5 | | 14-16/<br>0-0.8<br>Silt/Sand/Clay: Color as above, probably distorted interbeds, clay appears as above, but contains some silt and sand very fine to coarse, some silt, somewhat cohesive, saturated, no odor. | | | | 0.0 | | | | | | |
| | | | 16 | | | | | | | | | | | |
| 9 | 24 | 3 3 3 5 3 | | 0.8-1.2' Silty Sand: Dark gray (10 YR 4/1), sand fine to very coarse, predominately medium, trace fine gravel angular to subangular, loose, saturated, no odor. | | | | 0.0 | | | | | | |
| | | | 18 | 16-18/ | | | | | | | | | | |
| 10 | 24 | 3 2 3 4 | | Clay: Grayish brown as above, some silt, little very fine to coarse sand, trace fine gravel angular to subround, glacial till, poorly sorted, cohesive, somewhat plastic, saturated, no odor. | | | | 0.0 | | | | | | |
| | | | 20 | 18-20/<br>Clay: As above.<br>**END OF BORING AT 20'** | | | | | | | | | | |
| | | | 22 | | | | | | | | | | | |
| | | | 24 | | | | | | | | | | | |
| | | | 26 | | | | | | | | | | | |
| | | | 28 | | | | | | | | | | | |

State of Wisconsin
Department of Natural Resources

# MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ 7215 W. Center

| Facility/Project Name | County Name | Well Name |
|---|---|---|
| Hoffman's Valet | Milwaukee | MW-2 |

| Facility License, Permit or Monitoring Number | County Code | Wis. Unique Well Number | DNR Well Number |
|---|---|---|---|
| | | | |

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

| | | |
|---|---|---|
| surged with bailer and bailed | ☒ | 41 |
| 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 |
| bailed only | ☐ | 10 |
| pumped only | ☐ | 51 |
| pumped slowly | ☐ | 50 |
| Other _____ | ☐ | |

3. Time spent developing well: 60 min.

4. Depth of well (from top of well casing): 19.5 ft.

5. Inside diameter of well: 2.07 in.

6. Volume of water in filter pack and well casing: 5 gal.

7. Volume of water removed from well: 11 gal.

8. Volume of water added (if any): _____ gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☒ No
(If yes, attach results)

| | Before Development | After Development |
|---|---|---|
| 11. Depth to Water (from top of well casing) | a. 14.42 ft. | Dry ft. |
| Date | b. 01/28/05 m m / d d / y y y y | 01/28/05 m m / d d / y y y y |
| Time | c. 9:00 ☐ a.m. ☐ p.m. | 10:00 ☐ a.m. ☐ p.m. |
| 12. Sediment in well bottom | 0 inches | 0 inches |
| 13. Water clarity | Clear ☐ 10 Turbid ☒ 15 (Describe) Clear, then silty/turbid toward bottom | Clear ☒ 20 Turbid ☐ 25 (Describe) Clear, slightly silty at bottom |

Fill in if drilling fluids were used and well is at solid waste facility:

| | | |
|---|---|---|
| 14. Total suspended solids | _____ mg/l | _____ mg/l |
| 15. COD | _____ mg/l | _____ mg/l |

16. Well developed by: Name (first, last) and Firm
First Name: Andrew Last Name: Mumpy
Firm: ARCADIS

17. Additional comments on development:
Purged MW-2 dry 3 times with bailer allowing for approximately 70 percent recharge between purges.

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Ralph Last Name: Hoffman
Facility/Firm: Hoffman's Valet Cleaners
Street: 7215 W. Center Street
City/State/Zip: Wauwatosa, WI

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: [signature]
Print Name: Andrew Mumpx
Firm: ARCADIS Geraghty & Miller

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

State of Wisconsin
Department of Natural Resources

# MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ 7215 W. Center

| Facility/Project Name | County Name | Well Name |
|---|---|---|
| Hoffman's Valet | Milwaukee | MW-1 |

| Facility License, Permit or Monitoring Number | County Code | Wis. Unique Well Number | DNR Well Number |
|---|---|---|---|
| | | | |

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

| | | |
|---|---|---|
| surged with bailer and bailed | ☒ | 41 |
| 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 |
| bailed only | ☐ | 10 |
| pumped only | ☐ | 51 |
| pumped slowly | ☐ | 50 |
| Other _____ | ☐ | |

3. Time spent developing well 65 min.

4. Depth of well (from top of well casing) 20 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing 5 gal.

7. Volume of water removed from well 4 gal.

8. Volume of water added (if any) _____ gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☒ No
(If yes, attach results)

| | Before Development | After Development |
|---|---|---|
| 11. Depth to Water (from top of well casing) | a. 16.53 ft. | Dry ft. |
| Date | b. 1/28/05 m m / d d / y y y y | 1/28/05 m m / d d / y y y y |
| Time | c. 8:50 ☐ a.m. ☐ p.m. | 9:55 ☐ a.m. ☐ p.m. |
| 12. Sediment in well bottom | 0 inches | 0 inches |
| 13. Water clarity | Clear ☒ 10 Turbid ☐ 15 (Describe) Clear. | Clear ☒ 20 Turbid ☐ 25 (Describe) Clear. |

Fill in if drilling fluids were used and well is at solid waste facility:

| | | |
|---|---|---|
| 14. Total suspended solids | _____ mg/l | _____ mg/l |
| 15. COD | _____ mg/l | _____ mg/l |

16. Well developed by: Name (first, last) and Firm
First Name: Andrew Last Name: Mumpy
Firm: ARCADIS

17. Additional comments on development:
Purged MW-1 dry 3 times with bailer allowing for approximately 70 percent recharge between purges.

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Ralph Last Name: Hoffman
Facility/Firm: Hoffman's Valet Cleaners
Street: 7215 W. Center Street
City/State/Zip: Wauwatosa, WI

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: [signature]
Print Name: Andrew J. Mumpy
Firm: ARCADIS Geraghty & Miller

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

State of Wisconsin
Department of Natural Resources

# MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ 7215 W. Center

| Facility/Project Name | County Name | Well Name |
|---|---|---|
| Hoffman's Valet | Milwaukee | MW-3 |

| Facility License, Permit or Monitoring Number | County Code | Wis. Unique Well Number | DNR Well Number |
|---|---|---|---|
| | | | |

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

| | | |
|---|---|---|
| surged with bailer and bailed | ☒ | 41 |
| 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 |
| bailed only | ☐ | 10 |
| pumped only | ☐ | 51 |
| pumped slowly | ☐ | 50 |
| Other _____ | ☐ | |

3. Time spent developing well: 50 min.

4. Depth of well (from top of well casing): 19.5 ft.

5. Inside diameter of well: 2.07 in.

6. Volume of water in filter pack and well casing: 5 gal.

7. Volume of water removed from well: 8 gal.

8. Volume of water added (if any): _____ gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☒ No
(If yes, attach results)

| | Before Development | After Development |
|---|---|---|
| 11. Depth to Water (from top of well casing) | a. 14.61 ft. | Dry ft. |
| Date | b. 01/28/05 m m/d d/y y y y | 01/28/05 m m/d d/y y y y |
| Time | c. 9:15 ☐ a.m. ☐ p.m. | 10:05 ☐ a.m. ☐ p.m. |
| 12. Sediment in well bottom | 0 inches | 0 inches |
| 13. Water clarity | Clear ☐ 10 Turbid ☒ 15 (Describe) Clear, but slightly turbid at bottom. | Clear ☒ 20 Turbid ☐ 25 (Describe) Clear. |

Fill in if drilling fluids were used and well is at solid waste facility:

| | | |
|---|---|---|
| 14. Total suspended solids | _____ mg/l | _____ mg/l |
| 15. COD | _____ mg/l | _____ mg/l |

16. Well developed by: Name (first, last) and Firm
First Name: Andrew Last Name: Mumpy
Firm: ARCADIS

17. Additional comments on development:
Purged MW-3 dry 3 times with bailer allowing for approximately 70 percent recovery between purges.

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Ralph Last Name: Hoffman
Facility/Firm: Hoffman's Valet Cleaners
Street: 7215 W. Center Street
City/State/Zip: Wauwatosa, WI

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: [signature]
Print Name: Andrew Mumpy
Firm: ARCADIS Geraghty & Miller

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/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ 7215 W. Center Street

# MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

| | | |
|---|---|---|
| Facility/Project Name: Hoffman's Valet | Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W. | Well Name: MW-3 |
| Facility License, Permit or Monitoring Number | Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ____ Long. ____ or | Wis. Unique Well Number / DNR Well Number |
| Facility ID | St. Plane ____ ft. N, ____ ft. E | Date Well Installed: 1/19/05 |
| Type of Well — Well Code: MW | Section Location of Waste/Source: ___ 1/4 of SW 1/4 of Sec. 15 T. 7 N,R 21 ☒ E. ☐ W. | Well Installed By: Name (first, last) and Firm: Andew Mumpy, ARCADIS |
| Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☐ | Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☒ Not Known / Gov. Lot # | |

A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation ____ ft. MSL

C. Land surface elevation NA ft. MSL

D. Surface seal, bottom ____ ft MSL or ____ ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50 Hollow Stem Auger ☒ 41 ____ Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of Water (attach analysis if required):

E. Bentonite seal, top ____ ft. MSL or 1 ft.

F. Fine sand, top ____ ft. MSL or 8 ft.

G. Filter pack, top ____ ft. MSL or 10 ft.

H. Screen joint, top ____ ft. MSL or 10 ft.

I. Well bottom ____ ft. MSL or 20 ft.

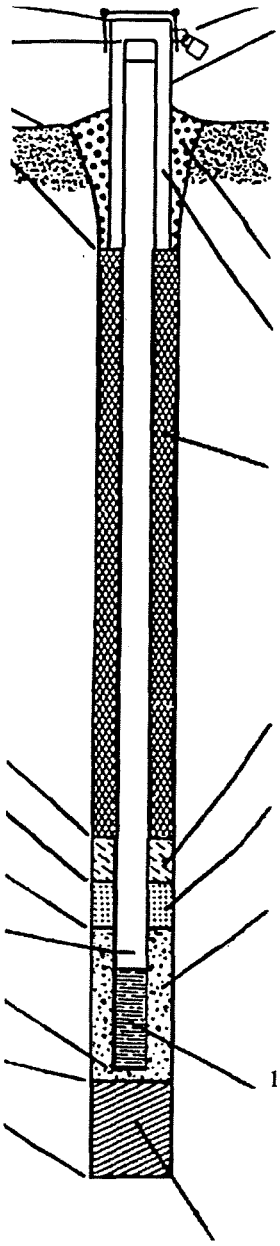
J. Filter pack, bottom ____ ft. MSL or 20 ft.

K. Borehole bottom ____ ft. MSL or 20 ft.

L. Borehole diameter 8 in.

M. O.D. well casing 2.36 in.

N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 12 in.
b. Length: 1 ft.
c. Material: Steel ☐ 04 Flush mount Other ☒
d. Additional protection? ☐ Yes ☒ No
If yes, describe: ____

3. Surface seal: Bentonite ☐ 30 Concrete ☒ 01 Other ☐ ____

4. Material between well casing and protective pipe: Bentonite ☐ 30 Annular space seal ☐ Red Flint #40 Other ☒

5. Annular space seal: a. Granular Bentonite ☒ 33
b. ____ Lbs/gal mud weight... Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight.... Bentonite slurry ☐ 31
d. ____ % Bentonite..... Bentonite-cement grout ☐ 50
e. 4 bags Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. bentonite chips Other ☒ ____

7. Fine sand Material: Manufacturer, product name & mesh size
a. Red Flint #10
b. Volume added 1 bag ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. Ref flint #40
b. Volume added 6 bags ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 23 Flush threaded PVC schedule 80 ☐ 24 Other ☐ ____

10. Screen material: Sch 40 PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 Other ☐ ____
b. Manufacturer ____
c. Slot size: .010 in.
d. Slotted length: 10 ft.

11. Backfill material (below filter pack): None ☒ 14 Other ☐ ____

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

Signature: [signature]

Firm: ARCADIS
126 N. Jefferson Street
Milwaukee, WI (414) 276-7742

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.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ 7215 W. Center Street

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

| | | |
|---|---|---|
| Facility/Project Name: Hoffman's Valet | Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W. | Well Name: MW-2 |
| Facility License, Permit or Monitoring Number | Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ____ Long. ____ or St. Plane ____ ft. N, ____ ft. E | Wis. Unique Well Number / DNR Well Number |
| Facility ID | Section Location of Waste/Source: ___ 1/4 of SW 1/4 of Sec. 15 T. 7 N,R 21 ☒ E. ☐ W. | Date Well Installed: 1/19/05 |
| Type of Well: Well Code MW | Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☒ Not Known | Well Installed By: Name (first, last) and Firm: Andrew Mumpy ARCADIS |
| Distance from Waste/ Source ____ ft. / Enf. Stds. Apply ☐ | Gov. Lot # | |

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

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

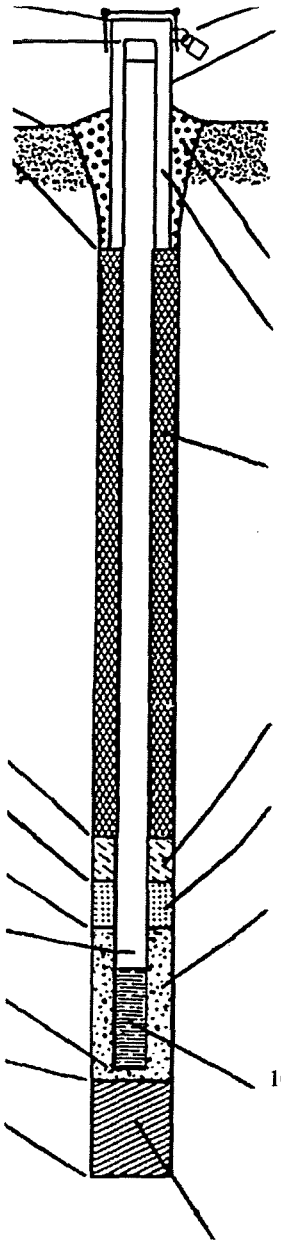
13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50 Hollow Stem Auger ☒ 41 ____ Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of Water (attach analysis if required):
____



E. Bentonite seal, top ____ ft. MSL or 1 ft.
F. Fine sand, top ____ ft. MSL or 8 ft.
G. Filter pack, top ____ ft. MSL or 10 ft.
H. Screen joint, top ____ ft. MSL or 10 ft.
I. Well bottom ____ ft. MSL or 20 ft.
J. Filter pack, bottom ____ ft. MSL or 20 ft.
K. Borehole bottom ____ ft. MSL or 20 ft.
L. Borehole diameter 8 in.
M. O.D. well casing 2.36 in.
N. I.D. well casing 2.07 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 12 in.
b. Length: 1 ft.
c. Material: Steel ☐ 04 Flush mount Other ☒
d. Additional protection? ☐ Yes ☒ No
If yes, describe: ____

3. Surface seal: Bentonite ☐ 30 Concrete ☒ 01 ____ Other ☐

4. Material between well casing and protective pipe: Bentonite ☐ 30 Annular space seal ☐ Red Flint #40 Other ☒

5. Annular space seal: a. Granular Bentonite ☒ 33
b. ____ Lbs/gal mud weight... Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight.... Bentonite slurry ☐ 31
d. ____ % Bentonite..... Bentonite-cement grout ☐ 50
e. 4 bags Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. Bentonite Chips Other ☒

7. Fine sand Material: Manufacturer, product name & mesh size
a. Red Flint #10
b. Volume added 1 bag ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. Red Flint #40
b. Volume added 6 bags ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 23 Flush threaded PVC schedule 80 ☐ 24 ____ Other ☐

10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 ____ Other ☐
b. Manufacturer ____
c. Slot size: 0.10 in.
d. Slotted length: 10 ft.

11. Backfill material (below filter pack): None ☒ 14 ____ Other ☐

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

Signature: [signature]
Firm: ARCADIS
126 N. Jefferson Street
Milwaukee, WI (414) 276-7742

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.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ 7215 W. Center Street

# MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

| | | |
|---|---|---|
| Facility/Project Name: Hoffman's Valet | Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W. | Well Name: MW-1 |
| Facility License, Permit or Monitoring Number | Local Grid Origin ☐ ( estimated: ☐ ) or Well Location ☐ Lat. ____ Long. ____ or St. Plane ____ ft. N, ____ ft. E | Wis. Unique Well Number / DNR Well Number |
| Facility ID | Section Location of Waste/Source: ___ 1/4 of SW 1/4 of Sec. 15 T. 7 N,R 21 ☒ E. ☐ W. | Date Well Installed: 1/19/05 |
| Type of Well: Well Code MW | Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☒ Not Known | Well Installed By: Name (first, last) and Firm: Andrew Mumpy, ARCADIS |
| Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☐ | Gov. Lot # | |

A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation ____ ft. MSL

C. Land surface elevation NA ft. MSL

D. Surface seal, bottom ____ ft MSL or ____ ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / ____ Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of Water (attach analysis if required):

E. Bentonite seal, top ____ ft. MSL or 1 ft.

F. Fine sand, top ____ ft. MSL or 9 ft.

G. Filter pack, top ____ ft. MSL or 11 ft.

H. Screen joint, top ____ ft. MSL or 11 ft.

I. Well bottom ____ ft. MSL or 21 ft.

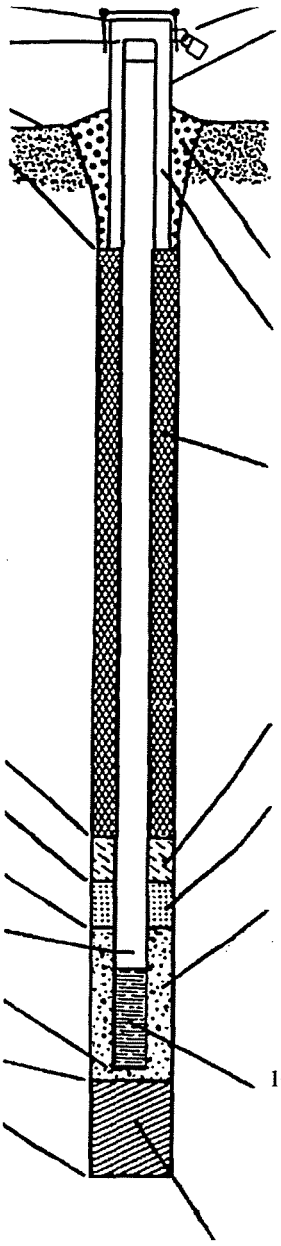
J. Filter pack, bottom ____ ft. MSL or 21 ft.

K. Borehole bottom ____ ft. MSL or 24 ft.

L. Borehole diameter 8 in.

M. O.D. well casing 2.36 in.

N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 12 in.
b. Length: 1 ft.
c. Material: Flush Mount — Steel ☐ 04 / Other ☒
d. Additional protection? ☐ Yes ☒ No
If yes, describe: ____

3. Surface seal: ____ — Bentonite ☐ 30 / Concrete ☒ 01 / Other ☐

4. Material between well casing and protective pipe: Red Flint #40 — Bentonite ☐ 30 / Annular space seal ☐ / Other ☒

5. Annular space seal: a. Granular Bentonite ☒ 33
b. ____ Lbs/gal mud weight... Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight.... Bentonite slurry ☐ 31
d. ____ % Bentonite..... Bentonite-cement grout ☐ 50
e. 4 bags Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. Bentonite Chips — Other ☒

7. Fine sand Material: Manufacturer, product name & mesh size
a. Red Flint #10
b. Volume added 1 bag ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. Red Flint #40
b. Volume added 7 bags ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / ____ Other ☐

10. Screen material: Sch 40 PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / ____ Other ☐
b. Manufacturer ____
c. Slot size: .010 in.
d. Slotted length: 10 ft.

