



# HYDRODYNAMICS CONSULTANTS, INC.

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Environmental Engineering, Consulting, and Contracting

**QUARTERLY GROUNDWATER AND SOIL VAPOR  
MONITORING/SAMPLING REPORT (4<sup>TH</sup> QUARTER)  
and  
SITE ENVIRONMENTAL CONDITION SUMMARY AND ASSESSMENT**

Prepared For  
Westwood Cleaners  
(WDNR BRRTS#02-41-552537)  
8731 West North Avenue  
Wauwatosa, Wisconsin 53226

July 2, 2021



# HYDRODYNAMICS CONSULTANTS, INC.

Environmental Engineering, Consulting, and Contracting

July 2, 2021

Jennifer Dorman, Environmental Program Associate  
Wisconsin Department of Natural Resources  
2300 Martin Luther King Drive  
Milwaukee, WI 53212

Re: WDNR BRRTS #02-41-552537  
Westwood Dry Cleaners  
8731 W. North Ave  
Wauwatosa, WI 53226

Dear Ms. Dorman:

Hydrodynamics Consultants, Inc. (HDC) is pleased to submit this quarterly groundwater and vapor monitoring report (4<sup>th</sup> Sampling) for your review and approval.

Based on the existing site investigation results and the groundwater/vapor monitoring report (updated with the recent 4<sup>th</sup> Sampling), Hydrodynamics Consultants, Inc. believes the concentrations of the released drycleaning solvent, tetrachloroethylene (PCE) and its degraded compounds (such as trichloroethylene -TCE, cis-1,2/trans-dichloroethylene - DCE, and vinyl chloride - VC), have been stable or decreasing, with no apparent migration away from the current locations. The contaminants found in the soil, groundwater, and soil vapor would not impact the environment or human health and safety if they are properly managed. To minimize the risks, HDC proposes to (1) use the building foundation/concrete floor inside the drycleaning plant as an engineered barrier (cap) to exclude direct soil contact exposure, (2) install, operate, and maintain a soil vapor mitigation system (sub-slab depressurization system) to mitigate the vapor intrusion risks, and (3) use groundwater usage restrictions in the potentially groundwater impact areas to exclude the groundwater exposure pathways. The site may be closed with the conditions included in the Geographic Information System (GIS) Registry.

To pursue the conditional site closure, HDC recommends installation of the soil vapor mitigation system proposed in this report in the areas where soil VOC exceedances were reported. Upon the DNR's review and approval of this report, a Workplan for the site closure including the soil gas mitigation system will be prepared and submitted to the DNR for review and approval.

## Certifications

I, Mike (Minghua) Wan, 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 Wis. Adm. Code."

Mike (Minghua) Wan, PE

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## 1.0 EXECUTIVE SUMMARY

Hydrodynamics Consultants, Inc. (HDC) has been retained by the owner to complete this additional site investigation at and around the Westwood Cleaners site, located at 8371 West North Ave. Wauwatosa, WI 53226.

In August 19, 2008, HDC performed limited soil boring and testing at the subject property. Four (4) soil borings were advanced to a depth of 16' deep each, and two soil samples were collected from each boring for laboratory analysis of chlorinated volatile organic compounds (cVOCs). The analytical results indicated up to 320,000 ug/Kg of tetrachloroethene (PCE or perc) and up to 3,970 ug/Kg of trichloroethene (TCE) were present in the samples at the site.

Based on the findings, HDC submitted a Site Investigation Work Plan (SIWP). On July 31, 2018, the WDNR received HDC's revised SIWP and approved it on August 7, 2018.

From September 16 to 19, 2018, HDC performed a Site Investigation (SI) at this site. Twelve new soil borings (NSB1-NSB12) were completed to a depth of 16' each. Three representative soil samples were collected from each boring. Low levels of PCE, TCE, and vinyl chloride (VC) were detected from these borings. Six of the soil borings were converted to monitoring wells (MW1 to MW6). These wells were 1"- to 2"-diameter PVC wells constructed to a depth approximately 15' below the ground surface. Five sub-slab soil vapor ports (SV1 - SV5) were installed at this site. One soil vapor sample was collected from each of these ports during the site investigation. Up to 1,200 ug/m<sup>3</sup> of PCE and 100 ug/m<sup>3</sup> of TCE were found in the soil vapor samples. The highest level of PCE was found in the basement of the adjoining restaurant building at SV2.

From September 19, 2018 to July 13, 2019, groundwater samples were collected from all of the existing monitoring wells on a quarterly basis for a period of one year. The quarterly groundwater sampling results confirmed that up to 4,300 ug/L of PCE, 120 ug/L of TCE, 23 ug/L of cis-1,2-dichloroethene (cDCE), and 20 ug/L of VC were present in MW2, MW5, and MW6. The groundwater table depth is about 7.81' to 10.06' below the groundwater surface. The concentrations of the cVOCs were stable or decreasing.

Since VOC concentrations in groundwater monitoring well MW2, installed near the property line, contained 53 ug/L of PCE in the last monitoring event dated July 13, 2019, further groundwater-impact extent evaluation to the south and southwest of the property was proposed by HDC. The WDNR approved HDC's Change Order #1, Additional Site Investigation Work Plan on February 3, 2020. The Change Order #1 included installation of 3 additional soil borings, 3 monitoring wells, and to complete quarterly soil vapor and groundwater monitoring for a period of one year.

From July 28, 2020 to August 10, 2020, HDC completed the additional site investigation and the first quarterly soil vapor and groundwater sampling at this site.



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On December 8, 2020, HDC preformed the 2<sup>nd</sup> quarterly sampling at the subject property. The second quarterly sampling event included collecting samples from all the existing monitoring wells (MW1 to MW9) and sub-slab vapor sampling ports (SV1 to SV7).

HDC preformed the 3<sup>rd</sup> quarterly sampling, on March 26, 2021 at the subject property. The third quarterly sampling event included collecting samples from all the existing monitoring wells (MW1 to MW9) and sub-slab vapor sampling ports (SV1 to SV7).

The 4<sup>th</sup> quarterly sampling was preformed on June 16, 2021. The fourth quarterly sampling event included collecting samples from all the existing monitoring wells (MW1 to MW9) and sub-slab vapor sampling ports (SV1 to SV7).

This report will summarize the 4<sup>th</sup> quarterly soil vapor and groundwater sampling results. The previous site investigation and monitoring results are incorporated in this report, especially in the figures. For details of the previous results, please refer to previous reports filed with the Wisconsin DNR.

Based on existing site investigation results and the groundwater/vapor monitoring report (updated with the 4<sup>th</sup> Sampling), Hydrodynamics Consultants, Inc. believes the concentrations of the released drycleaning solvent, tetrachloroethylene (PCE) and its degraded compounds (such as trichloroethylene -TCE, cis-1,2/trans- dichloroethylene - DCE, and vinyl chloride - VC) have been decreasing or stable, without any sign of impact to the environment or human health and safety. No apparent contaminant migration has been monitored, either. HDC requests that the WDNR consider this case for conditional closure, with the following conditions:

1. Groundwater contamination remains at this site, including the subject property at 8735 W. North Avenue, and potentially the adjoining property to the east at 8725 W. North Avenue, and the public alley to the south of the above two properties (See Groundwater Usage Restriction Area in Figure 6). Groundwater well installation or extraction from these properties should be prohibited.
2. Residual soil contamination exists that must be properly managed should it be excavated or removed. The existing building concrete floor and foundation must be maintained over the contaminated area as an engineered barrier to prevent any soil contact. The DNR must be notified to approve any change to this barrier. The 40' by 35' Engineered Barrier (cap) Area is illustrated in Figure 6.
3. The sub-slab soil vapor contamination is present under the drycleaning plant area. The proposed soil vapor mitigation system, which is a sub-slab depressurization system, must be properly installed to mitigate any indoor vapor intrusion risks. The vapor mitigation system, upon installation, must be kept operational and properly maintained. The sub-slab depressurization system should cover the same 40' by 35' Engineered Barrier Area as illustrated in Figure 6.
4. Upon the DNR's approval of the conditional case closure for this site, the monitoring wells and the soil vapor sampling ports should be properly plugged and the surface be restored.
5. The site should be included in the Geographic Information System (GIS) Registry upon closure.



## 2.0 INTRODUCTION

### 2.1 Location and Project Information

1. Site Owner:

Dong Sin  
8371 West North Avenue  
Wauwatosa, WI 53226

2. Site Address:

8371 West North Avenue  
Wauwatosa, WI 53226

3. Site Location (Figure 1):

NE  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of Section 21, T07N, R21E, Milwaukee County, Wisconsin.

4. Environmental Consultant:

Mike Wan, PE, Project Manager  
Hydrodynamics Consultants, Inc.  
5403 Patton Drive, Suite 215  
Lisle, IL 60532  
Tel. 630-724-0098  
Email Mike\_Wan@HydrodynamicsConsultants.com

5. WDNR BRRS#:

02-41-552537

6. WDNR Project Manager:

Binyoti Amungwafor  
Wisconsin Department of Natural Resources  
2300 Martin Luther King Drive, Milwaukee, WI 53212  
Tel. 414-263-8607  
Email: Binyoti.Amingwafor@Wisconsin.gov

### 2.2 Site Location Map

Please see attached Figure 1, Site Vicinity Map

### 2.3 Site Physiographical and Geological Information

#### 2.3.1 Topography/Geology

The general topography of land is flat with an elevation of approximately 705 feet above mean sea level (MSL). The local ground surface slopes gently toward the west or southwest.



No bedrock is encountered in the borings. According to the Glacial Deposit Map compiled by Wisconsin Geological & Natural History Survey in 1976, the site is located on the End Moraine deposit. The thickness of the glacial deposit is between 50' and 100' according to the Glacial Depth to Bedrock Map compiled by L.C. Trotta and R. D. Otter in 1973.

The closest surface water body is the Menomonee River which is approximately 1,600 feet to the west or southwest of the subject property.

The subsurface soil encountered in the soil borings is predominantly clay to silty clay from the surface down to the end of the borings at 16' below the ground surface, with thin lenses of silty fine sand/gravel being present in some borings.

### **2.3.2 Hydrogeology**

The site is located in the City of Wauwatosa where the ground surface is mostly covered with asphalt pavement or concrete. Surface water drains to the municipal storm water system through the manhole sumps in the parking lots and storm water grills along the edges of streets. Surface water may recharge to the groundwater table via infiltration in landscaped areas or open fields where no surface barrier is present. The subject property is mostly covered with asphalt pavement or concrete slabs except for the lawn covered area to the west of the strip mall building. The groundwater study conducted through the monitoring wells at this site discovered that the local groundwater flows generally to the west or southwest, with high hydraulic conductivity as detailed in later sections of this report. The regional groundwater table may slightly slope to the southwest and discharge into the Menomonee River system located about 1,600 ft. southwest of the site. This water surface elevation at Menomonee River channel is about 656' above the mean sea level (or about 49' below the concrete floor at Westwood Cleaners).

### **2.4 Background Information**

The subject property is located on the southeast corner of the intersection of West North Avenue and North Ludington Avenue in the City of Wauwatosa, WI (See Site Vicinity Map, Figure 1).

According to our inquiry, the subject dry-cleaning plant has been operating there since 1985. Drycleaning solvent, tetrachloroethene or perchloroethene (perc or PCE) has been used and stored at this site since 1985. Prior to 1985, no known record indicates that the site had been involved with any hazardous materials. Therefore, PCE and its degraded compounds (such as trichloroethene (TCE), cis-1,2-dichloroethene (cDCE), and vinyl chloride (VC) (called chlorinated volatile organic compounds, cVOCs) are the only contaminants of concern (COCs) for this site. Based on our observation and inquiries of the owner, the subsurface contamination of PCE may have been from historical spills or incidental releases during the past drycleaning operation. Further PCE release is unlikely because the drycleaning facility has installed secondary containments under the drycleaning machine and attention has been paid to proper storage and handling of the drycleaning generated wastes.





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Hydrodynamics Consultants, Inc. (HDC) completed a preliminary site investigation on August 19, 2008. HDC performed limited soil boring and testing at the subject property to confirm the site conditions. Four (4) soil borings (SB1 to SB4) were advanced to a depth of 16' each boring and two soil samples were collected from each boring for laboratory analysis of volatile organic compounds (VOCs). The analytical results indicated the drycleaning solvent, tetrachloroethene and its degraded products are present at the site. Based on the laboratory analysis from samples collected from these 4 borings, up to 320,000 µg/Kg of PCE was present in the borings (See Figure 3, Soil cVOC Distribution Map).

A Potential Claim Notification was completed and sent to the Department of Nature Resources (DNR) on August 28, 2008. Jennifer Feyerherm, Grant Manager of the WDNR sent the owner, Mr. Song Sin a letter on July 20, 2016, stating the site is qualified for reimbursement from the Wisconsin Drycleaners Environmental Response Fund (DERF).

Based on the initial site inspection, HDC believed that the contamination was related to unknown incidental spills or releases of perchloroethene near the drycleaning machine and waste drums. Other similar incidents may also have taken place near the back door through which the drycleaning solvent was delivered and waste solvent drums were removed. The drycleaner owner has implemented secondary storage containers under the potential source containers in order to minimize the impact of any incidental releases or spills. It appears that this dry-cleaner operation is in compliance with all the regulatory requirements.

The surrounding properties or store spaces have been used for commercial purposes without known involvement of any hazardous materials, except for petroleum products. Based on the ERRTS databases, a gasoline filling station is present on the northwest corner of the intersection of North Avenue and Ludington Avenue (8806 W North Avenue, WDNR BRRTS#: 03-41-100572). The gasoline station site was conditionally closed with proper GIS Registry. The property at 8901 West North Avenue, on the southwest corner of the intersection of North Avenue and Ludington Avenue (WDNR BRRTS#: 03-41-563748), was also used as a gasoline filling station. Petroleum release was found in that property. No further information was readily available for review.

There is no known risk at this time from the released cVOCs to the public health, safety, welfare, or the environment.



## 3.0 QUARTERLY GROUNDWATER AND VAPOR MONITORING (4<sup>th</sup>) RESULTS

### 3.1 Quarterly Groundwater Monitoring (4<sup>th</sup> Quarter)

#### 3.1.1 Quarterly Groundwater Sampling Summary

On June 16, 2021, Hydrodynamics Consultants, Inc. (HDC) crew members (2 technicians and 2 engineers) performed the 4<sup>th</sup> round of groundwater sampling from monitoring wells, MW1 to MW9. Please refer to the attached site map (Figure 2) for sampling locations.