11. Backfill material (below filter pack): None ☐ 14 / 3 feet — Other ☒

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

Signature: [signature] Firm: ARCADIS, 126 N. Jefferson Street, Milwaukee, WI (414) 276-7742

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.

State of Wisconsin
Department of Natural Resources

# Soil Boring Log Information

Form 4400-122 Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☒ 7215 W. Center Street



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| Hoffman's Valet Cleaners/WI000943.0001 | | GP-1 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| First Name Denny Last Name<br>Firm On-Site Environmental Services | 2/7/02 | 2/7/02 | Geoprobe (hand held) |

| WI Unique Well No. | DNR Well ID No. | Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | Feet | Feet MSL | 1 inches |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐/N☐ ☐E ☐W
_____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____
Lat _____ Long _____
Local Grid Location ☐N ☐E _____ Feet ☐S _____ Feet ☐W

| Facility ID | County | County Code | Civil Town/City/or Village |
|---|---|---|---|
| | Milwaukee | 41 | Wauwatosa |

| Sample Number and Type | Sample Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6 | | 0 | 0-0.25': Concrete.<br>0.25-0.5': Gravel mixed in with concrete fragments, abundant concrete flour, gravel fragments may not be native, dry (fill). | | | | 1.75 | | | | | | |
| 2 | 13.2 | | 2 | 0-1.1': Gravel fill, grayish white, some very fine to medium sand present, gravel approximately 1/4 to 1/2" in diameter, subrounded to subangular, loose, poorly sorted, dry. | | | | 2 | | | | | | |
| 3 | 9.6 | | 4 | 0-0.6': Gravel fill as above (gravel composed of cryptocrystalline quartz)<br>0.6-0.8': Rock fragments, black, some clay clinging to rock fragments, trace to some very fine sand\silt (clay/sand is very dark gray to black with slight odor, wet), clay very plastic, very soft. | | | | 22.5 | | | | | | |
| 4 | 15.6 | | 6 | 0-0.2': Black stained gravel fragments (quartz?).<br>0.2-1.1': Clay, very dark gray to black, definite odor present, some sand (very fine to fine), trace to some silt, clay is very soft and very plastic, wet to saturated, trace very fine gravel (approximately 2 mm). | | | | 17 | | | | | | |
| 5 | 9 | | 8 | 1.1-1.3': Sand, dark reddish brown, very fine to fine, some silt to silty, well rounded and sorted, slighlty cohesive, damp.<br>8-10/<br>0-0.75': Sand as above. | | | | 2.5 | | | | | | |
| | | | 10 | **END OF BORING AT 10'** | | | | | | | | | | |

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

Signature

Firm **ARCADIS**
**126 North Jefferson St, Suite 400**
**Milwaukee, WI 414 276 7742**

State of Wisconsin
Department of Natural Resources

# Soil Boring Log Information

Form 4400-122 Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☒ 7215 W. Center Street



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| Hoffman's Valet Cleaners/WI000943.0001 | | GP-2 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| First Name Denny Last Name<br>Firm On-Site Environmental Services | 2/7/02 | 2/7/02 | Geoprobe (hand held) |

| WI Unique Well No. | DNR Well ID No. | Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | Feet | Feet MSL | 1 inches |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐ /N☐ E☐ W☐ Lat _____
_____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____ Long _____

Local Grid Location
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

| Facility ID | County | County Code | Civil Town/City/or Village |
|---|---|---|---|
| | Milwaukee | 41 | Wauwatosa |

| Sample Number and Type | Sample Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6 | | 0 | 0-0.25': Concrete floor.<br>0.25-0.5': Gravel intermixed with concrete fragments, concrete flour present, dry (fill). | | | | 1.75 | | | | | | |
| 2 | 12 | | 2 | 0-1': Gravel fill, grayish white, some very fine to fine, trace medium sand present, gravel (1/4 to 1/2" in diameter) is subrounded to subangular (gravel composed primarily of chert-cryptocrystalline quartz). | | | | 1.75 | | | | | | |
| 3 | 19.2 | | 4 | 0-0.7': Gravel fill as above.<br>0.7-1.6': Clay, reddish brown, some very fine to fine sand, some silt, trace to some very fine gravel (approximately 2 mm), subrounded to subangular, some brown to dark brown mottling within the clay, moderately soft, plastic to moderately plastic (last 2-3" clay becomes very hard (HP >4) and very stiff), dry to moist. | | | | 2.5 | | | | | | |
| 4 | 16.8 | | 6 | 0-1.4': Clay, yellowish brown, some to abundant sand (very fine to fine), some silt, trace very fine gravel (approximately 2 mm), soft to very soft, very plastic, moist. | | | | 2.75 | | | | | | |
| 5 | 24 | | 8 | 0-1.95': Clay, as above<br>1.95-2': Sand, dark reddish brown, very fine to fine, perhaps trace medium, some silt to silty, well rounded and sorted, slightly cohesive, moist. | | | | 2.25 | | | | | | |
| | | | 10 | **END OF BORING AT 10'** | | | | | | | | | | |

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

Signature

Firm **ARCADIS**
**126 North Jefferson St, Suite 400**
**Milwaukee, WI 414 276 7742**

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 Wisconsin
Department of Natural Resources

# Soil Boring Log Information

Form 4400-122 Rev. 7-98

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



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| Hoffman's Valet Cleaners/WI000943.0001 | | GP-101 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| First Name Denny Last Name<br>Firm On-Site Environmental Services | 9/12/02 | 9/12/02 | Geoprobe |

| WI Unique Well No. | DNR Well ID No. | Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | _____ Feet | _____ Feet MSL | 2 inches |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐/N☐ ☐E ☐W
_____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____

Lat _____
Long _____

Local Grid Location ☐N ☐E
_____ Feet ☐S _____ Feet ☐W

| Facility ID | County | County Code | Civil Town/City/or Village |
|---|---|---|---|
| | Milwaukee | 41 | Wauwatosa |

| Sample Number and Type | Sample Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | 0.0 Datum at base of concrete and aggregate. | | | | | | | | | | |
| 1 | 41 | | 2 | 0-4/<br>0-2.5': Gravelly silt, yellowish-brown (10 YR 5/4), gravel fine grain, some clay, friable, somewhat cohesive, moist, no odor.<br>2.5-3.4': Silty clay, brown (10YR 5/3), trace fine gravel, firm, cohesive to somewhat cohesive, moist, no odor. | | | | 0.0 | | | | | | |
| 2 | 35 | | 4<br>6 | 4-7/<br>0-2.9': Apparent fill, silty clay intermixed with sand layers, yellowish-brown (10 YR 5/6), sand predominately fine grain, trace fine gravel throughout, trace coarse to medium sand, iron staining 0.9-1.3', somewhat cohesive to loose, moist, no odor. | | | | 0.0 | | | | | | |
| 3 | 38 | | 8<br>10 | 7-11/<br>0-0.9': Apparent fill, as above.<br>0.9-3.0': Sand, light yellowish-brown (10 YR 6/4), fine grain 0.9-1.7', sand/silt 1.7-2.1', medium to fine grain 2.1-3.0', loose, moist to very moist, no odor.<br>3.0-3.2': Silty clay, brown (10 YR 5/3), soft, cohesive, moist, no odor. | | | | 0.0 | | | | | | |

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

Signature

Firm **ARCADIS**
**126 North Jefferson St, Suite 400**
**Milwaukee, WI 414 276 7742**

ıorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file ısult in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. ifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, the completed form should be sent.

| Sample Number and Type | Sample Length All. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Soil Properties: Moisture Content | Soil Properties: Liquid Limit | Soil Properties: Plastic Limit | Soil Properties: P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | |
| 4 | 42 | | 12<br>14 | 11-15/<br>0-0.7': Clayey sand, color as above, fine grain, trace fine gravel, somewhat cohesive to loose, moist, no odor.<br>0.7-3.5': Silty clay, color as above, some fine gravel, trace fine sand throughout, hard-firm, cohesive to somewhat cohesive, moist, no odor. | | | | 0.0 | | | | | | |
| 5 | 42 | | 16<br>18<br>20 | 15-20/<br>(Macrocore advanced 5' under its own weight).<br>0-3.5': Silty clay, as above, sandy layer 1.4-1.6', hard to very soft, moist, no odor. | | | | 0.0 | | | | | | |
| 6 | 37 | | 22<br>24 | 20-24/<br>0-3.1': Silty clay, as above, sandy layers 0.2-0.4' and 2.2-2.3', silt content increasing, hard to very soft, cohesive to somewhat cohesive, moist, no odor. | | | | 0.0 | | | | | | |
| 7 | 44 | | 26<br>28 | 24-28/<br>0-3.7': Silty clay, as above, trace coarse to fine sand throughout, soft to very soft, cohesive to somewhat cohesive, moist, no odor. | | | | 0.0 | | | | | | |
| | | | | **END OF BORING AT 28'** | | | | | | | | | | |

State of Wisconsin
Department of Natural Resources

# Soil Boring Log Information

Form 4400-122 Rev. 7-98

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



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| Hoffman's Valet Cleaners/WI000943.0001 | | GP-102 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| First Name Denny Last Name<br>Firm On-Site Environmental Services | 9/12/02 | 9/12/02 | Geoprobe |

| WI Unique Well No. | DNR Well ID No. | Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | _____ Feet | _____ Feet MSL | 2 inches |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐ /N☐ ☐E ☐W
_____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____
Lat _____ Long _____
Local Grid Location ☐N ☐E _____ Feet ☐S _____ Feet ☐W

| Facility ID | County | County Code | Civil Town/City/or Village |
|---|---|---|---|
| | Milwaukee | 41 | Wauwatosa |

| Sample Number and Type | Sample Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | 0.0 Datum at base of concrete and aggregete. | | | | | | | | | | |
| 1 | 40 | | 2 | 0-4/<br>0-2.8': Gravelly silt, yellowish-brown (10 YR 5/6), gravel is coarse to fine grain, some clay, friable, somewhat cohesive to loose, moist, no odor, iron precipitation in places.<br>2.8-3.3': Clayey silt, brown (10 YR 5/3), some coarse to fine gravel, somewhat cohesive, moist, no odor. | | | | 0.0 | | | | | | |
| | | | 4 | | | | | | | | | | | |
| 2 | 46 | | 6 | 4-8/<br>0-1.9': Clayey silt, as above, gravel throughout is fine grain, moist, no odor.<br>1.9-3.3': Sand, brownish-yellow (10 YR 6/6), fine grain, loose, moist, no odor.<br>3.3-3.8': Silty sand, yellowish-brown (10 YR 5/6), fine grain, loose, moist, no odor. | | | | 0.0 | | | | | | |
| | | | 8 | | | | | | | | | | | |
| 3 | 34 | | 10 | 8-12/<br>0-0.3': Silty sand, as above.<br>0.3-0.4': Silty clay, yellowish-brown (10 YR 5/4), soft, cohesive to somewhat cohesive, moist, no odor.<br>0.4-2.3': Sand, light yellowish-brown (10 YR 6/4), medium to fine grain, trace fine gravel, iron staining throughout, significant iron and | | | | 0.0 | | | | | | |

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

Signature

Firm **ARCADIS**
**126 North Jefferson St, Suite 400**
**Milwaukee, WI 414 276 7742**

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.

| Sample Number and Type | Sample Length All. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | other reddish staining 1.8-2.3', loose, moist to very moist, no odor.<br>2.3-2.7': Sand, color as above, coarse to fine grain, some silt, loose, moist, no odor. | | | | | | | | | | |
| | | | 12 | 2.7-2.8': Sand, dark yellowish-brown (10 YR 3/6), coarse to fine grain, some fine gravel, some silt, loose, very moist, no odor. | | | | | | | | | | |
| 4 | 38 | | 14 | 12-16/<br>0-0.1': Sand, as above, very moist, no odor.<br>0.1-3.2': Silt and clay intermixed with silty clay, brown (10 YR 5/3), firm, cohesive to somewhat cohesive, moist becoming very moist at tip, no odor. | | | | 0.7 | | | | | | |
| | | | 16 | 16-20/<br>0-0.5': Sand, color as above, fine grain, loose, saturated, no odor.<br>0.5-0.7': Silty clay, color as above, soft, cohesive, moist, no odor. | | | | | | | | | | |
| 5 | 29 | | 18 | 0.7-1.6': Sand, color as above, coarse to fine grain, some silt, trace clay, loose, saturated, no odor.<br>1.6-2.4': Silty sand, color as above, fine grain, trace fine gravel, trace coarse to medium sand, loose, wet, no odor. | | | | | | | | | | |
| | | | 20 | **END OF BORING AT 20'** | | | | | | | | | | |
| | | | 22 | | | | | | | | | | | |
| | | | 24 | | | | | | | | | | | |
| | | | 26 | | | | | | | | | | | |
| | | | 28 | | | | | | | | | | | |

State of Wisconsin
Department of Natural Resources

# Soil Boring Log Information

Form 4400-122 Rev. 7-98

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



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| Hoffman's Valet Cleaners/WI000943.0001 | | GP-103 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| First Name Denny Last Name<br>Firm On-Site Environmental Services | 9/12/02 | 9/12/02 | Geoprobe |

| WI Unique Well No. | DNR Well ID No. | Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | _____ Feet | _____ Feet MSL | 2 inches |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐ /N☐ ☐E ☐W
_____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____
Lat _____ Long _____
Local Grid Location ☐N ☐E _____ Feet ☐S _____ Feet ☐W

| Facility ID | County | County Code | Civil Town/City/or Village |
|---|---|---|---|
| | Milwaukee | 41 | Wauwatosa |

| Sample Number and Type | Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | 0.0 Datum at base of concrete an aggregate. | | | | | | | | | | |
| 1 | 43 | | 2 | 0-4/<br>0-3.6': Silt, yellowish-brown (10 YR 5/4) becoming brown (10 YR 5/3) at 3.0', some fine gravel, some clay, trace coarse gravel, somewhat cohesive, moist, no odor. | | | | 0.0 | | | | | | |
| | | | 4 | | | | | | | | | | | |
| 2 | 40 | | 6 | 4-8/<br>0-0.4': Silt, as above, moist, no odor.<br>0.4-3.3': Sand, light yellowish-brown (10 YR 6/4), fine grain, silty sand layer 2.5-2.8', iron staining, loose, moist, no odor. | | | | 0.0 | | | | | | |
| | | | 8 | | | | | | | | | | | |
| 3 | 38 | | 10 | 8-12/<br>0-0.4': Silty sand, yellowish-brown (10 YR 5/6), fine grain, loose, moist, no odor.<br>0.4-0.5': Silty clay, yellowish-brown (10 YR 5/4), some fine sand, soft, cohesive to somewhat cohesive, moist, no odor.<br>0.5-1.9': Sand, light yellowish-brown (10 YR 6/4), medium to fine grain, significant iron | | | | 0.3 | | | | | | |

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

Signature

Firm **ARCADIS**
**126 North Jefferson St, Suite 400**
**Milwaukee, WI 414 276 7742**

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| Sample Number and Type | Sample Length All. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Soil Properties: Moisture Content | Soil Properties: Liquid Limit | Soil Properties: Plastic Limit | Soil Properties: P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 12 | precipitation at 1.9', loose, moist, no odor.<br>1.9-2.2': Silt, trace coarse to medium sand, loose, moist, no odor.<br>2.2-2.6': Sand, light yellowish-brown (10 YR 6/4), medium grain, trace fine gravel, trace coarse sand, trace fine sand,loose, moist, no odor.<br>2.6-3.1': Sand, dark yellowish-brown (10 YR 3/6), coarse to fine grain, some fine gravel, trace fines, loose, very moist, no odor.<br>3.1-3.2': Silt and clay, yellowish-brown (10 YR 5/4), soft, cohesive to somewhat cohesive, moist, no odor. | | | | | | | | | | |
| 4 | 25 | | 14 | 12-16/<br>0-2.1': Silty clay, brown (10 YR 5/3), firm, cohesive, moist, no odor. | | | | 3.1 | | | | | | |
| | | | 16 | 16-20/<br>0-1.0': Silty clay, as above, becoming clayey silt, color as above, somewhat cohesive, wet, no odor.<br>1.0-1.8': Sand, color as above, medium to fine grain, some coarse sand, some silt, trace fine gravel, loose, wet, no odor.<br>1.8-2.4': Silty clay, color as above, sandy layer at 2.1', hard, cohesive to somewhat cohesive, moist, no odor.<br>2.4-2.6': Silty sand, color as above, fine grain, some fine gravel, trace coarse to medium sand, loose, wet, no odor. | | | | | | | | | | |
| 5 | 31 | | 18 | | | | | | | | | | | |
| | | | 20 | **END OF BORING AT 20'** | | | | | | | | | | |
| | | | 22 | | | | | | | | | | | |
| | | | 24 | | | | | | | | | | | |
| | | | 26 | | | | | | | | | | | |
| | | | 28 | | | | | | | | | | | |

State of Wisconsin
Department of Natural Resources

# Soil Boring Log Information

Form 4400-122 Rev. 7-98

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



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| Hoffman's Valet Cleaners/WI000943.0001 | | GP-104 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| First Name Denny Last Name<br>Firm On-Site Environmental Services | 9/12/02 | 9/12/02 | Hand probe |

| WI Unique Well No. | DNR Well ID No. | Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | _____ Feet | _____ Feet MSL | 2 inches |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐/N☐ ☐E ☐W
_____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____
Lat _____ Long _____
Local Grid Location ☐N ☐E _____ Feet ☐S _____ Feet ☐W

| Facility ID | County | County Code | Civil Town/City/or Village |
|---|---|---|---|
| | Milwaukee | 41 | Wauwatosa |

| Sample Number and Type | Sample Length All. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 0 | 4" concrete, 0.0 datum at 0.5 ft bls.<br><br>0-2/<br>Fill (aggregate) not sampled. | | | | | | | | | | |
| 2 | 16 | | 2 | 2-4/<br>0-0.7': Pulverized concrete and aggregate.<br>0.7-1.3': Silty clay, yellowish-brown (10 YR 5/6), some coarse to fine gravel, iron precipitation in places, cohesive to somewhat cohesive, moist, no odor. | | | | 0.0 | | | | | | |
| 3 | 12 | | 4 | 4-6/<br>0-1.0': Silty clay, as above, gravelly (coarse to fine grain), moist, no odor. | | | | | | | | | | |
| 4 | 13 | | 6 | 6-8/<br>0-1.1': Silty clay, as above, moist, no odor. | | | | 0.0 | | | | | | |
| 5 | 10 | | 8 | 8-9/<br>0-0.8': Silty clay becoming sandy silt, color as above, gravelly (coarse to fine grain) somewhat cohesive to loose, moist, no odor.<br>Note: Insufficient recovery for field screen sample. | | | | | | | | | | |
| | | | 10 | **END OF BORING AT 9'**<br>(refusal) | | | | | | | | | | |

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

Signature 

Firm **ARCADIS**
**126 North Jefferson St, Suite 400**
**Milwaukee, WI 414 276 7742**

State of Wisconsin
Department of Natural Resources

# Soil Boring Log Information

Form 4400-122 Rev. 7-98

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



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| Hoffman's Valet Cleaners/WI000943.0001 | | GP-105 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| First Name Denny Last Name<br>Firm On-Site Environmental Services | 9/12/02 | 9/12/02 | Geoprobe |

| WI Unique Well No. | DNR Well ID No. | Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| | | | _____ Feet | _____ Feet MSL | 2 inches |