During groundwater sampling, the following procedures are adhered to:

- Prior to groundwater sampling, the wells are measured with a water level indicator, and then purged with a designated disposal bailer, 3 times of the well volume or until they are mostly dry.
- When sufficiently recharged, a groundwater sample is retrieved, with a designated PVC bailer equipped with a Teflon ball check valve at the bottom, from the well.
- Each groundwater sample retrieved is dispensed through a small PVC tube inserted in the bottom of the bailer into two 40-ml glass vials containing a HCL preserve.
- The sample containers are closed with Teflon-lined lids.
- After the vials are filled with water samples, we check to see if the vials are free of bubbles by holding the vials upside down. If bubbles are found, a new groundwater sample is collected from the well.
- Upon completion, groundwater samples are immediately stored in an ice-chilled cooler.

Proper decontamination procedures are followed during the groundwater sampling activities. A new PVC bailer is designated for each groundwater monitoring well. A new pair of gloves is used for collecting each groundwater sample. The water table indicator and tools are cleaned with soapy water and rinsed thoroughly before each use.

The Chain of Custody documentation is strictly adhered to during the groundwater sampling activities and during the delivery of the groundwater samples from the field to the laboratory.

During the field sampling activities, a waterproof pen is used to mark each groundwater sample container. The information marked on the sample containers includes, but is not limited to, the sample date and time, the sample identification, the sample locations, and any other applicable data.

All samples are generally picked up by an analytical laboratory the next working day. Before they are picked up, they are stored in a cooler with ice packs. The cooler is stored in our refrigerator, which is set to 4°C. Collected groundwater samples are analyzed by Stat Analytical Corporation which is a laboratory accredited by the WDNR.



A trip blank (MW-TB), and a duplicate sample from MW6 (MW6-4/4D), and a temperature blank are included with each groundwater sampling event. However, these samples are only analyzed when required.

Trip blanks are submitted for laboratory analysis to assess for potential contamination during handling, shipment, and storage of the investigative samples. Trip blanks are filled by the analytical laboratory with organic-free water and are kept with the investigative water samples throughout the field event. Field duplicate samples are collected for each investigative matrix (soil gas, sub-slab vapor, ambient air, indoor air, groundwater, and/or soil) as associated investigative samples. Field duplicate samples are processed, stored, packaged, and analyzed by the same methods as the other samples.

Decontamination water use is kept to a minimum, and typically 5-10 gallons of rinsate water is generated. The decontamination water is disposed on-site by evaporation over a hard surface.

### ***3.1.2 Quarterly Groundwater (4<sup>th</sup>) Sampling Results***

A total of 11 new groundwater samples (MW1-4/4 to MW9-4/4), including 1 duplicate and 1 trip blank, were analyzed for VOCs in accordance with US EPA Publication SW-846, Method 5035/8260B. The groundwater analytical results obtained are tabulated in Tables 1a and 1b. The groundwater COC distribution in the wells is illustrated in Figure 4. When compared to the Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard and Chapter NR 140 Preventive Action Limits (PALs), the following compounds are deemed as the contaminants of concern based on the new groundwater sampling results.

**Tetrachloroethene (PCE):** 34 µg/L of PCE was detected from MW5 with concentrations exceeded the groundwater Enforcement Standard (5 µg/L) and Preventive Action Limit as defined in the NR 140.

The groundwater sampling results confirmed that the groundwater quality have been impacted by the released PCE and its degraded compounds of TCE, cDCE, and/or VC at this site in MW5. No other contaminant of concern (COCs) was detected in other wells with concentration exceeding the Preventive Action Limits (PALs). The groundwater cVOC plume is illustrated in Figures 4 (horizontal distribution) and 4a (cross section).

## **3.2 Quarterly Soil Vapor Monitoring (4<sup>th</sup> Quarter)**

### ***3.2.1 Quarterly Sub-Slab Soil Vapor Sampling Summary***

On June 16, 2021, Hydrodynamics Consultants, Inc. (HDC) crew members (2 technicians and 2 engineers) performed the 4<sup>th</sup> round of vapor sampling from sample ports SV1 to SV7. All the existing soil vapor sampling ports were sampled with samples SV1-4/4 to SV7-4/4. One duplicate sample was collected from SV3 port (SV3-4/4). Please refer to the attached Sub-slab Vapor cVOC Distribution Map (Figure 5) for sampling locations.



During sampling activity, sub-slab vapor samples are collected, pursuant to Publication RR-800 (January 2018), Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin, and RR986 (Sub-Slab Sampling Procedures), to assess the indoor sub-slab vapor quality. The following procedures are adhered for the vapor sampling:

### ***Sampling Port Water Dam Test:***

To ensure there is no air leakage from the air to the sub-slab through the sampling port, a water dam test is used and described as follows:

- The floor around the sampling port is carefully cleaned;
- A 1.5"-diameter and 1.5" tall PVC coupler ring is placed around the sampling port with the sampling outlet tubing extruding about 2" above the ground;
- Modeling clay is used to seal between the bottom of the PVC ring and the concrete floor to create a water dam around the sampling port;
- Bottled water is poured inside the dam and we watched for the water level change. If the water level inside the dam drops, re-seal the port and re-test, until it is stable for about 5 minutes.

### **Sampling Device and Shut-In Test**

The sampling device is a 6-liter Summa canister and attached air flow regulator prepared by a certified lab. The shut-in test for the device provided by the lab is as follows:

- Check to make sure the canister valve (C) is tightly closed, the air flow regulator is tightly connected on the canister, and the air inlet cap on the regulator has a tight fit;
- Quickly open and close the canister valve for ½ turn, and watch to make sure the pressure gauge stays at its preselected pressure (around 30" Hg) without dropping for 30 seconds. If a pressure drop is observed, re-tighten the connections and cap, and re-test it until it is tight.

### **Sampling Train Assembly**

- A 3-way valve (A) that has one inlet and two outlets is tightly connected with a ¼" OD and 1/8" ID Teflon tube on each of the three ends. The 3-way valve can turn on one outlet while turning off the other outlets simultaneously.
- The inlet end of the 3-way valve is connected to a shut off valve which is attached to the sampling tube inserted in the sampling port inside the concrete floor. One of the two outlets on the 3-way valve is connected to the inlet of the Summa canister while the other outlet is connected to a purging pump (with PID instrument) to purge the vapor sampling train and test the subsurface vapor VOCs.

### **Sampling Train Shut-In Test**

- Check to make sure the canister valve (C) is tightly closed;
- Remove inlet cap from the canister and connect the inlet to one of the outlets of the 3-way valve (A);

- Turn off the vapor sampling port valve (B) and turn on the 3-way valve to allow flow to the canister inlet;
- Quickly open and close the canister valve for ½ turn, and watch to make sure the pressure gauge stays at its preselected pressure (around 30" Hg) without dropping. If a pressure dropping is observed, re-tighten the connections and cap until they are tight without leakage.

### **Sampling Train Purging and PID Reading**

- Turn on the outlet valve connected to the sampling port to allow soil vapor flow from the sub-slab space;
- The 3-way valve is first turned on to the purging pump outlet to purge 3 times the volume of the sampling train (including volume of tubing and the sampling port cavity, up to about 1 liter or 5 minutes) prior to sampling;
- Read the VOC concentrations while purging with the photo-ionization detector;
- Turn the 3-way valve to the canister inlet direction before removing the purging pump.

### **Sub-slab Soil Vapor Sampling**

- Turn the 3-way valve to connect the inlet for the Summa canister to allow soil vapor to be sucked into the pre-vacuumed Summa canister from the sub-slab;
- Paper towels are placed over the sampling train and Isopropyl Alcohol tracer fluid is spread over the towels covering the sampling train during the sampling to ensure no leakage into the sampling train.
- Turn on the Summa canister valve to withdraw soil vapor from the sub-slab space and observe the vacuum pressure drop on the gauge from about -30" Hg to about -5" Hg.
- Turn off the canister valve when the pressure gauge reaches below -5" Hg and replace and tighten the canister cap (the withdrawing process may take about 30 minutes for each sample to fill a 6-liter Summa canister).
- Record the final canister pressure and flow controller number on the canister sample tag, including sample ID and other information.
- The sample is then sent to the laboratory for analysis of VOCs using Method TO-15, including isopropyl alcohol content as its QA/QC parameter.
- The sampling port is sealed and covered for next sampling.

### **3.2.2 Quarterly Sub-Slab Soil Vapor (4<sup>th</sup>) Sampling Results**

A total of 8 sub-slab vapor samples (SV1-4/4 to SV7-4/4), including 1 duplicate (SV3-4/4D), were collected and analyzed for VOCs using US EPA Method TO-15, in accordance with RR-800, "Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin" procedures. The vapor analytical results obtained are tabulated in Tables 2a and 2b. The sub-slab vapor COC distribution is illustrated in Figure 5. HDC compared the analytical results to the US EPA's Indoor Air Vapor Action Levels (VAL) and Sub-Slab Vapor Risk Screening Levels (VRSL), and the following exceedances were present.



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**Tetrachloroethene (PCE):** up to 30,000  $\mu\text{g}/\text{m}^3$  of PCE was detected from vapor sampling port SV7 exceeding both the residential and commercial Indoor Air Vapor Action Levels, and both the residential and commercial Vapor Risk Screening Levels (VRSL). The VRSL of 5,840  $\mu\text{g}/\text{m}^3$  for PCE is applicable for this site.

**Trichloroethene (TCE):** up to 350  $\mu\text{g}/\text{m}^3$  of PCE was detected from vapor sampling port SV7 exceeding both the residential and commercial Indoor Air Vapor Action Levels, and both the residential and commercial Vapor Risk Screening Levels (VRSL). The VRSL of 292  $\mu\text{g}/\text{m}^3$  for TCE is applicable for this site.

The sub-slab vapor sampling results confirmed that the sub-slab Vapor Risk Screening Levels have been exceeded at this site in the source areas. The EPA's VRSL for commercial properties are applicable to this site. No VOCs were found in any other vapor sampling ports with concentrations exceeding the Vapor Risk Screening Levels (VRSLs). The soil vapor VOC plume is illustrated in Figure 5 (horizontal distribution), while the vertical soil vapor VOC distribution is shown in Figure 5a.

As part of the soil vapor monitoring process, HDC checked VOC concentrations in manholes at and around the property. The sanitary and storm manholes located in the parking lots and public right of ways around the property were checked with a photo-ionization detector (PID) which is calibrated with 100 ppm equivalent of isobutylene. Floor drains in the building in Westwood Cleaners and Super Cuts, as well as in the neighboring restaurant were also checked with the PID for VOCs. The air in the manholes and drains was measured by inserting the tip of the PID into the manholes and drains and waiting for the VOC readings. Based on our field measurements, no detectable VOC was found.



**4.0 QUARTERLY GROUNDWATER TABLE ELEVATION MONITORING RESULTS**

Prior to any groundwater disturbance, on June 16, 2021, we conducted a water-table survey for monitoring wells MW1 through MW9. The top of the well casing of monitoring well MW6 was chosen as a survey reference point and assumed to be 100.00 feet site datum elevation. The relative elevation of the top of well casing for each well was then determined by level shooting, and the distances between wells were directly measured using a wheel measure. The relative water-table elevation survey data can be summarized in Table 3.

A water table contour map for the relative water-table elevations is constructed as shown in Figure 4b. The groundwater flow trend is steadily to the west or southwest at this site. It may discharge to the Menomonee River basin located approximately 1,600’ southwest of the site. According to Google Earth map, the water surface elevation at the Menomonee River is about 40’ below the water table found at Westwood Cleaners site.

**Table 3 Relative Water Table Elevations**

Well Number	Relative Elevation of the Top of Casing	Water Depth (ft.)	Water Table Elevation (ft.)	Water Depth (ft.)	Water Table Elevation (ft.)	Water Depth (ft.)	Water Table Elevation (ft.)	Water Depth (ft.)	Water Table Elevation (ft.)
MW1	98.49	10.12	88.37	10.27	88.22	9.55	88.94	9.95	88.54
MW2	99.12	9.6	89.52	9.9	89.22	9.1	90.02	9.61	89.51
MW3	100.76	9.75	91.01	9.85	90.91	9.15	91.61	9.6	91.16
MW4	98.88	8.95	89.93	9.01	89.87	8.35	90.53	8.85	90.03
MW5	99.95	9.42	90.53	9.81	90.14	9.11	90.84	9.61	90.34
MW6	100	9.68	90.32	9.79	90.21	9.05	90.95	9.48	90.52
MW7	98.85	9.72	89.13	9.91	88.94	9.1	89.75	9.61	89.24
MW8	98.48	9.52	88.96	9.85	88.63	9.15	89.33	9.72	88.76
MW9	98.2	9.59	88.61	9.81	88.39	9.25	88.95	9.82	88.38



## 5.0 SITE ENVIRONMENTAL CONDITION SUMMARY AND ASSESSMENT

The following will summarize the general status of the released cVOCs and the migration trend with the residual contaminants in the soil, groundwater, and soil vapor. To exclude the potential exposure pathways and mitigate the environmental risks to the human health, safety, and welfare, or the environment, engineered barrier (cap), vapor mitigation system, and groundwater usage restriction are recommended for this site.

### 5.1 Groundwater Contamination and Exposure Exclusion

#### 5.1.1 Groundwater Monitoring Results

The groundwater sample analytical results for the 4<sup>th</sup> quarter are illustrated in Table 1a, while all the historical results are listed in Table 1b. All the historical analytical results are illustrated in Figure 4. Based on the groundwater sampling results, the following groundwater contamination trend can be summarized:

#### **MW1, MW3, MW4, MW7, and MW9**

A number of sampling events have been conducted in these wells. No chlorinated volatile organic compound (cVOC) was found with concentration exceeding the Enforcement Standard (ES) defined in NR140 in any sampling events. Based on the sampling results from these wells, the cVOCs are confined within or near the property boundaries.

#### **MW8**

Four sampling events were completed from this well, and only trace amount (10 µg/L) of PCE was reported in the samples collected in August 10, 2020. However, no cVOC was found with concentration exceeding the Enforcement Standard (ES) defined in NR140 in the later sampling events conducted in December 2020, March 2021, and June, 2021.