Local Grid Origin ☐ (estimated: ☐ ) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐/N☐ ☐E ☐W
_____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____
Lat _____ Long _____
Local Grid Location ☐N ☐E _____ Feet ☐S _____ Feet ☐W

| Facility ID | County | County Code | Civil Town/City/or Village |
|---|---|---|---|
| | Milwaukee | 41 | Wauwatosa |

| Sample Number and Type | Sample Length Att. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | 0.0 Datum at base of concrete and aggregate | | | | | | | | | | |
| 1 | 47 | | 2 | 0-4/<br>0-3.9': Gravelly silt, yellowish-brown (10 YR 5/6) becoming brown (10 YR 5/3) at 3.4', gravely coarse to fine grain, abundant clay 0-0.7' and 3.4-3.9', iron precipication in places, cohesive to somewhat cohesive, moist, no odor. | | | | 0.0 | | | | | | |
| | | | 4 | | | | | | | | | | | |
| 2 | 40 | | 6 | 4-8/<br>0-0.8': Gravelly silt, as above, abundant clay 0-0.5', cohesive to somewhat cohesive, moist, no odor.<br>0.8-3.3': Sand, yellowish-brown (10 YR 5/6), fine grain, silty 1.1-1.3' and 2.7-3.0', loose, moist, no odor. | | | | 0.0 | | | | | | |
| | | | 8 | | | | | | | | | | | |
| 3 | 32 | | 10 | 8-12/<br>0-1.9': Sand, as above, becoming medium to fine grain at 0.4', moist, no odor.<br>1.9-2.6': Sand, color as above, coarse to fine grain, trace silt, several visible bands of iron | | | | 0.0 | | | | | | |

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

Signature

Firm **ARCADIS**
**126 North Jefferson St, Suite 400**
**Milwaukee, WI 414 276 7742**

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| Sample Number and Type | Sample Length All. & Recovered (in) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties: Compressive Strength | Moisture Content | Liquid Limit | Plastic Limit | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 12 | precipitation, reddish band at 2.2', loose, moist, no odor.<br>2.6-2.7': Gravel and sand, color as above, gravel fine grain, sand coarse to fine grain, trace silt, loose, moist, no odor. | | | | | | | | | | |
| 4 | 37 | | 14 | 12-16/<br>0-3.1': Silty clay, brown (10 YR 5/3), firm to soft, cohesive, moist to very moist, no odor. | | | | 0.0 | | | | | | |
| 5 | 43 | | 16<br>18<br>20 | 16-20/<br>0-1.0': Gravel and sand, color as above, gravel fine grain, sand coarse grain, loose, saturated, no odor.<br>1.0-1.8': Sandy silt, color as above, sand is grain grain, loose, wet, no odor.<br>1.8-2.1': Sand, color as above, medium grain, some fine sand, trace fine gravel and coarse sand, loose, saturated, no odor.<br>2.1-3.6': Clayey silt, color as above, gravelly (coarse to fine grain), trace sand throughout (predominately fine grain), gravel- and sand-rich layer 2.5-2.6', somewhat cohesive to loose, wet, no odor.<br>**END OF BORING AT 20'** | | | | | | | | | | |
| | | | 22<br>24<br>26<br>28 | | | | | | | | | | | |

State of Wisconsin
Department of Natural Resources

# WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5 2/2000

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report 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 this form 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 this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

## (1) GENERAL INFORMATION

| WI Unique Well No. | DNR Well ID No. | County |
|---|---|---|
| | | Milwaukee |

Common Well Name GP-101 _____ Gov't Lot (If applicable)

_____ 1/4 of _____ 1/4 of Sec. _____ ; T. _____ N; R. _____ ☐ E ☐ W

Grid Location

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐ ) or Well Location ☐

Lat. _____ Long. _____ or

St. Plane _____ ft. N. _____ ft. E. ☐ S ☐ C ☐ N Zone

| Reason For Abandonment | WI Unique Well No. of Replacement Well |
|---|---|
| Completed sampling | |

## (2) FACILITY / OWNER NAME

Facility Name: Hoffman's Valet Cleaners/WI000943.0001

| Facility ID | License/Permit/Monitoring No. |
|---|---|
| | |

Street Address of Well: 7215 W. Center Street

City, Village or Town: Wauwatosa

| Present Well Owner | Original Owner |
|---|---|
| Ralph Hoffman | Ralph Hoffman |

Street Address or Route of Owner: 7215 W. Center Street

City, State, Zip Code: Wauwatosa, WI

## (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date 9/12/02

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☒ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) (From groundsurface) 30 Casing Diameter (in.) 2

Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

Depth to Water (Feet) -- Feet

## (4) PUMP, LINER, SCREEN, CASING & SEALING MATERIAL

| | | | |
|---|---|---|---|
| Pump & Piping Removed? | ☐ Yes | ☐ No | ☒ Not Applicable |
| Liner(s) Removed? | ☒ Yes | ☐ No | ☐ Not Applicable |
| Screen Removed? | ☒ Yes | ☐ No | ☐ Not Applicable |
| Casing Left in Place? | ☐ Yes | ☒ No | |
| Was casing Cut Off Below Surface? | ☐ Yes | ☒ No | |
| Did Sealing Material Rise to Surface? | ☒ Yes | ☐ No | |
| Did Material Settle After 24 Hours? | ☐ Yes | ☒ No | |
| If Yes, Was Hole Retopped? | ☐ Yes | ☐ No | |

Required Method of Placing Sealing Material
☒ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain) _____

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Bentonite-Sand Slurry " "
☒ Bentonite Chips

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

| (5) Material Used To Fill Well/Drillhole | From (Ft.) | To (Ft.) | No. Yards, Sacks Sealant or Volume | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| Concrete | Surface | 0.25 | | |
| Vita Plus 3/8" | 0.25 | 30 | 0.7 ft(3) | |
| Bentonite chips | | | | |
| | | | | |

(6) Comments 2.5' concrete and aggregate at the surface.

| (7) Name of Person or Firm Doing Sealing Work | Date of Abandonment |
|---|---|
| On-Site Environmental | 9/12/02 |
| Signature of Person Doing Work | Date Signed |
| Street or Route: P.O. Box 280 | Telephone Number: 608 837-8992 |
| City, State, Zip Code: Sun Prairie, WI 53590 | |

State of Wisconsin
Department of Natural Resources

# WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5 2/2000

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

## (1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Milwaukee

Common Well Name: GP-102 | Gov't Lot (If applicable):

Grid Location: _____ 1/4 of _____ 1/4 of Sec. _____ ; T. _____ N; R. _____ ☐ E ☐ W

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat. _____ Long. _____ or

St. Plane _____ ft. N. _____ ft. E. ☐ S ☐ C ☐ N Zone

Reason For Abandonment: Completed sampling | WI Unique Well No. of Replacement Well:

## (2) FACILITY / OWNER NAME

Facility Name: Hoffman's Valet Cleaners/WI000943.0001

Facility ID | License/Permit/Monitoring No.:

Street Address of Well: 7215 W. Center Street

City, Village or Town: Wauwatosa

Present Well Owner: Ralph Hoffman | Original Owner: Ralph Hoffman

Street Address or Route of Owner: 7215 W. Center Street

City, State, Zip Code: Wauwatosa, WI

## (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 9/12/02

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☒ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) (From groundsurface): 22 | Casing Diameter (in.): 2 | Casing Depth (ft.): _____

Lower Drillhole Diameter (in.): _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

Depth to Water (Feet): 16 Feet

## (4) PUMP, LINER, SCREEN, CASING & SEALING MATERIAL

| | | | |
|---|---|---|---|
| Pump & Piping Removed? | ☐ Yes | ☐ No | ☒ Not Applicable |
| Liner(s) Removed? | ☒ Yes | ☐ No | ☐ Not Applicable |
| Screen Removed? | ☒ Yes | ☐ No | ☐ Not Applicable |
| Casing Left in Place? | ☐ Yes | ☒ No | |
| Was casing Cut Off Below Surface? | ☐ Yes | ☒ No | |
| Did Sealing Material Rise to Surface? | ☒ Yes | ☐ No | |
| Did Material Settle After 24 Hours? | ☐ Yes | ☒ No | |
| If Yes, Was Hole Retopped? | ☐ Yes | ☐ No | |

Required Method of Placing Sealing Material
☒ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain) _____

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Bentonite-Sand Slurry " "
☒ Bentonite Chips

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

| (5) Material Used To Fill Well/Drillhole | From (Ft.) | To (Ft.) | No. Yards, Sacks Sealant or Volume | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| Concrete | Surface | 0.25 | | |
| Vita Plus 3/8" | 0.25 | 22 | 0.5 ft(3) | |
| Bentonite chips | | | | |
| | | | | |

(6) Comments: 2.5' concrete and aggregate at the surface.

| (7) Name of Person or Firm Doing Sealing Work | Date of Abandonment |
|---|---|
| On-Site Environmental | 9/12/02 |
| Signature of Person Doing Work | Date Signed |
| Street or Route: P.O. Box 280 | Telephone Number: 608 837-8992 |
| City, State, Zip Code: Sun Prairie, WI 53590 | |

State of Wisconsin
Department of Natural Resources

# WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report 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 this form 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 this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

## (1) GENERAL INFORMATION

| WI Unique Well No. | DNR Well ID No. | County |
|---|---|---|
| | | Milwaukee |

Common Well Name GP-103 Gov't Lot (If applicable) _____

Grid Location _____ 1/4 of _____ 1/4 of Sec. _____ ; T. _____ N; R. _____ ☐ E ☐ W

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat. _____ Long. _____ or

St. Plane _____ ft. N. _____ ft. E. ☐ S ☐ C ☐ N Zone

| Reason For Abandonment | WI Unique Well No. of Replacement Well |
|---|---|
| Completed sampling | |

## (2) FACILITY / OWNER NAME

Facility Name: Hoffman's Valet Cleaners/WI000943.0001

| Facility ID | License/Permit/Monitoring No. |
|---|---|
| | |

Street Address of Well: 7215 W. Center Street

City, Village or Town: Wauwatosa

| Present Well Owner | Original Owner |
|---|---|
| Ralph Hoffman | Ralph Hoffman |

Street Address or Route of Owner: 7215 W. Center Street

City, State, Zip Code: Wauwatosa, WI

## (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date 9/12/02

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☒ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) (From groundsurface) 22 Casing Diameter (in.) 2

Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

Depth to Water (Feet) 16 Feet

## (4) PUMP, LINER, SCREEN, CASING & SEALING MATERIAL

| | | | |
|---|---|---|---|
| Pump & Piping Removed? | ☐ Yes | ☐ No | ☒ Not Applicable |
| Liner(s) Removed? | ☒ Yes | ☐ No | ☐ Not Applicable |
| Screen Removed? | ☒ Yes | ☐ No | ☐ Not Applicable |
| Casing Left in Place? | ☐ Yes | ☒ No | |
| Was casing Cut Off Below Surface? | ☐ Yes | ☒ No | |
| Did Sealing Material Rise to Surface? | ☒ Yes | ☐ No | |
| Did Material Settle After 24 Hours? | ☐ Yes | ☒ No | |
| If Yes, Was Hole Retopped? | ☐ Yes | ☐ No | |

Required Method of Placing Sealing Material
☒ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain) _____

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Bentonite-Sand Slurry " "
☒ Bentonite Chips

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

| (5) Material Used To Fill Well/Drillhole | From (Ft.) | To (Ft.) | No. Yards, Sacks Sealant or Volume | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| Concrete | Surface | 0.25 | | |
| Vita Plus 3/8" | 0.25 | 22 | 0.5 ft(3) | |
| Bentonite chips | | | | |
| | | | | |

(6) Comments 2.5' concrete and aggregate at the surface.

| (7) Name of Person or Firm Doing Sealing Work | Date of Abandonment |
|---|---|
| On-Site Environmental | 9/12/02 |
| Signature of Person Doing Work | Date Signed |
| Street or Route: P.O. Box 280 | Telephone Number: 608 837-8992 |
| City, State, Zip Code: Sun Prairie, WI 53590 | |

State of Wisconsin
Department of Natural Resources

# WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5 2/2000

**Notice:** Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report 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 this form 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 this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

## (1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Milwaukee

Common Well Name: GP-105 Gov't Lot (If applicable)

Grid Location: _____ 1/4 of _____ 1/4 of Sec. _____ ; T. _____ N; R. _____ ☐ E ☐ W

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat. _____ Long. _____ or

St. Plane _____ ft. N. _____ ft. E. ☐ S ☐ C ☐ N Zone

Reason For Abandonment: Completed sampling

WI Unique Well No. of Replacement Well:

## (2) FACILITY / OWNER NAME

Facility Name: Hoffman's Valet Cleaners/WI000943.0001

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 7215 W. Center Street

City, Village or Town: Wauwatosa

Present Well Owner: Ralph Hoffman | Original Owner: Ralph Hoffman

Street Address or Route of Owner: 7215 W. Center Street

City, State, Zip Code: Wauwatosa, WI

## (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 9/12/02

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☒ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) (From groundsurface): 22 Casing Diameter (in.): 2

Casing Depth (ft.): _____

Lower Drillhole Diameter (in.): _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

Depth to Water (Feet): 16 Feet

## (4) PUMP, LINER, SCREEN, CASING & SEALING MATERIAL

| | | | |
|---|---|---|---|
| Pump & Piping Removed? | ☐ Yes | ☐ No | ☒ Not Applicable |
| Liner(s) Removed? | ☒ Yes | ☐ No | ☐ Not Applicable |
| Screen Removed? | ☒ Yes | ☐ No | ☐ Not Applicable |
| Casing Left in Place? | ☐ Yes | ☒ No | |
| Was casing Cut Off Below Surface? | ☐ Yes | ☒ No | |
| Did Sealing Material Rise to Surface? | ☒ Yes | ☐ No | |
| Did Material Settle After 24 Hours? | ☐ Yes | ☒ No | |
| If Yes, Was Hole Retopped? | ☐ Yes | ☐ No | |

Required Method of Placing Sealing Material
☒ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain) _____

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Bentonite-Sand Slurry " "
☒ Bentonite Chips

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

| (5) Material Used To Fill Well/Drillhole | From (Ft.) | To (Ft.) | No. Yards, Sacks Sealant or Volume | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| Concrete | Surface | 0.25 | | |
| Vita Plus 3/8" | 0.25 | 22 | 0.5 ft(3) | |
| Bentonite chips | | | | |
| | | | | |

(6) Comments: 2.5' concrete and aggregate at the surface.

| (7) Name of Person or Firm Doing Sealing Work | Date of Abandonment |
|---|---|
| On-Site Environmental | 9/12/02 |
| Signature of Person Doing Work | Date Signed |
| Street or Route: P.O. Box 280 | Telephone Number: 608 837 8992 |
| City, State, Zip Code: Sun Prairie, WI 53590 | |

ARCADIS

# Appendix B

Soil Screening Level (SSL)
Calculations

# Soil Screening Guidance for Chemicals

## Equation Values for Ingestion

| Noncarcinogenic Parameter | Value | Carcinogenic Age-adjusted Parameter | Value | Carcinogenic Nonadjusted Parameter | Value |
|---|---|---|---|---|---|
| Target Hazard Quotient (unitless) | 0.2 | Target Risk (unitless) | 1.0E-7 | Target Risk (unitless) | 1.0E-6 |
| Body Weight (kg) | 15 | Adult Body Weight (kg) | 70 | Body Weight (kg) | 70 |
| | | Child Body Weight (kg) | 15 | | |
| Exposure Duration (yr) | 6 | Adult Exposure Duration (yr) | 24 | Exposure Duration (yr) | 25 |
| | | Child Exposure Duration (yr) | 6 | | |
| Exposure Frequency (day/yr) | 350 | Exposure Frequency (day/yr) | 350 | Exposure Frequency (day/yr) | 250 |
| Intake Rate (mg/day) | 200 | Adult Intake Rate (mg/day) | 100 | Intake Rate (mg/day) | 100 |
| | | Child Intake Rate (mg/day) | 200 | | |
| | | Average Lifetime (yr) | 70 | Average Lifetime (yr) | 70 |
| | | Age-adjusted Ingestion Factor (mg-yr/kg-day) | 114.29 | | |

## Soil Screening Levels for Ingestion (mg/kg)

| Analyte | Cas Number | Oral RfD | Oral Slope Factor | Noncarcinogenic | Carcinogenic (Age-adjusted) | Carcinogenic (Nonadjusted) |
|---|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Dichloroethylene, 1,2-cis- | 156592 | 1.00E-02 [b] | 1.56E+02 | | |
| Methylene Chloride | 75092 | 6.00E-02 [a] 7.50E-03 [a] | 9.39E+02 | 8.52E+00 | 3.82E+02 |
| Naphthalene | 91203 | 2.00E-02 [a] | 3.13E+02 | | |
| Tetrachloroethylene | 127184 | 1.00E-02 [a] 5.20E-02 [v] | 1.56E+02 | 1.23E+00 | 5.50E+01 |

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# Soil Screening Guidance for Chemicals

## Equation Values for Inhalation of Volatiles

| Volatilization Factor Parameter | Value | Soil Saturation Concentration Parameter | Value | Noncarcinogenic Parameter | Value | Carcinogenic Parameter | Value |
|---|---|---|---|---|---|---|---|
| Surface Area (acres) | 0.5 | | | Target Hazard Quotient (unitless) | 0.2 | Target Risk (unitless) | 1.0E-7 |
| City (climate zone) | Chicago (VII) | | | Exposure Duration (yr) | 30 | Exposure Duration (yr) | 30 |
| Q/C ($g/m^2$-s per $kg/m^3$) | 97.78 | | | Exposure Frequency (day/yr) | 350 | Exposure Frequency (day/yr) | 350 |
| Fraction organic carbon (unitless) | 0.006 | Fraction organic carbon (unitless) | 0.006 | | | Average Lifetime (yr) | 70 |
| Dry soil bulk density ($g/cm^3$) | 1.5 | Dry soil bulk density ($g/cm^3$) | 1.5 | | | | |
| Soil particle density ($g/cm^3$) | 2.65 | Soil particle density ($g/cm^3$) | 2.65 | | | | |
| Water-filled soil porosity ($L_{water}/L_{soil}$) | 0.2 | Water-filled soil porosity ($L_{water}/L_{soil}$) | 0.2 | | | | |
| Exposure interval (s) | 9.5e08 | | | | | | |

## Soil Screening Levels for Inhalation of Volatiles (mg/kg)

| Analyte | Cas Number | Inhalation RfC | Inhalation Unit Risk | Volatilization Factor | Soil Saturation Concentration | Noncarcinogenic | Carcinogenic |
|---|---|---|---|---|---|---|---|
| Dichloroethylene, 1,2-cis- | 156592 | | | 5.9E+03 | 1.3E+03 | | |
| Methylene Chloride | 75092 | 3.0E+00 [b] | 4.7E-07 [a] | 5.2E+03 | 2.8E+03 | 3.3E+03 | 2.7E+00 |
| Naphthalene | 91203 | 3.0E-03 [a] | | 1.1E+05 | | 6.8E+01 | |
| Tetrachloroethylene | 127184 | 6.0E-01 [v] | 5.8E-07 [v] | 5.0E+03 | 2.4E+02 | 6.2E+02 | 2.1E+00 |

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# Soil Screening Guidance for Chemicals

## Equation Values for Inhalation of Volatiles

| Volatilization Factor Parameter | Value | Soil Saturation Concentration Parameter | Value | Noncarcinogenic Parameter | Value | Carcinogenic Parameter | Value |
|---|---|---|---|---|---|---|---|
| Surface Area (acres) | 0.5 | | | Target Hazard Quotient (unitless) | 0.2 | Target Risk (unitless) | 1.0E-7 |
| City (climate zone) | Chicago (VII) | | | Exposure Duration (yr) | 30 | Exposure Duration (yr) | 30 |
| Q/C ($g/m^2$-s per $kg/m^3$) | 97.78 | | | Exposure Frequency (day/yr) | 350 | Exposure Frequency (day/yr) | 350 |
| Fraction organic carbon (unitless) | 0.006 | Fraction organic carbon (unitless) | 0.006 | | | Average Lifetime (yr) | 70 |
| Dry soil bulk density ($g/cm^3$) | 1.5 | Dry soil bulk density ($g/cm^3$) | 1.5 | | | | |
| Soil particle density ($g/cm^3$) | 2.65 | Soil particle density ($g/cm^3$) | 2.65 | | | | |
| Water-filled soil porosity ($L_{water}/L_{soil}$) | 0.2 | Water-filled soil porosity ($L_{water}/L_{soil}$) | 0.2 | | | | |
| Exposure interval (s) | 9.5e08 | | | | | | |