#### **MW2**

Nine (9) sampling events have been completed from this well, and chlorinated volatile organic compounds, including PCE and TCE, were found with concentrations exceeding the Enforcement Standard (ES) defined in NR140 in some sampling events. The highest concentrations in MW2 were 99 µg/L for PCE and 89 µg/L for TCE as found on July 2020. However, no VOC was found in the last sampling.

Since MW2 is located close to the property border, additional monitoring wells (MW7, MW8, and MW9) were installed in further down-gradient directions in August 2020 to define the groundwater contamination boundaries. No cVOC concentration was found in the down-gradient wells higher than the Enforcement Standard as defined in NR140 based on the last 3 sampling events conducted in December 2020, March 2021, and June, 2021. Therefore, the cVOC concentrations found from MW2 have been stable or decreasing. The cVOCs contaminants are confined within or near the property boundaries.





## MW5

Ten (10) sampling events have been completed from this well, and chlorinated volatile organic compounds, including PCE, TCE, VC, and chloroform were found with concentrations exceeding the Enforcement Standard (ES) defined in NR140 in all sampling events. The highest concentrations were 4,600 µg/L for PCE, 180 µg/L for TCE, 38 µg/L for VC, and 11 µg/L for chloroform.

According to the general groundwater flow trend found at this site, the groundwater flow trend has been steady to the west or southwest. Therefore, MW5 is located in the plume source area while monitoring wells MW8, MW9, and MW1 are in the down-gradient directions. No cVOC concentration was found in the down-gradient wells with concentration exceeding the Enforcement Standard as defined in NR140 based on the last 3 sampling events. Therefore, the cVOC concentrations found from MW5 have been stable or decreasing. The groundwater cVOCs are confined within or near the property boundaries.

## MW6

Nine (9) sampling events have been completed from this well, and chlorinated volatile organic compounds, including PCE, TCE, and VC were found with concentrations exceeding the Enforcement Standard (ES) defined in NR140 in all sampling events. The highest concentrations were 700 µg/L for PCE, 52 µg/L for TCE, 5.7 µg/L for VC.

According to the general groundwater flow trend found at this site, MW6 is located near the plume source area while monitoring wells MW8, MW9, and MW1 are in the down-gradient directions. No cVOC concentration was found in the down-gradient wells with concentration exceeding the Enforcement Standard as defined in NR140 based on the last 3 sampling events. Therefore, the cVOC concentrations found in MW6 have been stable or decreasing. The groundwater cVOCs are confined within or near the property boundaries.

### ***5.1.2 Groundwater Contamination Exposure Pathway Exclusion***

The potentially groundwater impacted areas may include the subject property (8735 W. North Avenue), the adjoining property (8725 W. North Avenue), and the public alley to the south of these two properties, as illustrated in Figure 6. To exclude the groundwater usage risks, Hydrodynamics Consultants, Inc. recommends groundwater usage restrictions be implemented in the potential groundwater contamination areas, as shown in Figure 6.

## **5.2 Soil Contamination and Exposure Prevention**

### ***5.2.1 Soil Contamination Degree and Extent***

Fifteen (15) new soil borings (NSB1 to NSB15) and four (4) old soil borings (SB1 to SB4) were placed to define the extent and degree of soil contamination. Based on the site investigation results, there are two soil plumes with cVOC concentrations higher than the Residual



Contaminant Levels (RCLs) for soil to groundwater and one plume for soil direct contact pathways. The soil contamination extent and degree plumes are illustrated in Figures 3 and 3a.

## ***5.2.2 Soil Contamination Exposure Mitigation***

Risk for direct soil contact is present in the subject building inside the drycleaning plant as shown in Figure 6. To prevent a potential direct soil contact pathway, Hydrodynamics Consultants, Inc. recommends use and maintenance of the existing concrete floor/building foundation in the area designated in Figure 6 as an engineered barrier (cap) for the contaminated soil at this site. The designated barrier covers an area of 40' by 35' inside the store building as illustrated in Figure 6.

## **5.3 Soil Vapor Contamination and Mitigation**

### ***5.3.1 Soil Vapor Contamination Monitoring Results***

The soil vapor sample analytical results are illustrated in Table 2a and 2b and Figure 5. Based on the sub-slab soil vapor sampling results, the following vapor contamination trend can be summarized:

#### **SV1, SV2, SV3, SV4, SV5, and SV6**

Four to five sampling events have been conducted in these soil vapor ports. No chlorinated volatile organic compound (cVOC) was found with concentration exceeding the USEPA's Vapor Risk Screen Levels for commercial properties in any sampling events. Based on the sampling results from these locations, the sub-slab vapor cVOCs are confined within the property boundaries distributed near the drycleaning machine. Although trace amounts (up to 1,900  $\mu\text{g}/\text{m}^3$  of PCE) of cVOCs were reported in the basement (SV2) at the adjoining property at 8725 W. North Avenue, the results are all below the USEPA's VRSLs for commercial properties.

#### **SV7**

SV7 is located in the source area next to the drycleaning machine. Four sampling events have been conducted in this soil vapor port. Up to 38,000  $\mu\text{g}/\text{m}^3$  of PCE and 630  $\mu\text{g}/\text{m}^3$  of TCE were found with concentration exceeding the USEPA's Vapor Risk Screen Levels for commercial properties at this location.

Based on the sub-slab vapor sampling results from SV1 to SV7, the sub-slab vapor cVOCs are confined within the property boundaries and originate near the drycleaning machine area, with concentrations higher than VRSLs for commercial properties being defined in Figure 6.

### ***5.3.2 Proposed Soil Vapor Mitigation System***

Based on the last 4 quarterly sampling results from this site, the cVOCs are confined around the SV7 area within the property boundaries. Risk for vapor intrusion to the subject building inside the drycleaning plant (see Figure 6) needs to be addressed.

To exclude the indoor vapor intrusion pathway, HDC proposes installation of a soil vapor mitigation system in the source areas. A sub-slab depressurization (SSD) system is proposed as follows:

- a. A U-shaped trench will be cut in the concrete floor as shown in Figure 6. The trench will be approximately 2' deep by 2" wide by 75' long and filled with crushed stone (CA-7). A 4"-diameter perforated pipe will be buried in the middle of the gravel inside the trench before the concrete floor is restored. The trench will function as suction gallery that will have more than 50 cubic feet of void volume which can greatly enhance system performance.
- b. A 4"-diameter PVC pipe will be used to extend vertically from the perforated pipe to an in-line blower (Model RP265 from RadonAway Company), which is capable of up to 2.1 inches of water column (wc) suction and up to 166 cubic feet air per minute (cfm) flow.
- c. The proposed sub-slab depressurization system must have a measurable vacuum ( $<-0.003''$  wc) within the covered area (under the 40' by 35' engineered barrier or cap).
- d. All visible cracks and joints in the slab (including places where pipes exit the slab) and foundation walls will be sealed.
- e. The exhausts pipe outside the building will be extended above the roof ( $>12'$ ) and be placed more than 10' from any doors or windows.

Upon installation of the above SSD system, measurements will be made in the mitigation areas with a manometer to ensure a measurable vacuum ( $>0.003''$  wc) is present. Concrete floor penetration holes will be properly sealed after the vacuum measurements.

Figure 6 illustrates the sub-slab depressurization (SSD) system trench location for this site, while Figure 6a is the diagram showing the SSD system cross section.



## 6.0 CONCLUSION AND RECOMMENDATIONS

Based on existing site investigation results and the groundwater/vapor monitoring results, Hydrodynamics Consultants, Inc. believes the concentrations of the released drycleaning solvent, tetrachloroethylene (PCE) and its degraded compounds (such as trichloroethylene -TCE, cis-1,2/trans- dichloroethylene - DCE, and vinyl chloride - VC) have been decreasing or stable, without any sign of impact to the environment or human health and safety. Based on the sampling results, HDC requests that the WDNR consider this case for conditional closure, with the following conditions:

- 1.) Groundwater contamination remains at this site, including the subject property at 8735 W. North Avenue, and potentially the adjoining property to the east at 8725 W. North Avenue, and the public alley to the south of these two properties (See Groundwater Usage Restriction Area in Figure 6). Groundwater well installation or extraction from these properties should be prohibited.
- 2.) Residual soil contamination exists that must be properly managed should it be excavated or removed. The existing building concrete floor and foundation must be maintained over the contaminated area as an engineered barrier to prevent any soil contact. The DNR must be notified to approve any change to this barrier. The 40' by 35' Engineered Barrier (cap) Area is illustrated in Figure 6.
- 3.) The sub-slab soil vapor contamination is present under the drycleaning plant area. The proposed soil vapor mitigation system, which is a sub-slab depressurization system, must be properly installed to mitigate any indoor vapor intrusion risks. The vapor mitigation system, upon installation, must be kept operational and properly maintained. The sub-slab depressurization system should cover the same 40' by 35' Engineered Barrier Area as illustrated in Figure 6.
- 4.) Upon the DNR's approval of the conditional case closure for this site, the monitoring wells and the soil vapor sampling ports should be properly plugged and the surface be restored.
- 5.) The site should be included in the Geographic Information System (GIS) Registry upon closure.

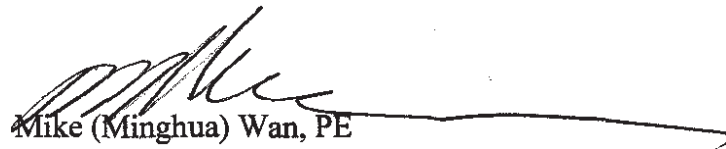


## 7.0 CONCLUDING REMARKS

The environmental assessment detailed in this report has been performed in accordance with generally accepted methods and practices of the environmental profession. The findings obtained in this project are believed to be reliable to the extent possible for the information gathered and for the scope and intent of the work mutually agreed upon by the client and HDC. HDC does not make any warranty or guarantee, expressly or implied, to conditions that could not be considered in our report, because the conditions were not readily available, hidden, or not disclosed to our inquiries and investigations.

HDC appreciates the opportunity to be of service to you on this project. If you have any questions concerning this report, please feel free to contact my office.

Prepared by:

A handwritten signature in black ink, appearing to read "Mike Wan", is written over a horizontal line.

Mike (Minghua) Wan, PE  
Senior Engineer

Reviewed by

**Yong Yu, Ph.D.**  
Senior Project Manager

Maple Testing Services, Inc.  
D/B/A Hydrodynamics Consultants, Inc.

# TABLES

Table 1a - 4th Quarterly Groundwater VOC Analytical Results

Sample ID:	MW1-4/4	MW2-4/4	MW3-4/4	MW4-4/4	MW5-4/4	MW6-4/4	MW6-4/4D	Groundwater Quality Standards	
Date:	6/16/2021							NR 140 ES	NR 140 PAL
Depth to Water (ft):	9.95	9.61	9.6	8.85	9.61	9.48	9.48	µg/L	µg/L
VOCs								µg/L	µg/L
Acetone	< 20	< 20	< 20	< 20	< 20	< 20	< 20	9000	1800
Benzene	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
Bromodichloromethane	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.6	0.06
Bromoform	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.4	0.44
Bromomethane	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	10	1
2-Butanone	< 20	< 20	< 20	< 20	< 20	< 20	< 20	NS	NS
Carbon disulfide	< 10	< 10	< 10	< 10	< 10	< 10	< 10	1000	NS
Carbon tetrachloride	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
Chlorobenzene	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NS	NS
Chloroethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	400	80
Chloroform	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6	0.6
Chloromethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	30	3
Dibromochloromethane	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	60	6
1,1-Dichloroethane	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	850	85
1,2-Dichloroethane	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
1,1-Dichloroethene	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7	0.7
cis-1,2-Dichloroethene	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	70	7
trans-1,2-Dichloroethene	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	100	20
1,2-Dichloropropane	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
cis-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.4	0.04
trans-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.4	0.04
Ethylbenzene	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	700	140
2-Hexanone	< 20	< 20	< 20	< 20	< 20	< 20	< 20	NS	NS
4-Methyl-2-pentanone	< 20	< 20	< 20	< 20	< 20	< 20	< 20	NS	NS
Methylene chloride	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
Methyl tert-butyl ether	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	60	12
Styrene	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	100	10
1,1,2,2-Tetrachloroethane	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.2	0.02
Tetrachloroethene	< 5.0	< 5.0	< 5.0	< 5.0	<b>34</b>	< 5.0	< 5.0	5	0.5
Toluene	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	800	160
1,1,1-Trichloroethane	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	200	40
1,1,2-Trichloroethane	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
Trichloroethene	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
Vinyl chloride	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	0.2	0.02
Xylene - total	< 15	< 15	< 15	< 15	< 15	< 15	< 15	2000	400

Notes:

NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard  
 NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit  
 NS = No Standard,  
 Sample ID with "- D" and "TB" refer to duplicate and trip blank, respectively

J - Analyte detected below reporting limit  
 All values in ug/L or ppb  
 Bold fonts/Shaded boxes indicate the levels exceed the NR 140 ES Quality Standards.