## Soil Screening Levels for Inhalation of Volatiles (mg/kg)

| Analyte | Cas Number | Inhalation RfC | Inhalation Unit Risk | Volatilization Factor | Soil Saturation Concentration | Noncarcinogenic | Carcinogenic |
|---|---|---|---|---|---|---|---|
| Trichlorofluoromethane | 75694 | 7.0E-01 b,c | | 2.8E+03 | 1.6E+03 | 4.1E+02 | |

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# Soil Screening Guidance for Chemicals

## Equation Values for Ingestion

| Noncarcinogenic Parameter | Value | Carcinogenic Age-adjusted Parameter | Value | Carcinogenic Nonadjusted Parameter | Value |
|---|---|---|---|---|---|
| Target Hazard Quotient (unitless) | 0.2 | Target Risk (unitless) | 1.0E-7 | Target Risk (unitless) | 1.0E-6 |
| Body Weight (kg) | 15 | Adult Body Weight (kg) | 70 | Body Weight (kg) | 70 |
| | | Child Body Weight (kg) | 15 | | |
| Exposure Duration (yr) | 6 | Adult Exposure Duration (yr) | 24 | Exposure Duration (yr) | 25 |
| | | Child Exposure Duration (yr) | 6 | | |
| Exposure Frequency (day/yr) | 350 | Exposure Frequency (day/yr) | 350 | Exposure Frequency (day/yr) | 250 |
| Intake Rate (mg/day) | 200 | Adult Intake Rate (mg/day) | 100 | Intake Rate (mg/day) | 100 |
| | | Child Intake Rate (mg/day) | 200 | | |
| | | Average Lifetime (yr) | 70 | Average Lifetime (yr) | 70 |
| | | Age-adjusted Ingestion Factor (mg-yr/kg-day) | 114.29 | | |

## Soil Screening Levels for Ingestion (mg/kg)

| Analyte | Cas Number | Oral RfD | Oral Slope Factor | Noncarcinogenic | Carcinogenic (Age-adjusted) | Carcinogenic (Nonadjusted) |
|---|---|---|---|---|---|---|

| | | | |
|---|---|---|---|
| Trichlorofluoromethane | 75694 | 3.00E-01 [a] | 4.69E+03 |

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## Equation Values for Soil to Ground Water

| Partitioning Equation Parameter | Value |
|---|---|
| Dilution factor (unitless) | 1.27 |
| Fraction organic carbon in soil (unitless) | 0.001 |
| Water-filled soil porosity ($L_{water}/L_{soil}$) | 0.2 |
| Dry soil bulk density (kg/L) | 1.5 |
| Soil particle density (kg/L) | 2.65 |

## Soil Screening Levels for Soil to Ground Water (mg/kg)

| Analyte | Cas Number | Ground Water Concentration* (mg/L) | Ground Water Concentration Source | Soil Screening Level |
|---|---|---|---|---|
| Trichlorofluoromethane | 75694 | 1.4E+01 | HBL | 9.2E+00 |

*Ground Water Concentration=Ground Water Concentration Source × Dilution Factor

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## Equation Values for Soil to Ground Water

| Partitioning Equation Parameter | Value |
|---|---|
| Dilution factor (unitless) | 2 |
| Fraction organic carbon in soil (unitless) | 0.001 |
| Water-filled soil porosity ($L_{water}/L_{soil}$) | 0.2 |
| Dry soil bulk density (kg/L) | 1.5 |
| Soil particle density (kg/L) | 2.65 |

## Soil Screening Levels for Soil to Ground Water (mg/kg)

| Analyte | Cas Number | Ground Water Concentration* (mg/L) | Ground Water Concentration Source | Soil Screening Level |
|---|---|---|---|---|
| Tetrachloroethylene | 127184 | 1.0E-02 | MCL | 4.1E-03 |

*Ground Water Concentration=Ground Water Concentration Source × Dilution Factor



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## Equation Values for Soil to Ground Water

| Partitioning Equation Parameter | Value |
|---|---|
| Dilution factor (unitless) | .22 |
| Fraction organic carbon in soil (unitless) | 0.001 |
| Water-filled soil porosity ($L_{water}/L_{soil}$) | 0.2 |
| Dry soil bulk density (kg/L) | 1.5 |
| Soil particle density (kg/L) | 2.65 |

## Soil Screening Levels for Soil to Ground Water (mg/kg)

| Analyte | Cas Number | Ground Water Concentration* (mg/L) | Ground Water Concentration Source | Soil Screening Level |
|---|---|---|---|---|
| Naphthalene | 91203 | 1.6E-01 | HBL | 3.4E-01 |

*Ground Water Concentration=Ground Water Concentration Source × Dilution Factor

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## Equation Values for Soil to Ground Water

| Partitioning Equation Parameter | Value |
|---|---|
| Dilution factor (unitless) | 2 |
| Fraction organic carbon in soil (unitless) | 0.001 |
| Water-filled soil porosity ($L_{water}/L_{soil}$) | 0.1 |
| Dry soil bulk density (kg/L) | 1.5 |
| Soil particle density (kg/L) | 2.65 |

## Soil Screening Levels for Soil to Ground Water (mg/kg)

| Analyte | Cas Number | Ground Water Concentration* (mg/L) | Ground Water Concentration Source | Soil Screening Level |
|---|---|---|---|---|
| Methylene Chloride | 75092 | 1.0E-02 | MCL | 9.8E-04 |

*Ground Water Concentration=Ground Water Concentration Source × Dilution Factor

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## Equation Values for Soil to Ground Water

| Partitioning Equation Parameter | Value |
|---|---|
| Dilution factor (unitless) | 2 |
| Fraction organic carbon in soil (unitless) | 0.001 |
| Water-filled soil porosity ($L_{water}/L_{soil}$) | 0.2 |
| Dry soil bulk density (kg/L) | 1.5 |
| Soil particle density (kg/L) | 2.65 |

## Soil Screening Levels for Soil to Ground Water (mg/kg)

| Analyte | Cas Number | Ground Water Concentration* (mg/L) | Ground Water Concentration Source | Soil Screening Level |
|---|---|---|---|---|
| Dichloroethylene, 1,2-cis- | 156592 | 1.4E-01 | MCLG | 2.7E-02 |

*Ground Water Concentration=Ground Water Concentration Source × Dilution Factor

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URL: http://risk.lsd.ornl.gov/epa/ssl1.htm
This page was last updated on: May 12, 1999

ARCADIS

# Appendix C

Investigative-Derived Waste
Disposal Documentation

# Badger Disposal of WI., Inc.

5611 W. HEMLOCK STREET
MILWAUKEE, WI 53223

WS Number: _____
Approval #: _____

(414) 760-9175 1-866-271-0961 WID988580056

A.Generator Name: Hoffman Valet Cleaners Customer #_____
Address: 7215 West Center Street
City, State, Zip: Wauwatosa WI 53213 SIC Code: _____
Contact: Ralph Hoffman Title: Owner
Telephone: 480-451-6110 Ext. _____ FAX #: N/A
EPA ID: N/A

Bill to: ARCADIS
Billing Address: 126 N. Jefferson Street, Suite 400
City, State, Zip: Milwaukee, WI 53202
Contact: Ed Buc Title: Senior Engineer
Phone Number: 414-276-7742 FAX #: 414-276-7603

This profile sheet was completed using: ☐ General Knowledge ☐ Analysis (attached) ☐ MSDS ☐ Both

## B. WASTE DESCRIPTION AND GENERAL CHARACTERISTICS

Name of Waste: Soil cuttings
Process Generating Waste: monitoring well installation
Color: brown Odor: none ☒ None ☐ Mild ☐ Strong ☐ Single Layer ☐ Double Layer ☐ Multi-Layer
Free Phases: ____ ☐ Liquid 0 % ☐ Powder _____ % ☐ Solid 100 % ☐ Sludge _____ %

## C. RCRA AND DOT INFORMATION

Is this a USEPA Hazardous Waste? ☐ Yes ☒ No Please list the USEPA Hazardous waste codes: _____
Is this a DOT Hazardous Material? ☐ Yes ☒ No Anticipated Annual Volume: 7 / Units: 55 gal drums
Proper Shipping Name: non-regulated waste
Hazardous Class #: _____ PG #: _____ UN/NA #: _____ Additional Description: _____
Method of Shipment: ☐ Bulk Liquid ☐ Bulk Solid ☒ Drum Container Type: metal Size: 55 gall

## D. SPECIAL HANDLING INSTRUCTIONS

If Special handling techniques are required, specify: lift gate needed for pickup - no dock or forklift
Treatment: _____ Is a representative sample provided? ☐ Yes ☐ No

## E. METALS (Indicate in parts per million [ppm] if this waste contains any of the following using): ☐ TCLP ☐ Generator Knowledge ☐ TOTAL

| Metal | Less than | or Actual | Metal | Less than | or Actual | Metal | Less than | or Actual |
|---|---|---|---|---|---|---|---|---|
| Arsenic | ☒ <5 ☐ <500 | | Mercury | ☒ <0.2 ☐ <20 | | Nickel | ☒ <5 ☐ <134 | |
| Barium | ☒ <100 | | Selenium | ☒ <1 ☐ <100 | | Thallium | ☒ <5 ☐ <130 | |
| Cadmium | ☒ <1 ☐ <100 | | Silver | ☒ <5 | | Zinc | ☒ <5 | |
| Chromium | ☒ <5 | | Chromium-Hex | ☒ <5 ☐ <500 | | | | |
| Lead | ☒ <5 ☐ <500 | | Copper | ☒ <5 | | | | |

## F. PHYSICAL/CHEMICAL PROPERTIES

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Specific Gravity:** | ☐ <0.8 | ☐ 0.8-1.0 | ☐ 1.0-1.2 | ☒ 1.2-1.4 | ☐ 1.4-1.7 | ☐ >1.7 | Actual: _____ |
| **Total Suspended Solids:** | ☐ 0.5 | ☐ 0.5-2.0 | ☐ 2.0-5.0 | ☐ 5.0-20 | ☐ >20 | Actual: _____ | |
| **pH:** | ☐ <2 | ☐ 2-6 | ☒ 6-8 | ☐ 8-10 | ☐ 10-12.5 | ☐ >12.5 | Actual: _____ |
| **BTU's:** | ☒ <1 | ☐ 1-4 | ☐ 4-8 | ☐ 8-12 | ☐ 12-16 | Actual: _____ | |
| **Flash Point Degree F:** | ☐ <73°F | ☐ 73-140°F | ☐ >140-200°F | ☒ >200°F | Actual: _____ | | |
| **Sulfur (WT):** | ☒ <0.5 | % ☐ 0.5-2.0 | ☐ 2-5 | ☐ >5.0 | Actual: _____ | | |

## G. HAZARDOUS CHARACTERISTICS AND OTHER COMPONENTS

**Reactivity:** ☒ None ☐ Explosive ☐ Pyrophoric ☐ Shock Sensitive ☐ Water Reactive ☐ Etiological ☐ Radioactive ☐ Acutely Hazardous Waste
**Viscosity:** ☐ Low ☐ Medium ☐ High **Are TC Codes present?** ☐ Yes ☒ No (If yes, please list in USEPA Waste Code Section).
**Halogens:** ☒ < 1 % Chlorine ☐ _____ % Fluorine ☐ _____ % Bromine ☐ _____ % Iodine
**Cyanides** (ppm) _____ **PCB's** (ppm) _____ **Pesticides:** (ppm) _____ **Sulfides:** (ppm): _____ **Phenolics:** (ppm) _____

## H. CHEMICAL COMPOSITION (MUST TOTAL 100%)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Soil | >99 | % | | % | | % |
| Tetrachloroethene | < 1 | % | | % | | % |
| | | % | | % | | % |
| | | % | | % | | % |
| | | % | | % | | % |
| | | % | | % | | % |
| | | % | | % | | % |
| | | % | | % | | % |

I hereby certify that all information submitted in this and all attached documents is complete and accurate, and that all known or suspected hazards have been disclosed. The Generator further recognizes that for reasons of efficiency and speed in processing it is desirable to name Badger Disposal of WI, Inc. as Generator's agent for disposal of waste. Accordingly Generator specifically authorizes office and/or employees of Badger Disposal of WI, Inc. to sign forms and/or contract in respect to waste disposal utilizing only information and matters that appear on the Badger Disposal "master sheet" above. In this respect, Badger Disposal of WI, Inc. is to in no manner change or alter the data on the above master sheet. The Generator specifically acknowledges that it has carefully reviewed the above master sheet data and information. With the above limitations, Generator further consents and directs that the officer and/or employee of Badger Disposal sign the name of the undersigned agent of Generator to any and all such forms and/or contracts respecting processing and disposal of Generator's waste.

SIGNATURE OF GENERATOR'S OFFICER AND/OR AGENT TITLE DATE

BADGER DISPOSAL
Badger Disposal of WI, Inc.

To: Ed Buc
Arcadis, G & M Inc.
126 N. Jefferson St., Suite 400
Milwaukee, WI 53202

FAX: 414-276-7603

Date: March 31, 2005
Technical Representative:
Henry J. Krier
Telephone Number:
414-760-9175/866-271-0961

PRICE PROPOSAL

| WS DESCRIPTION | DISPOSAL PRICE |
|---|---|
| Non-Haz. Soil Drums – Wauwatosa | $75.00/55 gal. drum |
| Transportation | $15.00/drum |
| Stop Fee | $35.00 |

Stated prices for all services are firm for thirty (30) days from the date of this quotation. Invoices are issued on waste pick-up dates and are payable 15 days after received. Customer is responsible for all costs of collection, including reasonable attorney fees. Any deviation of waste from the stated constituents on the Waste Profile Sheet can result in rejection of the load or off-spec charges.

We appreciate the opportunity to be of service. If you should have any questions, please contact me.

Please indicate acceptance of this quotation by signing in the space provided below, including a purchase order number, and mailing or faxing a copy to the above address/number.

**Quotation by:** Henry J. Krier **Accepted by:**_____ **Date:**

5611 W. Hemlock St. Milwaukee, WI 53223
866-271-0961 • 414-760-9175 • Fax: 414-760-9189 • www.badgerdisposal.com

SEVERN TRENT STL

**STL North Canton**
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

# ANALYTICAL REPORT

PROJECT NO. WI000943.0002

WAUWAUTOSA,WI

Lot #: A5B170265

Ed Buc

ARCADIS Geraghty & Miller, Inc
126 North Jefferson Street
Suite 400
Milwaukee, WI 53202

SEVERN TRENT LABORATORIES, INC.

Denise Pohl
Project Manager

March 2, 2005

# CASE NARRATIVE

A5B170265

The following report contains the analytical results for one solid sample submitted to STL North Canton by ARCADIS Geraghty & Miller, Inc from the Wauwautosa, WI Site, project number WI000943.0002. The sample was received February 17, 2005, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The sample presented in this report was analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Brian Maillet and Ed Buc on March 01, 2005. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

## SUPPLEMENTAL QC INFORMATION

### SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 6.0°C.

# CASE NARRATIVE (continued)

## GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

## QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

### QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

### LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

### METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

| Volatile (GC or GC/MS) | Semivolatile (GC/MS) | Metals |
|---|---|---|
| Methylene chloride | Phthalate Esters | Copper |
| Acetone | | Iron |
| 2-Butanone | | Zinc |
| | | Lead* |

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

**MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

**SURROGATE COMPOUNDS**

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

***STL North Canton Certifications and Approvals:***

*California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#200004), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), North Carolina (#39702), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903). Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)*

*Y:\Barb\STL headers\Qc846-Narrative_060204.doc, Revised06/02/04 DJL*

# EXECUTIVE SUMMARY - Detection Highlights

**A5B170265**

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | ANALYTICAL METHOD |
|---|---|---|---|---|
| **DRUMS 02/09/05 13:50 001** | | | | |
| Chloroform | 0.0021 | 0.025 | mg/L | SW846 8260B |
| | Qualifiers: J,B | | | |

# ANALYTICAL METHODS SUMMARY

**A5B170265**

| PARAMETER | ANALYTICAL METHOD |
|---|---|
| Volatile Organics by GC/MS | SW846 8260B |

**References:**

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

# SAMPLE SUMMARY

A5B170265

| WO # | SAMPLE# | CLIENT SAMPLE ID | SAMPLED DATE | SAMP TIME |
|---|---|---|---|---|
| G4MCP | 001 | DRUMS | 02/09/05 | 13:50 |

**NOTE(S):**

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS Geraghty & Miller, Inc.

Client Sample ID: DRUMS

TCLP GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | A5B170265-001 | **Work Order #...:** | G4MCP1AA | **Matrix.....:** | SO |
| **Date Sampled...:** | 02/09/05 13:50 | **Date Received..:** | 02/17/05 | | |
| **Leach Date.....:** | 02/23/05 | **Prep Date.....:** | 02/25/05 | **Analysis Date..:** | 02/25/05 |
| **Leach Batch #..:** | P505410 | **Prep Batch #...:** | 5056388 | | |
| **Dilution Factor:** | 1 | | | | |
| **% Moisture.....:** | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS |
|---|---|---|---|
| Benzene | ND | 0.025 | mg/L |
| Carbon tetrachloride | ND | 0.025 | mg/L |
| Chlorobenzene | ND | 0.025 | mg/L |
| **Chloroform** | **0.0021 J,B** | **0.025** | **mg/L** |
| 1,2-Dichloroethane | ND | 0.025 | mg/L |
| 1,1-Dichloroethylene | ND | 0.070 | mg/L |
| Methyl ethyl ketone | ND | 0.050 | mg/L |
| Tetrachloroethylene | ND | 0.070 | mg/L |
| Trichloroethylene | ND | 0.050 | mg/L |
| Vinyl chloride | ND | 0.025 | mg/L |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 96 | (86 - 125) |
| 1,2-Dichloroethane-d4 | 88 | (80 - 122) |
| Toluene-d8 | 103 | (90 - 122) |
| 4-Bromofluorobenzene | 96 | (84 - 125) |

**NOTE(S):**

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

SEVERN TRENT STL

# *QUALITY CONTROL SECTION*

## METHOD BLANK REPORT

## TCLP GC/MS Volatiles

**Client Lot #...:** A5B170265 **Work Order #...:** G46E21AD **Matrix.....:** SOLID
**MB Lot-Sample #:** A5B250000-388
**Leach Date.....:** 02/23/05 **Prep Date.....:** 02/25/05 **Analysis Date..:** 02/25/05
**Leach Batch #..:** P505410 **Prep Batch #...:** 5056388
**Dilution Factor:** 1

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD |
|---|---|---|---|---|
| Benzene | ND | 0.025 | mg/L | SW846 8260B |
| Carbon tetrachloride | ND | 0.025 | mg/L | SW846 8260B |
| Chlorobenzene | ND | 0.025 | mg/L | SW846 8260B |
| **Chloroform** | **0.0034 J** | **0.025** | **mg/L** | **SW846 8260B** |
| 1,2-Dichloroethane | ND | 0.025 | mg/L | SW846 8260B |
| 1,1-Dichloroethylene | ND | 0.070 | mg/L | SW846 8260B |
| **Methyl ethyl ketone** | **0.0051 J** | **0.050** | **mg/L** | **SW846 8260B** |
| Tetrachloroethylene | ND | 0.070 | mg/L | SW846 8260B |
| Trichloroethylene | ND | 0.050 | mg/L | SW846 8260B |
| Vinyl chloride | ND | 0.025 | mg/L | SW846 8260B |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 95 | (86 - 125) |
| 1,2-Dichloroethane-d4 | 86 | (80 - 122) |
| Toluene-d8 | 101 | (90 - 122) |
| 4-Bromofluorobenzene | 97 | (84 - 125) |

**NOTE(S):**

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

J Estimated result. Result is less than RL.