**Table 1a - 4th Quarterly Groundwater VOC Analytical Results**

Sample ID:	MW7-4/4	MW8-4/4	MW9-4/4	Trip Blank	Groundwater Quality Standards	
Date:	6/16/2021				NR 140 ES	NR 140 PAL
Depth to Water (ft):	9.61	9.72	9.82	NA		
VOCs					µg/L	µg/L
Acetone	< 20	< 20	< 20	< 20	9000	1800
Benzene	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
Bromodichloromethane	< 5.0	< 5.0	< 5.0	< 5.0	0.6	0.06
Bromoform	< 1.0	< 1.0	< 1.0	< 1.0	4.4	0.44
Bromomethane	< 5.0	< 5.0	< 5.0	< 5.0	10	1
2-Butanone	< 20	< 20	< 20	< 20	NS	NS
Carbon disulfide	< 10	< 10	< 10	< 10	1000	NS
Carbon tetrachloride	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
Chlorobenzene	< 5.0	< 5.0	< 5.0	< 5.0	NS	NS
Chloroethane	< 10	< 10	< 10	< 10	400	80
Chloroform	< 1.0	< 1.0	< 1.0	< 1.0	6	0.6
Chloromethane	< 10	< 10	< 10	< 10	30	3
Dibromochloromethane	< 5.0	< 5.0	< 5.0	< 5.0	60	6
1,1-Dichloroethane	< 5.0	< 5.0	< 5.0	< 5.0	850	85
1,2-Dichloroethane	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
1,1-Dichloroethene	< 5.0	< 5.0	< 5.0	< 5.0	7	0.7
cis-1,2-Dichloroethene	< 5.0	< 5.0	< 5.0	< 5.0	70	7
trans-1,2-Dichloroethene	< 5.0	< 5.0	< 5.0	< 5.0	100	20
1,2-Dichloropropane	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
cis-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0	0.4	0.04
trans-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0	0.4	0.04
Ethylbenzene	< 5.0	< 5.0	< 5.0	< 5.0	700	140
2-Hexanone	< 20	< 20	< 20	< 20	NS	NS
4-Methyl-2-pentanone	< 20	< 20	< 20	< 20	NS	NS
Methylene chloride	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
Methyl tert-butyl ether	< 5.0	< 5.0	< 5.0	< 5.0	60	12
Styrene	< 5.0	< 5.0	< 5.0	< 5.0	100	10
1,1,2,2-Tetrachloroethane	< 5.0	< 5.0	< 5.0	< 5.0	0.2	0.02
Tetrachloroethene	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
Toluene	< 5.0	< 5.0	< 5.0	< 5.0	800	160
1,1,1-Trichloroethane	< 5.0	< 5.0	< 5.0	< 5.0	200	40
1,1,2-Trichloroethane	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
Trichloroethene	< 5.0	< 5.0	< 5.0	< 5.0	5	0.5
Vinyl chloride	< 2.0	< 2.0	< 2.0	< 2.0	0.2	0.02
Xylene - total	< 15	< 15	< 15	< 15	2000	400

Notes:

NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard  
 NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit  
 NS = No Standard,  
 Sample ID with " - D" and "TB" refer to duplicate and trip blank, respectively

J - Analyte detected below reporting limit  
 All values in ug/L or ppb  
 Bold fonts/Shaded boxes indicate the levels exceed the NR 140 ES Quality Standards.





Table 2a - 4th Quarterly Soil Gas VOC Analytical Results

Sample ID:	SV1-4/4	SV2-4/4	SV3-4/4	SV4-4/4	SV5-4/4	SV6-4/4	SV7-4/4	SV3-4/4D	Indoor Air Vapor Action Levels (VAL)*		Vapor Risk Screening Levels (VRSL)*	
Date:	6/16/2021								Residential	Commercial	Residential	Commercial
VOCs									µg/m³	µg/m³	µg/m³	µg/m³
1,1,1-Trichloroethane	< 3.9	< 4.0	< 4.4	< 5.3	< 3.3	< 3.3	< 3.5	< 4.0	5210	21900	174000	730000
1,1,2-Trichloroethane	< 3.9	< 4.0	< 4.4	< 5.3	< 3.3	< 3.3	< 3.5	< 4.0	0.209	0.876	6.95	29.2
1,1-Dichloroethane	< 2.8	< 2.9	< 3.2	< 3.8	< 2.4	< 2.4	< 2.5	< 2.9	17.5	76.7	585	2560
1,1-Dichloroethene	< 2.8	< 2.9	< 3.2	< 3.8	< 2.4	< 2.4	< 2.5	< 2.9	209	876	6950	29200
1,2,4-Trichlorobenzene	< 5.3	< 5.5	< 6.0	< 7.2	< 4.5	< 4.5	< 4.8	< 5.5	2.09	8.76	69.5	292
1,2-Dibromoethane	< 5.3	< 5.5	< 6.0	< 7.2	< 4.5	< 4.5	< 4.8	< 5.5	0.0468	0.204	1.56	6.81
1,2-Dichlorobenzene	< 4.3	< 4.4	< 4.8	< 5.8	< 3.6	< 3.6	< 3.8	< 4.4	209	876	6950	29200
1,2-Dichloroethane	< 2.8	< 2.9	< 3.2	< 3.8	< 2.4	< 2.4	< 2.5	< 2.9	1.08	4.72	36	157
1,2-Dichloropropane	< 3.2	< 3.3	< 3.6	< 4.3	< 2.7	< 2.7	< 2.9	< 3.3	4.17	17.5	139	584
1,4-Dichlorobenzene	< 4.3	< 4.4	< 4.8	< 5.8	< 3.6	< 3.6	< 3.8	< 4.4	2.55	11.1	85.1	372
1,4-Dioxane	< 6.4	< 6.6	< 7.2	< 8.7	< 5.4	< 5.4	< 5.7	< 6.6	5.62	24.5	187	818
2-Butanone	5.7	6.9	< 6.0	< 7.2	< 4.5	< 4.5	< 4.8	< 5.5	NV	NV	NV	NV
Acetone	54	73	40	31	36	110	45	47	32200	135000	1070000	4510000
Benzene	4	4.1	5.1	3.1	3.1	< 1.8	3.4	2.9	3.6	15.7	120	524
Bromodichloromethane	< 4.6	< 4.8	< 5.2	< 6.2	< 3.9	< 3.9	< 4.1	< 4.8	0.759	3.31	25.3	110
Bromoform	< 19	< 19	< 21	< 25	< 15	< 16	< 17	< 19	25.5	111	851	3720
Bromomethane	< 6.8	< 7.0	< 7.6	< 9.1	< 5.7	< 5.7	< 6.0	< 7.0	5.21	21.9	174	730
Carbon disulfide	< 2.2	3.9	3.1	< 3.0	< 1.9	2	< 2.0	< 2.3	730	3070	24300	102000
Carbon tetrachloride	< 4.6	< 4.8	< 5.2	< 6.2	< 3.9	< 3.9	< 4.1	< 4.8	4.68	20.4	156	681
Chlorobenzene	< 3.2	< 3.3	< 3.6	< 4.3	< 2.7	< 2.7	< 2.9	< 3.3	52.1	219	1740	7300
Chloroform	6.3	15	< 4.0	< 4.8	12	< 3.0	< 3.2	< 3.7	1.22	5.33	40.7	178
cis-1,2-Dichloroethene	< 2.8	< 2.9	< 3.2	< 3.8	< 2.4	< 2.4	14	< 2.9	NS	NS	NS	NS
cis-1,3-Dichloropropene	< 3.2	< 3.3	< 3.6	< 4.3	< 2.7	< 2.7	< 2.9	< 3.3	NS	NS	NS	NS
Dibromochloromethane	< 6.1	< 6.2	< 6.8	< 8.2	< 5.1	< 5.1	< 5.4	< 6.2	NS	NS	NS	NS
Dichlorodifluoromethane	< 3.6	< 3.7	< 4.0	< 4.8	3.2	< 3.0	< 3.2	< 3.7	104	438	3480	14600
Ethylbenzene	13	11	15	9.2	9.1	3.4	12	8.1	11.2	49.1	374	1640
Isopropyl Alcohol	1900	410	450	190	360	200	390	820	209	876	6950	29200
m,p-Xylene	45	46	63	41	< 38	14	51	35	104	438	3480	14600
Methyl tert-butyl ether	< 2.5	< 2.6	< 2.8	< 3.4	< 2.1	< 2.1	< 2.2	< 2.6	108	472	3600	15700
Methylene chloride	< 25	< 25	42	< 33	< 21	< 21	< 22	260	626	2630	20900	87600
Naphthalene	5	7.5	7.5	7.3	6.2	3.9	9	6.3	0.826	3.61	27.5	120
o-Xylene	16	16	22	14	13	5.4	18	13	104	438	3480	14600
Styrene	< 3.2	< 3.3	< 3.6	< 4.3	< 2.7	< 2.7	< 2.9	< 3.3	1040	4380	34800	146000
Tetrachloroethene	48	68	<b>200</b>	86	97	12	<b>30000</b>	<b>200</b>	41.7	<b>175</b>	1390	<b>5840</b>
Toluene	59	48	70	38	38	15	47	35	5210	21900	174000	730000
trans-1,2-Dichloroethene	< 2.8	< 2.9	< 3.2	< 3.8	< 2.4	< 2.4	< 2.5	< 2.9	NS	NS	NS	NS
trans-1,3-Dichloropropene	< 3.2	< 3.3	< 3.6	< 4.3	< 2.7	< 2.7	< 2.9	< 3.3	NS	NS	NS	NS
Trichloroethene	< 3.9	< 4.0	4.7	< 5.3	< 3.3	< 3.3	<b>350</b>	4.5	2.09	<b>8.76</b>	69.5	292
Trichlorofluoromethane	< 3.9	< 4.0	< 4.4	< 5.3	< 3.3	< 3.3	< 3.5	< 4.0	NS	NS	NS	NS
Vinyl acetate	< 25	< 26	< 28	< 34	< 21	< 21	< 22	< 26	209	876	6950	29200
Vinyl chloride	< 1.8	< 1.8	< 2.0	< 2.4	< 1.5	< 1.5	< 1.6	< 1.8	1.68	27.9	55.9	929
Xylenes, Total	62	63	85	56	51	19	69	48	104	438	3480	14600