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

### GC/MS Volatiles

**Client Lot #...:** A5B170265 **Work Order #...:** G46E21AA-LCS **Matrix.....:** SOLID
**LCS Lot-Sample#:** A5B250000-388 G46E21AC-LCSD
**Prep Date.....:** 02/25/05 **Analysis Date..:** 02/25/05
**Prep Batch #...:** 5056388
**Dilution Factor:** 1

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | RPD | RPD LIMITS | METHOD |
|---|---|---|---|---|---|
| **Benzene** | **97** | **(76 - 118)** | | | **SW846 8260B** |
| | **99** | **(76 - 118)** | **1.5** | **(0-30)** | **SW846 8260B** |
| **Chlorobenzene** | **100** | **(76 - 113)** | | | **SW846 8260B** |
| | **100** | **(76 - 113)** | **0.38** | **(0-30)** | **SW846 8260B** |
| **1,1-Dichloroethylene** | **112** | **(67 - 128)** | | | **SW846 8260B** |
| | **105** | **(67 - 128)** | **6.3** | **(0-30)** | **SW846 8260B** |
| **Trichloroethylene** | **98** | **(76 - 119)** | | | **SW846 8260B** |
| | **95** | **(76 - 119)** | **2.8** | **(0-20)** | **SW846 8260B** |
| **Toluene** | **96** | **(72 - 117)** | | | **SW846 8260B** |
| | **96** | **(72 - 117)** | **0.28** | **(0-30)** | **SW846 8260B** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 96 | (86 - 124) |
| | 98 | (86 - 124) |
| 1,2-Dichloroethane-d4 | 86 | (80 - 122) |
| | 89 | (80 - 122) |
| Toluene-d8 | 100 | (90 - 122) |
| | 103 | (90 - 122) |
| 4-Bromofluorobenzene | 105 | (84 - 125) |
| | 104 | (84 - 125) |

**NOTE(S):**

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

Bold print denotes control parameters

## MATRIX SPIKE SAMPLE EVALUATION REPORT

### TCLP GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client Lot #...:** | A5B170265 | **Work Order #...:** | G40V21AP-MS | **Matrix.....:** | SOLID |
| **MS Lot-Sample #:** | A5B230191-007 | | G40V21AQ-MSD | | |
| **Date Sampled...:** | 02/11/05 10:25 | **Date Received..:** | 02/23/05 | | |
| **Leach Date.....:** | 02/23/05 | **Prep Date.....:** | 02/25/05 | **Analysis Date..:** | 02/25/05 |
| **Leach Batch #..:** | P505410 | **Prep Batch #...:** | 5056388 | | |
| **Dilution Factor:** | 1 | | | | |

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | RPD | RPD LIMITS | METHOD |
|---|---|---|---|---|---|
| **Benzene** | **97** | **(76 - 117)** | | | **SW846 8260B** |
| | **96** | **(76 - 117)** | **0.21** | **(0-30)** | **SW846 8260B** |
| **Chlorobenzene** | **90** | **(72 - 114)** | | | **SW846 8260B** |
| | **95** | **(72 - 114)** | **5.5** | **(0-30)** | **SW846 8260B** |
| **1,1-Dichloroethylene** | **101** | **(67 - 129)** | | | **SW846 8260B** |
| | **99** | **(67 - 129)** | **1.6** | **(0-30)** | **SW846 8260B** |
| **Trichloroethylene** | **90** | **(72 - 121)** | | | **SW846 8260B** |
| | **91** | **(72 - 121)** | **0.89** | **(0-30)** | **SW846 8260B** |
| **Toluene** | **89** | **(67 - 113)** | | | **SW846 8260B** |
| | **91** | **(67 - 113)** | **2.3** | **(0-30)** | **SW846 8260B** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Dibromofluoromethane | 101 | (86 - 125) |
| | 98 | (86 - 125) |
| 1,2-Dichloroethane-d4 | 90 | (80 - 122) |
| | 89 | (80 - 122) |
| Toluene-d8 | 103 | (90 - 122) |
| | 100 | (90 - 122) |
| 4-Bromofluorobenzene | 104 | (84 - 125) |
| | 101 | (84 - 125) |

**NOTE(S):**

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

Bold print denotes control parameters

ARCADIS

Laboratory Task Order No./P.O. No. _____

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name WI000943.0002/Hoffman

Project Location Wauwatosa, WI

Laboratory STL

Project Manager Ed Buc

Sampler(s)/Affiliation Brian Meillet/ARCADIS

| Sample ID/Location | Matrix | Date/Time Sampled | Lab ID | ANALYSIS / METHOD / SIZE: VOC TCLP - Glass Jar | | | | | | Remarks | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DRUMS | S | 2/4/05 1350 | | 1 | | | | | | | 1 |

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 1

| | | | | | | |
|---|---|---|---|---|---|---|
| Relinquished by: | Organization: ARCADIS | Date 2/6/05 | Time 1511 | Seal Intact? | | |
| Received by: | Organization: STL NC | Date 2/7/05 | Time 9:40 | (Yes) | No | N/A |
| Relinquished by: | Organization: | Date / / | Time | Seal Intact? | | |
| Received by: | Organization: | Date / / | Time | Yes | No | N/A |

Special Instructions/Remarks: _____

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

14

STL North Canton

**STL Cooler Receipt Form/Narrative** **Lot Number:** ASB170265
**North Canton Facility**

Client: ARCADIS Project: Way Wautosa, WI Quote#: 6311
Cooler Received on: 2-17-05 Opened on: 2-17-05 by: (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☑ Other: _____
STL Cooler No# _____ Foam Box ☐ Client Cooler ☑ Other ____

1. Were custody seals on the outside of the cooler? Yes ☑ No ☐ Intact? Yes ☑ No ☐ NA ☐
   If YES, Quantity 1
   Were the custody seals signed and dated? Yes ☑ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☐ None ☐ Other: _____
6. Cooler temperature upon receipt 6.0 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/$H_2O$ Slurry ☐
COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☑
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐
Concerning: _____

| √ | |
|---|---|
| | ***1. CHAIN OF CUSTODY*** |
| | The following discrepancies occurred: |
| | ***2. SAMPLE CONDITION*** |
| | Sample(s) _____ were received after the recommended holding time had expired. |
| | Sample(s) _____ were received in a broken container. |
| | ***3. SAMPLE PRESERVATION*** |
| | Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot # 101104HNO3; Sulfuric Acid Lot # 102804-H2SO4; Sodium Hydroxide Lot # -082404-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 071604-CH3COO2ZN/NaOH* |
| | Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM) |
| | ***4. Other (see below or back)*** |

| Client ID | pH | Date | Initials |
|---|---|---|---|
| | | | |
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# *END OF REPORT*

ARCADIS

Laboratory Task Order No./P.O. No. _____

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name WI000943.0002/Hoffman

Project Location Wauwatosa, WI

Laboratory STL

Project Manager Ed Bus

Sampler(s)/Affiliation Brian McNutt/ARCADIS

| Sample ID/Location | Matrix | Date/Time Sampled | Lab ID | ANALYSIS / METHOD / SIZE: VOC TCLP - Glass Jar | | | | | | Remarks | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DRUMS | S | 2/9/05/1350 | | 1 | | | | | | | 1 |
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Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 1

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by: [signature] | Organization: ARCADIS | Date 2/16/05 | Time 1511 | Seal Intact? | |
| Received by: _____ | Organization: _____ | Date / / | Time _____ | (Yes) | No N/A |
| Relinquished by: _____ | Organization: _____ | Date / / | Time _____ | Seal Intact? | |
| Received by: _____ | Organization: _____ | Date / / | Time _____ | Yes | No N/A |

Special Instructions/Remarks: _____

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex SPECIFY ☐ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01

ARCADIS

# Appendix D

Laboratory Analytical Reports

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

02/07/2005

Job No: 05.00589



The following samples were received by TestAmerica for analysis:

WI000943.0002 Hoffman Cleaners

| Sample Number | Sample Description | Date Taken | Date Received |
|---|---|---|---|
| 604536 | MW-1 | 01/28/2005 | 01/31/2005 |
| 604537 | MW-2 | 01/28/2005 | 01/31/2005 |
| 604538 | MW-3 | 01/28/2005 | 01/31/2005 |
| 604539 | Trip Blank | 01/28/2005 | 01/31/2005 |

Brian DeJong
Organic Operations Manager

ARCADIS
Job No: 05.00589

02/07/2005


## KEY TO DATA FLAGS

The attached sample(s) may have a result flag shown on the report. The following are the result flag definitions:

A = Analyzed/extracted past hold time
B = Blank is contaminated
C = Standard outside of control limits
D = Diluted for analysis
E = TCLP extraction outside of method required temperature range
F = Sample filtered in lab
G = Received past hold time
H = Late eluting hydrocarbons present
I = Improperly handled sample
J = Estimated concentration
L = Common lab solvent
M = Matrix interference
P = Improperly preserved sample
Q = Result confirmed via re-analysis
S = Sediment present
T = Does not match typical pattern
W = BOD re-set due to missed dilution
X = Unidentified compound(s) present
Z = Internal standard outside limits
* = See Case Narrative

## KEY TO ANALYST INITIALS

The attached sample(s) may have been analyzed by another certified laboratory. If a number appears in the Analyst Initials field, the following are the appropriate certifications (if the lab code does not appear below, that means that certification is not required for the work performed):

| Lab Code | Certification Number |
|---|---|
| 008 | WDNR - 999766900 |
| 009 | WDNR - 241293690 |
| 020 | WDNR - 999447680 |
| 030 | ILNELAC - 100230; WDNR - 998294430 |
| 060 | ILNELAC - 100221; WDNR - 999447130 |
| 070 | IA - 007; ILNELAC - 000668; MDH - 019-999-319; WDNR - 999917270 |
| 090 | ILNELAC 200006; WDNR - 399031270 |
| 130 | WDNR - 632021390 |
| 147 | WDNR - 721026460 |
| 148 | WDNR - 399017190 |
| 300 | FLNELAC - 87358; IA - 131; MDH - 047-999-345; WDNR - 998020430 |
| 400 | WDNR - 113133790 |
| 510 | WDNR - 241249360 |
| 520 | WDNR - 999518190; ILNELAC - 100439 |
| 700 | WDNR - 113289110 |

TestAmerica Watertown Certifications: WI DNR - 128053530; IL NELAC - 100453; IA DNR - 294; MN DoH - 055-999-366; ND DoH R-046; AR DEQ - 88-0808

Unless sub-contracted (see above), volatiles analyses (including VOC, PVOC, GRO, BTEX and TPH Gasoline) performed by TestAmerica Watertown at 1101 Industrial Drive, Units 9&10. All other analyses performed at 602 Commerce Drive, Watertown WI 53094.

Results reported between the Method Detection Limit (MDL) and Limit of Quantitation (LOQ) are less certain than results at or above the LOQ.

For questions regarding this report, please contact Dan Milewsky or Warren Topel.

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

02/07/2005
Job No: 05.00589
Sample No: 604536
Account No: 32050
Page 3 of 16

JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-1
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/28/2005 10:15 Date Received: 01/31/2005

| Parameter | Results | Units | MDL | LOQ | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|---|
| VOC - AQUEOUS - EPA 8260B | | | | | | | | |
| Benzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromochloromethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromodichloromethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromoform | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| n-Butylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| sec-Butylbenzene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| tert-Butylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Carbon Tetrachloride | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chlorodibromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chloroethane | <1.0 | ug/L | 1.0 | 3.3 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chloroform | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chloromethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 2-Chlorotoluene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 4-Chlorotoluene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dibromo-3-Chloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dibromoethane (EDB) | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Dibromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dichlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,3-Dichlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,4-Dichlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Dichlorodifluoromethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1-Dichloroethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dichloroethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| cis-1,2-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| trans-1,2-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dichloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,3-Dichloropropane | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 2,2-Dichloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1-Dichloropropene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| cis-1,3-Dichloropropene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| trans-1,3-Dichloropropene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Di-isopropyl ether | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Ethylbenzene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Hexachlorobutadiene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

02/07/2005
Job No: 05.00589
Sample No: 604536
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-1
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/28/2005 10:15 Date Received: 01/31/2005

| Parameter | Results | Units | MDL | LOQ | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| p-Isopropyltoluene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Methylene Chloride | <1.0 | ug/L | 1.0 | 3.3 | SW 8260B | 02/04/2005 | mae | 7089 |
| Methyl-t-butyl ether | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Naphthalene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| n-Propylbenzene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Styrene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,1,2-Tetrachloroethane | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,2,2-Tetrachloroethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Tetrachloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Toluene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,3-Trichlorobenzene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,4-Trichlorobenzene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,1-Trichloroethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,2-Trichloroethane | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| Trichloroethene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Trichlorofluoromethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,3-Trichloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,4-Trimethylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,3,5-Trimethylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Vinyl Chloride | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Xylenes, Total | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Surr: Dibromofluoromethane | 104 | % | | 89-119 | SW 8260B | 02/04/2005 | mae | 7089 |
| Surr: Toluene-d8 | 100 | % | | 91-109 | SW 8260B | 02/04/2005 | mae | 7089 |
| Surr: Bromofluorobenzene | 100 | % | | 89-114 | SW 8260B | 02/04/2005 | mae | 7089 |

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

02/07/2005
Job No: 05.00589
Sample No: 604537
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-2
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/28/2005 10:30 Date Received: 01/31/2005

| Parameter | Results | Units | MDL | LOQ | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|---|
| VOC - AQUEOUS - EPA 8260B | | | | | | | | |
| Benzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromochloromethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromodichloromethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromoform | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| n-Butylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| sec-Butylbenzene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| tert-Butylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Carbon Tetrachloride | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chlorodibromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chloroethane | <1.0 | ug/L | 1.0 | 3.3 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chloroform | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chloromethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 2-Chlorotoluene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 4-Chlorotoluene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dibromo-3-Chloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dibromoethane (EDB) | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Dibromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dichlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,3-Dichlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,4-Dichlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Dichlorodifluoromethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1-Dichloroethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dichloroethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| cis-1,2-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| trans-1,2-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dichloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,3-Dichloropropane | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 2,2-Dichloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1-Dichloropropene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| cis-1,3-Dichloropropene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| trans-1,3-Dichloropropene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Di-isopropyl ether | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Ethylbenzene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Hexachlorobutadiene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

02/07/2005
Job No: 05.00589
Sample No: 604537
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-2
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/28/2005 10:30 Date Received: 01/31/2005

| Parameter | Results | Units | MDL | LOQ | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| p-Isopropyltoluene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Methylene Chloride | <1.0 | ug/L | 1.0 | 3.3 | SW 8260B | 02/04/2005 | mae | 7089 |
| Methyl-t-butyl ether | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Naphthalene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| n-Propylbenzene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Styrene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,1,2-Tetrachloroethane | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,2,2-Tetrachloroethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Tetrachloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Toluene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,3-Trichlorobenzene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,4-Trichlorobenzene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,1-Trichloroethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,2-Trichloroethane | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| Trichloroethene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Trichlorofluoromethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,3-Trichloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,4-Trimethylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,3,5-Trimethylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Vinyl Chloride | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Xylenes, Total | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Surr: Dibromofluoromethane | 105 | % | | 89-119 | SW 8260B | 02/04/2005 | mae | 7089 |
| Surr: Toluene-d8 | 99 | % | | 91-109 | SW 8260B | 02/04/2005 | mae | 7089 |
| Surr: Bromofluorobenzene | 99 | % | | 89-114 | SW 8260B | 02/04/2005 | mae | 7089 |

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ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

02/07/2005
Job No: 05.00589
Sample No: 604538
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-3
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/28/2005 10:45 Date Received: 01/31/2005

| Parameter | Results | Units | MDL | LOQ | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|---|
| VOC - AQUEOUS - EPA 8260B | | | | | | | | |
| Benzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromochloromethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromodichloromethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromoform | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Bromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| n-Butylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| sec-Butylbenzene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| tert-Butylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Carbon Tetrachloride | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chlorodibromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chloroethane | <1.0 | ug/L | 1.0 | 3.3 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chloroform | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Chloromethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 2-Chlorotoluene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 4-Chlorotoluene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dibromo-3-Chloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dibromoethane (EDB) | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Dibromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dichlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,3-Dichlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,4-Dichlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Dichlorodifluoromethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1-Dichloroethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dichloroethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| cis-1,2-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| trans-1,2-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2-Dichloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,3-Dichloropropane | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 2,2-Dichloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1-Dichloropropene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| cis-1,3-Dichloropropene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| trans-1,3-Dichloropropene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Di-isopropyl ether | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Ethylbenzene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Hexachlorobutadiene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |

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WDNR No. 128053530
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# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

02/07/2005
Job No: 05.00589
Sample No: 604538
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: MW-3
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/28/2005 10:45 Date Received: 01/31/2005

| Parameter | Results | Units | MDL | LOQ | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| p-Isopropyltoluene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Methylene Chloride | <1.0 | ug/L | 1.0 | 3.3 | SW 8260B | 02/04/2005 | mae | 7089 |
| Methyl-t-butyl ether | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Naphthalene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| n-Propylbenzene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Styrene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,1,2-Tetrachloroethane | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,2,2-Tetrachloroethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Tetrachloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Toluene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,3-Trichlorobenzene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,4-Trichlorobenzene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,1-Trichloroethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,1,2-Trichloroethane | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7089 |
| Trichloroethene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Trichlorofluoromethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,3-Trichloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,2,4-Trimethylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| 1,3,5-Trimethylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Vinyl Chloride | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7089 |
| Xylenes, Total | 0.86 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7089 |
| Surr: Dibromofluoromethane | 107 | % | | 89-119 | SW 8260B | 02/04/2005 | mae | 7089 |
| Surr: Toluene-d8 | 102 | % | | 91-109 | SW 8260B | 02/04/2005 | mae | 7089 |
| Surr: Bromofluorobenzene | 102 | % | | 89-114 | SW 8260B | 02/04/2005 | mae | 7089 |

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

02/07/2005
Job No: 05.00589
Sample No: 604539
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: Trip Blank
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/28/2005 UNKNOWN Date Received: 01/31/2005

| Parameter | Results | Units | MDL | LOQ | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|---|
| VOC - AQUEOUS - EPA 8260B | | | | | | | | |
| Benzene | 0.35 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Bromobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Bromochloromethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| Bromodichloromethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Bromoform | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Bromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| n-Butylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| sec-Butylbenzene | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7086 |
| tert-Butylbenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Carbon Tetrachloride | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| Chlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Chlorodibromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Chloroethane | <1.0 | ug/L | 1.0 | 3.3 | SW 8260B | 02/04/2005 | mae | 7086 |
| Chloroform | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Chloromethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| 2-Chlorotoluene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| 4-Chlorotoluene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,2-Dibromo-3-Chloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,2-Dibromoethane (EDB) | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Dibromomethane | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,2-Dichlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,3-Dichlorobenzene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,4-Dichlorobenzene | 0.28 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Dichlorodifluoromethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,1-Dichloroethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,2-Dichloroethane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,1-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| cis-1,2-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| trans-1,2-Dichloroethene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,2-Dichloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,3-Dichloropropane | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7086 |
| 2,2-Dichloropropane | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,1-Dichloropropene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| cis-1,3-Dichloropropene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| trans-1,3-Dichloropropene | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Di-isopropyl ether | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| Ethylbenzene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| Hexachlorobutadiene | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

02/07/2005
Job No: 05.00589
Sample No: 604539
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Groundwater Analysis
SAMPLE DESCRIPTION: Trip Blank
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/28/2005 UNKNOWN Date Received: 01/31/2005

| Parameter | | Results | Units | MDL | LOQ | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| p-Isopropyltoluene | | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Methylene Chloride | L | 1.2 | ug/L | 1.0 | 3.3 | SW 8260B | 02/04/2005 | mae | 7086 |
| Methyl-t-butyl ether | | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| Naphthalene | | 0.31 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7086 |
| n-Propylbenzene | | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| Styrene | | 1.4 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,1,1,2-Tetrachloroethane | | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,1,2,2-Tetrachloroethane | | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Tetrachloroethene | | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| Toluene | | 1.4 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,2,3-Trichlorobenzene | | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,2,4-Trichlorobenzene | | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,1,1-Trichloroethane | | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,1,2-Trichloroethane | | <0.25 | ug/L | 0.25 | 0.83 | SW 8260B | 02/04/2005 | mae | 7086 |
| Trichloroethene | | 0.25 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Trichlorofluoromethane | | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,2,3-Trichloropropane | | <0.50 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,2,4-Trimethylbenzene | | 0.32 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| 1,3,5-Trimethylbenzene | | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Vinyl Chloride | | <0.20 | ug/L | 0.20 | 0.67 | SW 8260B | 02/04/2005 | mae | 7086 |
| Xylenes, Total | | 3.1 | ug/L | 0.50 | 1.7 | SW 8260B | 02/04/2005 | mae | 7086 |
| Surr: Dibromofluoromethane | | 101 | % | | 89-119 | SW 8260B | 02/04/2005 | mae | 7086 |
| Surr: Toluene-d8 | | 101 | % | | 91-109 | SW 8260B | 02/04/2005 | mae | 7086 |
| Surr: Bromofluorobenzene | | 101 | % | | 89-114 | SW 8260B | 02/04/2005 | mae | 7086 |

# QUALITY CONTROL REPORT
## CONTINUING CALIBRATION VERIFICATION

02/07/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00589
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Run Batch | True Value | Observed Value | Percent Recovery | Control Limits |
|---|---|---|---|---|---|
| VOC - AQUEOUS - EPA 8260B | | | | | |
| Benzene | 7086 | 50.0 | 52.1 | 104 | 80 - 120 |
| Bromoform | 7086 | 50.0 | 47.2 | 94 | 80 - 120 |
| Chlorobenzene | 7086 | 50.0 | 51.2 | 102 | 80 - 120 |
| Chloroform | 7086 | 50.0 | 53.2 | 106 | 80 - 120 |
| Chloromethane | 7086 | 50.0 | 43.5 | 87 | 80 - 120 |
| 1,1-Dichloroethane | 7086 | 50.0 | 53.4 | 107 | 80 - 120 |
| 1,1-Dichloroethene | 7086 | 50.0 | 52.8 | 106 | 80 - 120 |
| 1,2-Dichloropropane | 7086 | 50.0 | 51.9 | 104 | 80 - 120 |
| Ethylbenzene | 7086 | 50.0 | 51.0 | 102 | 80 - 120 |
| Methyl-t-butyl ether | 7086 | 50.0 | 51.7 | 103 | 80 - 120 |
| 1,1,2,2-Tetrachloroethane | 7086 | 50.0 | 53.6 | 107 | 80 - 120 |
| Toluene | 7086 | 50.0 | 50.5 | 101 | 80 - 120 |
| Trichloroethene | 7086 | 50.0 | 50.6 | 101 | 80 - 120 |
| 1,2,4-Trimethylbenzene | 7086 | 50.0 | 53.2 | 106 | 80 - 120 |
| 1,3,5-Trimethylbenzene | 7086 | 50.0 | 52.6 | 105 | 80 - 120 |
| Vinyl Chloride | 7086 | 50.0 | 48.9 | 98 | 80 - 120 |
| Xylenes, Total | 7086 | 150 | 152 | 101 | 80 - 120 |
| Surr: Dibromofluoromethane | 7086 | 50.0 | 50.6 | 101 | 88 - 112 |
| Surr: Toluene-d8 | 7086 | 50.0 | 49.3 | 99 | 89 - 112 |
| Surr: Bromofluorobenzene | 7086 | 50.0 | 51.9 | 104 | 90 - 114 |
| VOC - AQUEOUS - EPA 8260B | | | | | |
| Benzene | 7089 | 50.0 | 52.5 | 105 | 80 - 120 |
| Bromoform | 7089 | 50.0 | 49.5 | 99 | 80 - 120 |
| Chlorobenzene | 7089 | 50.0 | 50.3 | 101 | 80 - 120 |
| Chloroform | 7089 | 50.0 | 52.5 | 105 | 80 - 120 |
| Chloromethane | 7089 | 50.0 | 52.0 | 104 | 80 - 120 |
| 1,1-Dichloroethane | 7089 | 50.0 | 53.1 | 106 | 80 - 120 |
| 1,1-Dichloroethene | 7089 | 50.0 | 50.7 | 101 | 80 - 120 |
| 1,2-Dichloropropane | 7089 | 50.0 | 50.1 | 100 | 80 - 120 |
| Ethylbenzene | 7089 | 50.0 | 48.2 | 96 | 80 - 120 |
| Methyl-t-butyl ether | 7089 | 50.0 | 48.8 | 98 | 80 - 120 |
| 1,1,2,2-Tetrachloroethane | 7089 | 50.0 | 50.6 | 101 | 80 - 120 |
| Toluene | 7089 | 50.0 | 50.2 | 100 | 80 - 120 |
| Trichloroethene | 7089 | 50.0 | 50.4 | 101 | 80 - 120 |
| 1,2,4-Trimethylbenzene | 7089 | 50.0 | 49.4 | 99 | 80 - 120 |
| 1,3,5-Trimethylbenzene | 7089 | 50.0 | 49.5 | 99 | 80 - 120 |
| Vinyl Chloride | 7089 | 50.0 | 49.5 | 99 | 80 - 120 |
| Xylenes, Total | 7089 | 150 | 150 | 100 | 80 - 120 |
| Surr: Dibromofluoromethane | 7089 | 50.0 | 53.1 | 106 | 88 - 112 |
| Surr: Toluene-d8 | 7089 | 50.0 | 51.1 | 102 | 89 - 112 |
| Surr: Bromofluorobenzene | 7089 | 50.0 | 50.9 | 102 | 90 - 114 |

# QUALITY CONTROL REPORT

## BLANKS

02/07/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00589
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Prep Batch | Run Batch | Blank Result | MDL | LOQ | Units |
|---|---|---|---|---|---|---|
| VOC - AQUEOUS - EPA 8260B | | | | | | |
| Benzene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Bromobenzene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Bromochloromethane | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| Bromodichloromethane | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Bromoform | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Bromomethane | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| n-Butylbenzene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| sec-Butylbenzene | | 7086 | <0.25 | 0.25 | 0.83 | ug/L |
| tert-Butylbenzene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Carbon Tetrachloride | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| Chlorobenzene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Chlorodibromomethane | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Chloroethane | | 7086 | <1.0 | 1.0 | 3.3 | ug/L |
| Chloroform | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Chloromethane | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| 2-Chlorotoluene | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| 4-Chlorotoluene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,2-Dibromo-3-Chloropropane | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,2-Dibromoethane (EDB) | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Dibromomethane | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,2-Dichlorobenzene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,3-Dichlorobenzene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,4-Dichlorobenzene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Dichlorodifluoromethane | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,1-Dichloroethane | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,2-Dichloroethane | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,1-Dichloroethene | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| cis-1,2-Dichloroethene | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| trans-1,2-Dichloroethene | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,2-Dichloropropane | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,3-Dichloropropane | | 7086 | <0.25 | 0.25 | 0.83 | ug/L |
| 2,2-Dichloropropane | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,1-Dichloropropene | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| cis-1,3-Dichloropropene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| trans-1,3-Dichloropropene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Di-isopropyl ether | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |

Method blank results exceed control limits when results are higher than the highest of any of the following: 1 - The limit of detection; 2 - Five percent of the regulatory limit for that analyte; 3 - Five percent of the measured concentration in the sample. NR149.14 (3)d

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# QUALITY CONTROL REPORT

## BLANKS

02/07/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00589
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Prep Batch | Run Batch | Blank Result | MDL | LOQ | Units |
|---|---|---|---|---|---|---|
| Ethylbenzene | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| Hexachlorobutadiene | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| Isopropylbenzene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| p-Isopropyltoluene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Methylene Chloride | | 7086 | <1.0 | 1.0 | 3.3 | ug/L |
| Methyl-t-butyl ether | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| Naphthalene | | 7086 | <0.25 | 0.25 | 0.83 | ug/L |
| n-Propylbenzene | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| Styrene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,1,1,2-Tetrachloroethane | | 7086 | <0.25 | 0.25 | 0.83 | ug/L |
| 1,1,2,2-Tetrachloroethane | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Tetrachloroethene | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| Toluene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,2,3-Trichlorobenzene | | 7086 | <0.25 | 0.25 | 0.83 | ug/L |
| 1,2,4-Trichlorobenzene | | 7086 | <0.25 | 0.25 | 0.83 | ug/L |
| 1,1,1-Trichloroethane | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,1,2-Trichloroethane | | 7086 | <0.25 | 0.25 | 0.83 | ug/L |
| Trichloroethene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Trichlorofluoromethane | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,2,3-Trichloropropane | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,2,4-Trimethylbenzene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,3,5-Trimethylbenzene | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Vinyl Chloride | | 7086 | <0.20 | 0.20 | 0.67 | ug/L |
| Xylenes, Total | | 7086 | <0.50 | 0.50 | 1.7 | ug/L |
| Surr: Dibromofluoromethane | | 7086 | 101.2 | | 89-119 | % |
| Surr: Toluene-d8 | | 7086 | 99.8 | | 91-109 | % |
| Surr: Bromofluorobenzene | | 7086 | 100.8 | | 89-114 | % |
| VOC - AQUEOUS - EPA 8260B | | | | | | |
| Benzene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Bromobenzene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Bromochloromethane | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| Bromodichloromethane | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Bromoform | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Bromomethane | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| n-Butylbenzene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| sec-Butylbenzene | | 7089 | <0.25 | 0.25 | 0.83 | ug/L |
| tert-Butylbenzene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |

Method blank results exceed control limits when results are higher than the highest of any of the following: 1 - The limit of detection; 2 - Five percent of the regulatory limit for that analyte; 3 - Five percent of the measured concentration in the sample. NR149.14 (3)d

# QUALITY CONTROL REPORT

## BLANKS

02/07/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00589
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Prep Batch | Run Batch | Blank Result | MDL | LOQ | Units |
|---|---|---|---|---|---|---|
| Carbon Tetrachloride | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| Chlorobenzene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Chlorodibromomethane | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Chloroethane | | 7089 | <1.0 | 1.0 | 3.3 | ug/L |
| Chloroform | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Chloromethane | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| 2-Chlorotoluene | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| 4-Chlorotoluene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,2-Dibromo-3-Chloropropane | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,2-Dibromoethane (EDB) | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Dibromomethane | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,2-Dichlorobenzene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,3-Dichlorobenzene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,4-Dichlorobenzene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Dichlorodifluoromethane | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,1-Dichloroethane | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,2-Dichloroethane | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,1-Dichloroethene | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| cis-1,2-Dichloroethene | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| trans-1,2-Dichloroethene | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,2-Dichloropropane | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,3-Dichloropropane | | 7089 | <0.25 | 0.25 | 0.83 | ug/L |
| 2,2-Dichloropropane | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,1-Dichloropropene | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| cis-1,3-Dichloropropene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| trans-1,3-Dichloropropene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Di-isopropyl ether | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| Ethylbenzene | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| Hexachlorobutadiene | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| Isopropylbenzene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| p-Isopropyltoluene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Methylene Chloride | | 7089 | <1.0 | 1.0 | 3.3 | ug/L |
| Methyl-t-butyl ether | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| Naphthalene | | 7089 | <0.25 | 0.25 | 0.83 | ug/L |
| n-Propylbenzene | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| Styrene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,1,1,2-Tetrachloroethane | | 7089 | <0.25 | 0.25 | 0.83 | ug/L |

Method blank results exceed control limits when results are higher than the highest of any of the following: 1 - The limit of detection; 2 - Five percent of the regulatory limit for that analyte; 3 - Five percent of the measured concentration in the sample. NR149.14 (3)d

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# QUALITY CONTROL REPORT

## BLANKS

02/07/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00589
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Prep Batch | Run Batch | Blank Result | MDL | LOQ | Units |
|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Tetrachloroethene | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| Toluene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,2,3-Trichlorobenzene | | 7089 | <0.25 | 0.25 | 0.83 | ug/L |
| 1,2,4-Trichlorobenzene | | 7089 | <0.25 | 0.25 | 0.83 | ug/L |
| 1,1,1-Trichloroethane | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,1,2-Trichloroethane | | 7089 | <0.25 | 0.25 | 0.83 | ug/L |
| Trichloroethene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Trichlorofluoromethane | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,2,3-Trichloropropane | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| 1,2,4-Trimethylbenzene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| 1,3,5-Trimethylbenzene | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Vinyl Chloride | | 7089 | <0.20 | 0.20 | 0.67 | ug/L |
| Xylenes, Total | | 7089 | <0.50 | 0.50 | 1.7 | ug/L |
| Surr: Dibromofluoromethane | | 7089 | 102.0 | | 89-119 | % |
| Surr: Toluene-d8 | | 7089 | 98.6 | | 91-109 | % |
| Surr: Bromofluorobenzene | | 7089 | 98.6 | | 89-114 | % |

Method blank results exceed control limits when results are higher than the highest of any of the following: 1 - The limit of detection; 2 - Five percent of the regulatory limit for that analyte; 3 - Five percent of the measured concentration in the sample. NR149.14 (3)d

TestAmerica
ANALYTICAL TESTING CORPORATION
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602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# QUALITY CONTROL REPORT
## MATRIX SPIKE/MATRIX SPIKE DUPLICATE

02/07/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00589
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Analyte | Prep Batch Number | Run Batch Number | Sample Result | Spike Amount | Units | Matrix Spike Result | MSD Result | MS Percent Recovery | MSD Percent Recovery | Control Limits | Relative Percent Difference |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VOC - AQUEOUS - EPA 8260B | | | | | | | | | | | |
| Benzene | | 7086 | 0.51 | 50.0 | ug/L | 50.8 | 51.4 | 101 | 102 | 80 - 121 | 1.2 |
| Chlorobenzene | | 7086 | <0.20 | 50.0 | ug/L | 54.0 | 50.3 | 108 | 101 | 85 - 116 | 7.1 |
| 1,1-Dichloroethene | | 7086 | <0.50 | 50.0 | ug/L | 52.2 | 42.9 | 104 | 86 | 72 - 131 | 20 |
| Ethylbenzene | | 7086 | 0.96 | 50.0 | ug/L | 53.5 | 51.0 | 105 | 100 | 83 - 118 | 4.8 |
| Methyl-t-butyl ether | | 7086 | 1.8 | 50.0 | ug/L | 51.0 | 52.4 | 98 | 101 | 71 - 127 | 2.7 |
| Toluene | | 7086 | 1.8 | 50.0 | ug/L | 51.4 | 51.6 | 99 | 100 | 82 - 116 | 0.4 |
| Trichloroethene | | 7086 | 0.21 | 50.0 | ug/L | 49.9 | 49.4 | 99 | 98 | 80 - 117 | 1.0 |
| 1,2,4-Trimethylbenzene | | 7086 | 5.0 | 50.0 | ug/L | 55.6 | 55.2 | 101 | 100 | 80 - 122 | 0.7 |
| 1,3,5-Trimethylbenzene | | 7086 | 1.6 | 50.0 | ug/L | 55.3 | 55.8 | 107 | 108 | 83 - 122 | 0.9 |
| Xylenes, Total | | 7086 | 10 | 150 | ug/L | 161 | 157 | 101 | 98 | 84 - 119 | 2.5 |
| Surr: Dibromofluoromethane | | 7086 | 51.1 | 50.0 | ug/L | 50.8 | 51.0 | 102 | 102 | 88 - 112 | 0.4 |
| Surr: Toluene-d8 | | 7086 | 50.4 | 50.0 | ug/L | 49.9 | 50.2 | 100 | 100 | 89 - 112 | 0.6 |
| Surr: Bromofluorobenzene | | 7086 | 50.0 | 50.0 | ug/L | 50.3 | 51.6 | 101 | 103 | 90 - 114 | 2.6 |
| VOC - AQUEOUS - EPA 8260B | | | | | | | | | | | |
| Benzene | | 7089 | <0.20 | 50.0 | ug/L | 47.7 | 54.0 | 95 | 108 | 80 - 121 | 12 |
| Chlorobenzene | | 7089 | <0.20 | 50.0 | ug/L | 45.3 | 50.8 | 91 | 102 | 85 - 116 | 11 |
| 1,1-Dichloroethene | | 7089 | <0.50 | 50.0 | ug/L | 47.7 | 53.0 | 95 | 106 | 72 - 131 | 11 |
| Ethylbenzene | | 7089 | <0.50 | 50.0 | ug/L | 43.9 | 49.0 | 88 | 98 | 83 - 118 | 11 |
| Methyl-t-butyl ether | | 7089 | <0.50 | 50.0 | ug/L | 46.5 | 52.8 | 93 | 106 | 71 - 127 | 13 |
| Toluene | | 7089 | <0.20 | 50.0 | ug/L | 45.8 | 51.7 | 92 | 103 | 82 - 116 | 12 |
| Trichloroethene | | 7089 | <0.20 | 50.0 | ug/L | 46.2 | 52.5 | 92 | 105 | 80 - 117 | 13 |
| 1,2,4-Trimethylbenzene | | 7089 | <0.20 | 50.0 | ug/L | 45.0 | 50.8 | 90 | 102 | 80 - 122 | 12 |
| 1,3,5-Trimethylbenzene | | 7089 | <0.20 | 50.0 | ug/L | 45.2 | 50.7 | 90 | 101 | 83 - 122 | 12 |
| Xylenes, Total | | 7089 | <0.50 | 150 | ug/L | 137 | 153 | 91 | 102 | 84 - 119 | 11 |
| Surr: Dibromofluoromethane | | 7089 | 53.2 | 50.0 | ug/L | 52.2 | 52.8 | 104 | 106 | 88 - 112 | 1.1 |
| Surr: Toluene-d8 | | 7089 | 50.5 | 50.0 | ug/L | 51.1 | 50.7 | 102 | 101 | 89 - 112 | 0.8 |
| Surr: Bromofluorobenzene | | 7089 | 50.5 | 50.0 | ug/L | 51.1 | 50.6 | 102 | 101 | 90 - 114 | 1.0 |

# ARCADIS

Laboratory Task Order No./P.O. No. _____

## CHAIN-OF-CUSTODY RECORD

Page 1 of 1

5.00589

Project Number/Name WI000943.0002/Hoffman cleaners

Project Location Waunatosa, WI

Laboratory Test America

Project Manager Ed Buc

Sampler(s)/Affiliation AM/ ARCADIS

| Sample ID/Location | Matrix | Date/~~Time~~ Sampled | Time / ~~Lab ID~~ | ANALYSIS / METHOD / SIZE: VOC's 8260 w SEDS method 40-mL VOAs w/ HCl preserv | ANALYSIS / METHOD / SIZE: Trip Blank | ANALYSIS / METHOD / SIZE | ANALYSIS / METHOD / SIZE | ANALYSIS / METHOD / SIZE | ANALYSIS / METHOD / SIZE | Remarks | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | L | 1-28-05 | 10:15 | 3 | | | | | | | 3 |
| MW-2 | ↓ | ↓ | 10:30 | 3 | | | | | | | 3 |
| MW-3 | ↓ | ↓ | 10:45 | 3 | | | | | | 6 mL | 3 |
| Trip Blank | ↓ | — | — | | 1 | | | | | | 1 |
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Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers 10

| | | | | |
|---|---|---|---|---|
| Relinquished by: A. Murphy | Organization: ARCADIS | Date 1/31/05 | Time 9:00 | Seal Intact? |
| Received by: Vicki Reynolds | Organization: Test America | Date 1/31/05 | Time 10:45 | Yes (No) N/A |
| Relinquished by: Vicki Reynolds | Organization: Test America | Date 1/31/05 | Time 12130 | Seal Intact? |
| Received by: _____ | Organization: _____ | Date 1/31/05 | Time 1225 | Yes (No) N/A |

Special Instructions/Remarks:

Direct Questions/Comments to Brian Maillet - / ARCADIS @ 414-276-7742

R 1/31/05

Delivery Method: ☐ In Person ☐ Common Carrier _____ SPECIFY ☒ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

01/27/2005

Job No: 05.00327



The following samples were received by TestAmerica for analysis:

WI000943.0002 Hoffman Cleaners

| Sample Number | Sample Description | Date Taken | Date Received |
|---|---|---|---|
| 603598 | MW-1 10-12 | 01/19/2005 | 01/20/2005 |
| 603599 | MW-2 10-12 | 01/19/2005 | 01/20/2005 |
| 603600 | MW-3 10-12 | 01/19/2005 | 01/20/2005 |

Soil results reported
on a dry weight basis.

Brian DeJong
Organic Operations Manager

# KEY TO DATA FLAGS

The attached sample(s) may have a result flag shown on the report. The following are the result flag definitions:

A = Analyzed/extracted past hold time
B = Blank is contaminated
C = Standard outside of control limits
D = Diluted for analysis
E = TCLP extraction outside of method required temperature range
F = Sample filtered in lab
G = Received past hold time
H = Late eluting hydrocarbons present
I = Improperly handled sample
J = Estimated concentration
L = Common lab solvent
M = Matrix interference
P = Improperly preserved sample
Q = Result confirmed via re-analysis
S = Sediment present
T = Does not match typical pattern
W = BOD re-set due to missed dilution
X = Unidentified compound(s) present
Z = Internal standard outside limits
* = See Case Narrative

# KEY TO ANALYST INITIALS

The attached sample(s) may have been analyzed by another certified laboratory. If a number appears in the Analyst Initials field, the following are the appropriate certifications (if the lab code does not appear below, that means that certification is not required for the work performed):

| Lab Code | Certification Number |
|---|---|
| 008 | WDNR - 999766900 |
| 009 | WDNR - 241293690 |
| 020 | WDNR - 999447680 |
| 030 | ILNELAC - 100230; WDNR - 998294430 |
| 060 | ILNELAC - 100221; WDNR - 999447130 |
| 070 | IA - 007; ILNELAC - 000668; MDH - 019-999-319; WDNR - 999917270 |
| 090 | ILNELAC 200006; WDNR - 399031270 |
| 130 | WDNR - 632021390 |
| 147 | WDNR - 721026460 |
| 148 | WDNR - 399017190 |
| 300 | FLNELAC - 87358; IA - 131; MDH - 047-999-345; WDNR - 998020430 |
| 400 | WDNR - 113133790 |
| 510 | WDNR - 241249360 |
| 520 | WDNR - 999518190; ILNELAC - 100439 |
| 700 | WDNR - 113289110 |

TestAmerica Watertown Certifications: WI DNR - 128053530; IL NELAC - 100453; IA DNR - 294; MN DoH - 055-999-366; ND DoH R-046; AR DEQ - 88-0808

Unless sub-contracted (see above), volatiles analyses (including VOC, PVOC, GRO, BTEX and TPH Gasoline) performed by TestAmerica Watertown at 1101 Industrial Drive, Units 9&10. All other analyses performed at 602 Commerce Drive, Watertown WI 53094.

Results reported between the Method Detection Limit (MDL) and Limit of Quantitation (LOQ) are less certain than results at or above the LOQ.

For questions regarding this report, please contact Dan Milewsky or Warren Topel.

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

01/27/2005
Job No: 05.00327
Sample No: 603598
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: MW-1 10-12
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/19/2005 09:19 Date Received: 01/20/2005

| Parameter | Results | Units | Reporting Limit | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|
| Solids, Total | 85.8 | % | n/a | SW 5035 | 01/24/2005 | amf | 5940 |
| VOC - METHANOL - 8260B | | | | | | | |
| Benzene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Bromobenzene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Bromochloromethane | <41 | ug/kg | 35 | SW 8260B | 01/26/2005 | eml | 3230 |
| Bromodichloromethane | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Bromoform | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Bromomethane | <117 | ug/kg | 100 | SW 8260B | 01/26/2005 | eml | 3230 |
| n-Butylbenzene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| sec-Butylbenzene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| tert-Butylbenzene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Carbon Tetrachloride | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Chlorobenzene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Chlorodibromomethane | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Chloroethane | <58 | ug/kg | 50 | SW 8260B | 01/26/2005 | eml | 3230 |
| Chloroform | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Chloromethane | <58 | ug/kg | 50 | SW 8260B | 01/26/2005 | eml | 3230 |
| 2-Chlorotoluene | <58 | ug/kg | 50 | SW 8260B | 01/26/2005 | eml | 3230 |
| 4-Chlorotoluene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,2-Dibromo-3-Chloropropane | <58 | ug/kg | 50 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,2-Dibromoethane (EDB) | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Dibromomethane | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,2-Dichlorobenzene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,3-Dichlorobenzene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,4-Dichlorobenzene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Dichlorodifluoromethane | <58 | ug/kg | 50 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,1-Dichloroethane | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,2-Dichloroethane | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,1-Dichloroethene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| cis-1,2-Dichloroethene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| trans-1,2-Dichloroethene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,2-Dichloropropane | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,3-Dichloropropane | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 2,2-Dichloropropane | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,1-Dichloropropene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| cis-1,3-Dichloropropene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| trans-1,3-Dichloropropene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Di-isopropyl ether | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Ethylbenzene | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

01/27/2005
Job No: 05.00327
Sample No: 603598
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: MW-1 10-12
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/19/2005 09:19 Date Received: 01/20/2005

| Parameter | | Results | Units | Reporting Limit | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | | <41 | ug/kg | 35 | SW 8260B | 01/26/2005 | eml | 3230 |
| Isopropylbenzene | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| p-Isopropyltoluene | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Methylene Chloride | L | 72 | ug/kg | 50 | SW 8260B | 01/26/2005 | eml | 3230 |
| Methyl-t-butyl ether | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Naphthalene | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| n-Propylbenzene | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Styrene | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,1,1,2-Tetrachloroethane | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,1,2,2-Tetrachloroethane | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Tetrachloroethene | | 2,800 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Toluene | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,2,3-Trichlorobenzene | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,2,4-Trichlorobenzene | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,1,1-Trichloroethane | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,1,2-Trichloroethane | | <41 | ug/kg | 35 | SW 8260B | 01/26/2005 | eml | 3230 |
| Trichloroethene | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Trichlorofluoromethane | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,2,3-Trichloropropane | | <117 | ug/kg | 100 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,2,4-Trimethylbenzene | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| 1,3,5-Trimethylbenzene | | <29 | ug/kg | 25 | SW 8260B | 01/26/2005 | eml | 3230 |
| Vinyl Chloride | | <41 | ug/kg | 35 | SW 8260B | 01/26/2005 | eml | 3230 |
| Xylenes, Total | | <41 | ug/kg | 35 | SW 8260B | 01/26/2005 | eml | 3230 |
| Surr: Dibromofluoromethane | | 96 | % | 82-112 | SW 8260B | 01/26/2005 | eml | 3230 |
| Surr: Toluene-d8 | | 105 | % | 91-106 | SW 8260B | 01/26/2005 | eml | 3230 |
| Surr: Bromofluorobenzene | | 95 | % | 89-110 | SW 8260B | 01/26/2005 | eml | 3230 |

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

01/27/2005
Job No: 05.00327
Sample No: 603599
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: MW-2 10-12
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/19/2005 12:38 Date Received: 01/20/2005

| Parameter | Results | Units | Reporting Limit | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|
| Solids, Total | 88.8 | % | n/a | SW 5035 | 01/24/2005 | amf | 5940 |
| VOC - METHANOL - 8260B | | | | | | | |
| Benzene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Bromobenzene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Bromochloromethane | <39 | ug/kg | 35 | SW 8260B | 01/25/2005 | aba | 3228 |
| Bromodichloromethane | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Bromoform | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Bromomethane | <113 | ug/kg | 100 | SW 8260B | 01/25/2005 | aba | 3228 |
| n-Butylbenzene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| sec-Butylbenzene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| tert-Butylbenzene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Carbon Tetrachloride | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Chlorobenzene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Chlorodibromomethane | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Chloroethane | <56 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| Chloroform | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Chloromethane | <56 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| 2-Chlorotoluene | <56 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| 4-Chlorotoluene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2-Dibromo-3-Chloropropane | <56 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2-Dibromoethane (EDB) | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Dibromomethane | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2-Dichlorobenzene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,3-Dichlorobenzene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,4-Dichlorobenzene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Dichlorodifluoromethane | <56 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1-Dichloroethane | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2-Dichloroethane | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1-Dichloroethene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| cis-1,2-Dichloroethene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| trans-1,2-Dichloroethene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2-Dichloropropane | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,3-Dichloropropane | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 2,2-Dichloropropane | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1-Dichloropropene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| cis-1,3-Dichloropropene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| trans-1,3-Dichloropropene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Di-isopropyl ether | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Ethylbenzene | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

01/27/2005
Job No: 05.00327
Sample No: 603599
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: MW-2 10-12
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/19/2005 12:38 Date Received: 01/20/2005

| Parameter | | Results | Units | Reporting Limit | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | | <39 | ug/kg | 35 | SW 8260B | 01/25/2005 | aba | 3228 |
| Isopropylbenzene | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| p-Isopropyltoluene | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Methylene Chloride | L | 96 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| Methyl-t-butyl ether | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Naphthalene | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| n-Propylbenzene | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Styrene | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1,1,2-Tetrachloroethane | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1,2,2-Tetrachloroethane | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Tetrachloroethene | | 3,720 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Toluene | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2,3-Trichlorobenzene | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2,4-Trichlorobenzene | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1,1-Trichloroethane | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1,2-Trichloroethane | | <39 | ug/kg | 35 | SW 8260B | 01/25/2005 | aba | 3228 |
| Trichloroethene | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Trichlorofluoromethane | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2,3-Trichloropropane | | <113 | ug/kg | 100 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2,4-Trimethylbenzene | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,3,5-Trimethylbenzene | | <28 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Vinyl Chloride | | <39 | ug/kg | 35 | SW 8260B | 01/25/2005 | aba | 3228 |
| Xylenes, Total | | <39 | ug/kg | 35 | SW 8260B | 01/25/2005 | aba | 3228 |
| Surr: Dibromofluoromethane | | 91 | % | 82-112 | SW 8260B | 01/25/2005 | aba | 3228 |
| Surr: Toluene-d8 | | 102 | % | 91-106 | SW 8260B | 01/25/2005 | aba | 3228 |
| Surr: Bromofluorobenzene | | 98 | % | 89-110 | SW 8260B | 01/25/2005 | aba | 3228 |

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

01/27/2005
Job No: 05.00327
Sample No: 603600
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: MW-3 10-12
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/19/2005 13:56 Date Received: 01/20/2005

| Parameter | Results | Units | Reporting Limit | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|
| Solids, Total | 80.5 | % | n/a | SW 5035 | 01/24/2005 | amf | 5940 |
| VOC - METHANOL - 8260B | | | | | | | |
| Benzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Bromobenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Bromochloromethane | <43 | ug/kg | 35 | SW 8260B | 01/25/2005 | aba | 3228 |
| Bromodichloromethane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Bromoform | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Bromomethane | <124 | ug/kg | 100 | SW 8260B | 01/25/2005 | aba | 3228 |
| n-Butylbenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| sec-Butylbenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| tert-Butylbenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Carbon Tetrachloride | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Chlorobenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Chlorodibromomethane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Chloroethane | <62 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| Chloroform | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Chloromethane | <62 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| 2-Chlorotoluene | <62 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| 4-Chlorotoluene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2-Dibromo-3-Chloropropane | <62 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2-Dibromoethane (EDB) | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Dibromomethane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2-Dichlorobenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,3-Dichlorobenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,4-Dichlorobenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Dichlorodifluoromethane | <62 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1-Dichloroethane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2-Dichloroethane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1-Dichloroethene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| cis-1,2-Dichloroethene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| trans-1,2-Dichloroethene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2-Dichloropropane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,3-Dichloropropane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 2,2-Dichloropropane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1-Dichloropropene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| cis-1,3-Dichloropropene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| trans-1,3-Dichloropropene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Di-isopropyl ether | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Ethylbenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |

# ANALYTICAL REPORT

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

01/27/2005
Job No: 05.00327
Sample No: 603600
Account No: 32050


JOB DESCRIPTION: WI000943.0002 Hoffman Cleaners
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: MW-3 10-12
Wauwatosa, WI
Rec'd on ice

Date/Time Taken: 01/19/2005 13:56 Date Received: 01/20/2005

| Parameter | Results | Units | Reporting Limit | Method | Date Analyzed | Analyst | Prep/Run Batch |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | <43 | ug/kg | 35 | SW 8260B | 01/25/2005 | aba | 3228 |
| Isopropylbenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| p-Isopropyltoluene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Methylene Chloride | <62 | ug/kg | 50 | SW 8260B | 01/25/2005 | aba | 3228 |
| Methyl-t-butyl ether | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Naphthalene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| n-Propylbenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Styrene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1,1,2-Tetrachloroethane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1,2,2-Tetrachloroethane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Tetrachloroethene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Toluene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2,3-Trichlorobenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2,4-Trichlorobenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1,1-Trichloroethane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,1,2-Trichloroethane | <43 | ug/kg | 35 | SW 8260B | 01/25/2005 | aba | 3228 |
| Trichloroethene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Trichlorofluoromethane | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2,3-Trichloropropane | <124 | ug/kg | 100 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,2,4-Trimethylbenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| 1,3,5-Trimethylbenzene | <31 | ug/kg | 25 | SW 8260B | 01/25/2005 | aba | 3228 |
| Vinyl Chloride | <43 | ug/kg | 35 | SW 8260B | 01/25/2005 | aba | 3228 |
| Xylenes, Total | <43 | ug/kg | 35 | SW 8260B | 01/25/2005 | aba | 3228 |
| Surr: Dibromofluoromethane | 91 | % | 82-112 | SW 8260B | 01/25/2005 | aba | 3228 |
| Surr: Toluene-d8 | 100 | % | 91-106 | SW 8260B | 01/25/2005 | aba | 3228 |
| Surr: Bromofluorobenzene | 96 | % | 89-110 | SW 8260B | 01/25/2005 | aba | 3228 |

# QUALITY CONTROL REPORT
## CONTINUING CALIBRATION VERIFICATION

01/27/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00327
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Run Batch | True Value | Observed Value | Percent Recovery | Control Limits |
|---|---|---|---|---|---|
| VOC - METHANOL - 8260B | | | | | |
| Benzene | 3228 | 50.0 | 48.8 | 98 | 85 - 115 |
| Bromoform | 3228 | 50.0 | 49.9 | 100 | |
| Chlorobenzene | 3228 | 50.0 | 47.5 | 95 | 85 - 115 |
| Chloroform | 3228 | 50.0 | 48.0 | 96 | 80 - 120 |
| Chloromethane | 3228 | 50.0 | 48.8 | 98 | |
| 1,1-Dichloroethane | 3228 | 50.0 | 48.4 | 97 | |
| 1,1-Dichloroethene | 3228 | 50.0 | 48.9 | 98 | 80 - 120 |
| 1,2-Dichloropropane | 3228 | 50.0 | 49.1 | 98 | 80 - 120 |
| Di-isopropyl ether | 3228 | 50.0 | 52.8 | 106 | |
| Ethylbenzene | 3228 | 50.0 | 47.3 | 95 | 80 - 120 |
| Methyl-t-butyl ether | 3228 | 50.0 | 52.7 | 105 | 80 - 120 |
| 1,1,2,2-Tetrachloroethane | 3228 | 50.0 | 48.0 | 96 | |
| Toluene | 3228 | 50.0 | 48.7 | 97 | 80 - 120 |
| Trichloroethene | 3228 | 50.0 | 47.8 | 96 | |
| 1,2,4-Trimethylbenzene | 3228 | 50.0 | 47.1 | 94 | |
| 1,3,5-Trimethylbenzene | 3228 | 50.0 | 46.9 | 94 | |
| Vinyl Chloride | 3228 | 50.0 | 53.9 | 108 | 80 - 120 |
| Xylenes, Total | 3228 | 150 | 140 | 93 | |
| Surr: Dibromofluoromethane | 3228 | 50.0 | 49.4 | 99 | 87 - 111 |
| Surr: Toluene-d8 | 3228 | 50.0 | 49.8 | 100 | 88 - 110 |
| Surr: Bromofluorobenzene | 3228 | 50.0 | 49.6 | 99 | 90 - 108 |
| VOC - METHANOL - 8260B | | | | | |
| Benzene | 3230 | 50.0 | 46.8 | 94 | 85 - 115 |
| Bromoform | 3230 | 50.0 | 43.5 | 87 | |
| Chlorobenzene | 3230 | 50.0 | 44.8 | 90 | 85 - 115 |
| Chloroform | 3230 | 50.0 | 42.4 | 85 | 80 - 120 |
| Chloromethane | 3230 | 50.0 | 40.8 | 82 | |
| 1,1-Dichloroethane | 3230 | 50.0 | 43.7 | 87 | |
| 1,1-Dichloroethene | 3230 | 50.0 | 43.9 | 88 | 80 - 120 |
| 1,2-Dichloropropane | 3230 | 50.0 | 47.6 | 95 | 80 - 120 |
| Di-isopropyl ether | 3230 | 50.0 | 44.2 | 88 | |
| Ethylbenzene | 3230 | 50.0 | 47.2 | 94 | 80 - 120 |
| Methyl-t-butyl ether | 3230 | 50.0 | 43.6 | 87 | 80 - 120 |
| 1,1,2,2-Tetrachloroethane | 3230 | 50.0 | 52.4 | 105 | |
| Toluene | 3230 | 50.0 | 45.6 | 91 | 80 - 120 |
| Trichloroethene | 3230 | 50.0 | 45.0 | 90 | |
| 1,2,4-Trimethylbenzene | 3230 | 50.0 | 46.1 | 92 | |
| 1,3,5-Trimethylbenzene | 3230 | 50.0 | 45.4 | 91 | |
| Vinyl Chloride | 3230 | 50.0 | 43.4 | 87 | 80 - 120 |
| Xylenes, Total | 3230 | 150 | 134 | 89 | |
| Surr: Dibromofluoromethane | 3230 | 50.0 | 46.6 | 93 | 87 - 111 |

# QUALITY CONTROL REPORT
## CONTINUING CALIBRATION VERIFICATION

01/27/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00327
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Run Batch | True Value | Observed Value | Percent Recovery | Control Limits |
|---|---|---|---|---|---|
| Surr: Toluene-d8 | 3230 | 50.0 | 50.1 | 100 | 88 - 110 |
| Surr: Bromofluorobenzene | 3230 | 50.0 | 49.7 | 99 | 90 - 108 |

# QUALITY CONTROL REPORT
## BLANKS

01/27/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00327
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Prep Batch | Run Batch | Blank Result | Reporting Limit | Units |
|---|---|---|---|---|---|
| VOC - METHANOL - 8260B | | | | | |
| Benzene | | 3228 | <25 | 25 | ug/kg |
| Bromobenzene | | 3228 | <25 | 25 | ug/kg |
| Bromochloromethane | | 3228 | <35 | 35 | ug/kg |
| Bromodichloromethane | | 3228 | <25 | 25 | ug/kg |
| Bromoform | | 3228 | <25 | 25 | ug/kg |
| Bromomethane | | 3228 | <100 | 100 | ug/kg |
| n-Butylbenzene | | 3228 | <25 | 25 | ug/kg |
| sec-Butylbenzene | | 3228 | <25 | 25 | ug/kg |
| tert-Butylbenzene | | 3228 | <25 | 25 | ug/kg |
| Carbon Tetrachloride | | 3228 | <25 | 25 | ug/kg |
| Chlorobenzene | | 3228 | <25 | 25 | ug/kg |
| Chlorodibromomethane | | 3228 | <25 | 25 | ug/kg |
| Chloroethane | | 3228 | <50 | 50 | ug/kg |
| Chloroform | | 3228 | <25 | 25 | ug/kg |
| Chloromethane | | 3228 | <50 | 50 | ug/kg |
| 2-Chlorotoluene | | 3228 | <50 | 50 | ug/kg |
| 4-Chlorotoluene | | 3228 | <25 | 25 | ug/kg |
| 1,2-Dibromo-3-Chloropropane | | 3228 | <50 | 50 | ug/kg |
| 1,2-Dibromoethane (EDB) | | 3228 | <25 | 25 | ug/kg |
| Dibromomethane | | 3228 | <25 | 25 | ug/kg |
| 1,2-Dichlorobenzene | | 3228 | <25 | 25 | ug/kg |
| 1,3-Dichlorobenzene | | 3228 | <25 | 25 | ug/kg |
| 1,4-Dichlorobenzene | | 3228 | <25 | 25 | ug/kg |
| Dichlorodifluoromethane | | 3228 | <50 | 50 | ug/kg |
| 1,1-Dichloroethane | | 3228 | <25 | 25 | ug/kg |
| 1,2-Dichloroethane | | 3228 | <25 | 25 | ug/kg |
| 1,1-Dichloroethene | | 3228 | <25 | 25 | ug/kg |
| cis-1,2-Dichloroethene | | 3228 | <25 | 25 | ug/kg |
| trans-1,2-Dichloroethene | | 3228 | <25 | 25 | ug/kg |
| 1,2-Dichloropropane | | 3228 | <25 | 25 | ug/kg |
| 1,3-Dichloropropane | | 3228 | <25 | 25 | ug/kg |
| 2,2-Dichloropropane | | 3228 | <25 | 25 | ug/kg |
| 1,1-Dichloropropene | | 3228 | <25 | 25 | ug/kg |
| cis-1,3-Dichloropropene | | 3228 | <25 | 25 | ug/kg |
| trans-1,3-Dichloropropene | | 3228 | <25 | 25 | ug/kg |
| Di-isopropyl ether | | 3228 | <25 | 25 | ug/kg |

Method blank results exceed control limits when results are higher than the highest of any of the following: 1 - The limit of detection; 2 - Five percent of the regulatory limit for that analyte; 3 - Five percent of the measured concentration in the sample. NR149.14 (3)d

# QUALITY CONTROL REPORT
## BLANKS

01/27/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00327
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Prep Batch | Run Batch | Blank Result | Reporting Limit | Units |
|---|---|---|---|---|---|
| Ethylbenzene | | 3228 | <25 | 25 | ug/kg |
| Hexachlorobutadiene | | 3228 | <35 | 35 | ug/kg |
| Isopropylbenzene | | 3228 | <25 | 25 | ug/kg |
| p-Isopropyltoluene | | 3228 | <25 | 25 | ug/kg |
| Methylene Chloride | | 3228 | <50 | 50 | ug/kg |
| Methyl-t-butyl ether | | 3228 | <25 | 25 | ug/kg |
| Naphthalene | | 3228 | <25 | 25 | ug/kg |
| n-Propylbenzene | | 3228 | <25 | 25 | ug/kg |
| Styrene | | 3228 | <25 | 25 | ug/kg |
| 1,1,1,2-Tetrachloroethane | | 3228 | <25 | 25 | ug/kg |
| 1,1,2,2-Tetrachloroethane | | 3228 | <25 | 25 | ug/kg |
| Tetrachloroethene | | 3228 | <25 | 25 | ug/kg |
| Toluene | | 3228 | <25 | 25 | ug/kg |
| 1,2,3-Trichlorobenzene | | 3228 | <25 | 25 | ug/kg |
| 1,2,4-Trichlorobenzene | | 3228 | <25 | 25 | ug/kg |
| 1,1,1-Trichloroethane | | 3228 | <25 | 25 | ug/kg |
| 1,1,2-Trichloroethane | | 3228 | <35 | 35 | ug/kg |
| Trichloroethene | | 3228 | <25 | 25 | ug/kg |
| Trichlorofluoromethane | | 3228 | <25 | 25 | ug/kg |
| 1,2,3-Trichloropropane | | 3228 | <100 | 100 | ug/kg |
| 1,2,4-Trimethylbenzene | | 3228 | <25 | 25 | ug/kg |
| 1,3,5-Trimethylbenzene | | 3228 | <25 | 25 | ug/kg |
| Vinyl Chloride | | 3228 | <35 | 35 | ug/kg |
| Xylenes, Total | | 3228 | <35 | 35 | ug/kg |
| Surr: Dibromofluoromethane | | 3228 | 101.6 | 82-112 | % |
| Surr: Toluene-d8 | | 3228 | 100.0 | 91-106 | % |
| Surr: Bromofluorobenzene | | 3228 | 97.0 | 89-110 | % |
| VOC - METHANOL - 8260B | | | | | |
| Benzene | | 3230 | <25 | 25 | ug/kg |
| Bromobenzene | | 3230 | <25 | 25 | ug/kg |
| Bromochloromethane | | 3230 | <35 | 35 | ug/kg |
| Bromodichloromethane | | 3230 | <25 | 25 | ug/kg |
| Bromoform | | 3230 | <25 | 25 | ug/kg |
| Bromomethane | | 3230 | <100 | 100 | ug/kg |
| n-Butylbenzene | | 3230 | <25 | 25 | ug/kg |
| sec-Butylbenzene | | 3230 | <25 | 25 | ug/kg |
| tert-Butylbenzene | | 3230 | <25 | 25 | ug/kg |

Method blank results exceed control limits when results are higher than the highest of any of the following: 1 - The limit of detection; 2 - Five percent of the regulatory limit for that analyte; 3 - Five percent of the measured concentration in the sample. NR149.14 (3)d

# QUALITY CONTROL REPORT

## BLANKS

01/27/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00327
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Prep Batch | Run Batch | Blank Result | Reporting Limit | Units |
|---|---|---|---|---|---|
| Carbon Tetrachloride | | 3230 | <25 | 25 | ug/kg |
| Chlorobenzene | | 3230 | <25 | 25 | ug/kg |
| Chlorodibromomethane | | 3230 | <25 | 25 | ug/kg |
| Chloroethane | | 3230 | <50 | 50 | ug/kg |
| Chloroform | | 3230 | <25 | 25 | ug/kg |
| Chloromethane | | 3230 | <50 | 50 | ug/kg |
| 2-Chlorotoluene | | 3230 | <50 | 50 | ug/kg |
| 4-Chlorotoluene | | 3230 | <25 | 25 | ug/kg |
| 1,2-Dibromo-3-Chloropropane | | 3230 | <50 | 50 | ug/kg |
| 1,2-Dibromoethane (EDB) | | 3230 | <25 | 25 | ug/kg |
| Dibromomethane | | 3230 | <25 | 25 | ug/kg |
| 1,2-Dichlorobenzene | | 3230 | <25 | 25 | ug/kg |
| 1,3-Dichlorobenzene | | 3230 | <25 | 25 | ug/kg |
| 1,4-Dichlorobenzene | | 3230 | <25 | 25 | ug/kg |
| Dichlorodifluoromethane | | 3230 | <50 | 50 | ug/kg |
| 1,1-Dichloroethane | | 3230 | <25 | 25 | ug/kg |
| 1,2-Dichloroethane | | 3230 | <25 | 25 | ug/kg |
| 1,1-Dichloroethene | | 3230 | <25 | 25 | ug/kg |
| cis-1,2-Dichloroethene | | 3230 | <25 | 25 | ug/kg |
| trans-1,2-Dichloroethene | | 3230 | <25 | 25 | ug/kg |
| 1,2-Dichloropropane | | 3230 | <25 | 25 | ug/kg |
| 1,3-Dichloropropane | | 3230 | <25 | 25 | ug/kg |
| 2,2-Dichloropropane | | 3230 | <25 | 25 | ug/kg |
| 1,1-Dichloropropene | | 3230 | <25 | 25 | ug/kg |
| cis-1,3-Dichloropropene | | 3230 | <25 | 25 | ug/kg |
| trans-1,3-Dichloropropene | | 3230 | <25 | 25 | ug/kg |
| Di-isopropyl ether | | 3230 | <25 | 25 | ug/kg |
| Ethylbenzene | | 3230 | <25 | 25 | ug/kg |
| Hexachlorobutadiene | | 3230 | <35 | 35 | ug/kg |
| Isopropylbenzene | | 3230 | <25 | 25 | ug/kg |
| p-Isopropyltoluene | | 3230 | <25 | 25 | ug/kg |
| Methylene Chloride | | 3230 | <50 | 50 | ug/kg |
| Methyl-t-butyl ether | | 3230 | <25 | 25 | ug/kg |
| Naphthalene | | 3230 | <25 | 25 | ug/kg |
| n-Propylbenzene | | 3230 | <25 | 25 | ug/kg |
| Styrene | | 3230 | <25 | 25 | ug/kg |
| 1,1,1,2-Tetrachloroethane | | 3230 | <25 | 25 | ug/kg |

Method blank results exceed control limits when results are higher than the highest of any of the following: 1 - The limit of detection; 2 - Five percent of the regulatory limit for that analyte; 3 - Five percent of the measured concentration in the sample. NR149.14 (3)d

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# QUALITY CONTROL REPORT
## BLANKS

01/27/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00327
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Prep Batch | Run Batch | Blank Result | Reporting Limit | Units |
|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | | 3230 | <25 | 25 | ug/kg |
| Tetrachloroethene | | 3230 | <25 | 25 | ug/kg |
| Toluene | | 3230 | <25 | 25 | ug/kg |
| 1,2,3-Trichlorobenzene | | 3230 | <25 | 25 | ug/kg |
| 1,2,4-Trichlorobenzene | | 3230 | <25 | 25 | ug/kg |
| 1,1,1-Trichloroethane | | 3230 | <25 | 25 | ug/kg |
| 1,1,2-Trichloroethane | | 3230 | <35 | 35 | ug/kg |
| Trichloroethene | | 3230 | <25 | 25 | ug/kg |
| Trichlorofluoromethane | | 3230 | <25 | 25 | ug/kg |
| 1,2,3-Trichloropropane | | 3230 | <100 | 100 | ug/kg |
| 1,2,4-Trimethylbenzene | | 3230 | <25 | 25 | ug/kg |
| 1,3,5-Trimethylbenzene | | 3230 | <25 | 25 | ug/kg |
| Vinyl Chloride | | 3230 | <35 | 35 | ug/kg |
| Xylenes, Total | | 3230 | <35 | 35 | ug/kg |
| Surr: Dibromofluoromethane | | 3230 | 92.0 | 82-112 | % |
| Surr: Toluene-d8 | | 3230 | 106.4 | 91-106 | % |
| Surr: Bromofluorobenzene | | 3230 | 93.4 | 89-110 | % |

Method blank results exceed control limits when results are higher than the highest of any of the following: 1 - The limit of detection; 2 - Five percent of the regulatory limit for that analyte; 3 - Five percent of the measured concentration in the sample. NR149.14 (3)d

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# QUALITY CONTROL REPORT
# LABORATORY CONTROL STANDARD

01/27/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00327
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Analyte | Prep Batch Number | Run Batch Number | LCS Amount | Units | LCS Result | LCSD Result | LCS Percent Recovery | LCSD Percent Recovery | Control Limits | Relative Percent Difference |
|---|---|---|---|---|---|---|---|---|---|---|
| VOC - METHANOL - 8260B | | | | | | | | | | |
| Benzene | | 3228 | 50.0 | ug/kg | 46.2 | 46.0 | 92 | 92 | 64 - 124 | 0.4 |
| Chlorobenzene | | 3228 | 50.0 | ug/kg | 46.6 | 46.6 | 93 | 93 | 80 - 123 | 0.0 |
| 1,1-Dichloroethene | | 3228 | 50.0 | ug/kg | 45.5 | 44.5 | 91 | 89 | 43 - 141 | 2.2 |
| Ethylbenzene | | 3228 | 50.0 | ug/kg | 47.9 | 45.8 | 96 | 92 | 79 - 122 | 4.5 |
| Methyl-t-butyl ether | | 3228 | 50.0 | ug/kg | 47.2 | 49.4 | 94 | 99 | 55 - 137 | 4.6 |
| Toluene | | 3228 | 50.0 | ug/kg | 48.2 | 47.0 | 96 | 94 | 78 - 120 | 2.5 |
| Trichloroethene | | 3228 | 50.0 | ug/kg | 46.5 | 45.7 | 93 | 91 | 78 - 124 | 1.7 |
| 1,2,4-Trimethylbenzene | | 3228 | 50.0 | ug/kg | 46.9 | 45.3 | 94 | 91 | 75 - 128 | 3.5 |
| 1,3,5-Trimethylbenzene | | 3228 | 50.0 | ug/kg | 47.1 | 45.6 | 94 | 91 | 76 - 127 | 3.2 |
| Xylenes, Total | | 3228 | 150 | ug/kg | 141 | 139 | 94 | 93 | 79 - 122 | 1.4 |
| Surr: Dibromofluoromethane | | 3228 | 50.0 | ug/L | 48.2 | 46.5 | 96 | 93 | 87 - 111 | 3.6 |
| Surr: Toluene-d8 | | 3228 | 50.0 | ug/L | 51.3 | 50.8 | 103 | 102 | 88 - 110 | 1.0 |
| Surr: Bromofluorobenzene | | 3228 | 50.0 | ug/L | 49.2 | 48.9 | 98 | 98 | 90 - 108 | 0.6 |
| VOC - METHANOL - 8260B | | | | | | | | | | |
| Benzene | | 3230 | 50.0 | ug/kg | 45.9 | 53.4 | 92 | 107 | 64 - 124 | 15 |
| Chlorobenzene | | 3230 | 50.0 | ug/kg | 43.8 | 49.6 | 88 | 99 | 80 - 123 | 12 |
| 1,1-Dichloroethene | | 3230 | 50.0 | ug/kg | 44.2 | 50.2 | 88 | 100 | 43 - 141 | 13 |
| Ethylbenzene | | 3230 | 50.0 | ug/kg | 44.7 | 52.3 | 89 | 105 | 79 - 122 | 16 |
| Methyl-t-butyl ether | | 3230 | 50.0 | ug/kg | 46.2 | 51.9 | 92 | 104 | 55 - 137 | 12 |
| Toluene | | 3230 | 50.0 | ug/kg | 44.2 | 54.6 | 88 | 109 | 78 - 120 | 21 |
| Trichloroethene | | 3230 | 50.0 | ug/kg | 44.7 | 51.1 | 89 | 102 | 78 - 124 | 13 |
| 1,2,4-Trimethylbenzene | | 3230 | 50.0 | ug/kg | 44.8 | 48.9 | 90 | 98 | 75 - 128 | 8.8 |
| 1,3,5-Trimethylbenzene | | 3230 | 50.0 | ug/kg | 44.3 | 48.8 | 89 | 98 | 76 - 127 | 9.7 |
| Xylenes, Total | | 3230 | 150 | ug/kg | 132 | 149 | 88 | 99 | 79 - 122 | 12 |
| Surr: Dibromofluoromethane | | 3230 | 50.0 | ug/L | 47.9 | 49.3 | 96 | 99 | 87 - 111 | 2.9 |
| Surr: Toluene-d8 | | 3230 | 50.0 | ug/L | 50.9 | 53.8 | 102 | 108 | 88 - 110 | 5.5 |
| Surr: Bromofluorobenzene | | 3230 | 50.0 | ug/L | 50.6 | 47.7 | 101 | 95 | 90 - 108 | 5.9 |

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 COMMERCE DRIVE · WATERTOWN, WI 53094 · 920-261-1660 · FAX 920-261-8120

# QUALITY CONTROL REPORT
## DUPLICATES

01/27/2005

Mr. Ed Buc
ARCADIS
126 N Jefferson Street
Suite 400
Milwaukee, WI 53202

Job No: 05.00327
Account No: 32050



Job Description: WI000943.0002 Hoffman Cleaners

| Parameter | Prep Batch Number | Run Batch Number | Sample Value | Duplicate Value | Units | RPD | Control Limit |
|---|---|---|---|---|---|---|---|
| Solids, Total | | 5940 | 80.5 | 80.9 | % | 0.5 | |
| Solids, Total | | 5940 | 88.3 | 88.4 | % | 0.1 | |

# ARCADIS

Laboratory Task Order No./P.O. No. _____

## CHAIN-OF-CUSTODY RECORD

Page 1 of 1

5.00327

Project Number/Name WI000943.0002 / Hoffman Cleaners

Project Location Waunwatosa, WI

Laboratory Test America

Project Manager Ed Buc

Sampler(s)/Affiliation AM / ARCADIS

| Sample ID/Location | Matrix | Date/~~Time~~ Sampled | ~~Time~~ Lab ID | ANALYSIS / METHOD / SIZE: VOC 2oz. glass jar MeOH Preserve | Trip Blank | Temp Blank | DT WT. Polt unpreserved | | | Remarks | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 (10-12) | S | 1-20-05 | 9:19 | 1 | | | 1 | | | 1/19/05 | 2 |
| MW-2 (10-12) | S | ↓ | 12:38 | 1 | | | 1 | | | ↓ | 2 |
| MW-3 (10-12) | S | ↓ | 13:56 | 1 | | | 1 | | | ↓ | 2 |
| Trip Blank | L | — | — | | 1 | | | | | water trip | 1 |
| Temp Blank | L | — | — | | | 1 | | | | | 1 |

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 8

| | | | | | Seal Intact? |
|---|---|---|---|---|---|
| Relinquished by: A. Mumby | Organization: ARCADIS | Date 1/20/05 | Time 9:20 | | |
| Received by: | Organization: TA | Date 1/20/05 | Time 1049 | | ~~Yes~~ No N/A |
| Relinquished by: | Organization: TA | Date 1/20/05 | Time 1339 | | ~~Seal Intact?~~ |
| Received by: | Organization: | Date 1/20/05 | Time 1345 | | Yes No N/A |

Special Instructions/Remarks:

Direct Questions / Comments to Brian Maillet w/ ARCADIS @ 414-276-7742

1-20 pm Warren called Brian RE: water trip blanks - do not analyze protocol should be MEOH for soil 1/20/05

Delivery Method: ☐ In Person ☐ Common Carrier _____ SPECIFY ☒ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01

ARCADIS

## Appendix E

NR 712 Certification

ARCADIS

## Submittal Certification

This attachment was prepared to satisfy the requirements of Wisconsin Administrative Code Chapter NR 712.09 and is applicable to the following document, dated May 2, 2005.

*Site Investigation and Closure Report*

"I,_____, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

_____ _____

Signature, title and P.E. number P.E. stamp

---

"I,_____, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

_____ _____

Signature and title Date

---

"I,_____, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

_____ _____

Signature and title Date