Notes:

\* US EPA Vapor Intrusion Screening Levels (VISL) Calculator (Default Results)

J - Analyte detected below reporting limit

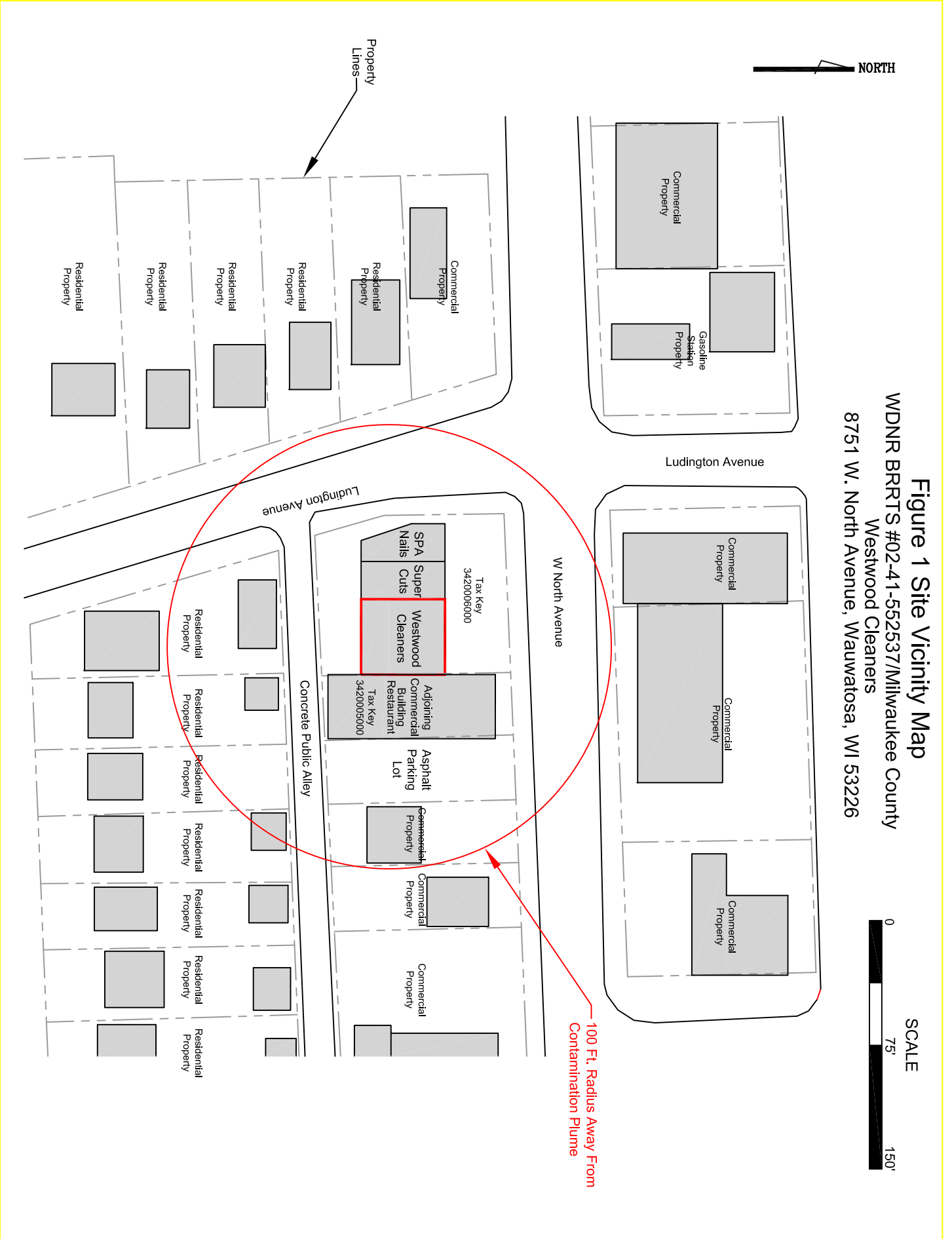
Bold fonts/Shaded boxes indicate the levels exceed the VRSL (Commercial) Quality Standards.

Table 2b - All Soil Gas VOC Analytical Results

TABULATION OF SAMPLE ANALYTICAL RESULTS	VOCS ↓	Analytical Results (µg/m³) ↓																																										
		1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2-Dibromochloroethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	2-Butanone	Acetone	Benzene	Bromodichloromethane	Bromofom	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropyl Alcohol	m,p-Xylene	Methyl tert-butyl ether	Methylene chloride	Naphthalene	o-Xylene	Styrene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	Xylene - total	
Indoor Air Vapor Action Levels (VAL)*	Residential	5210	0.209	17.5	209	2.09	0.047	209	1.08	4.17	2.55	5.62	NV	32200	3.6	0.759	25.5	5.21	730	4.68	52.1	1.22	NS	NS	NS	104	11.2	209	104	108	626	0.826	104	1040	41.7	5210	NS	NS	2.09	NS	NS	209	1.68	104
	Commercial	21900	0.876	76.7	876	8.76	0.204	876	4.72	17.5	11.1	24.5	NV	135000	1.57	3.31	111	21.9	3070	20.4	219	5.33	NS	NS	NS	438	49.1	876	438	472	2630	3.61	438	4380	175	21900	NS	NS	8.76	NS	NS	876	27.9	438
Vapor Risk Screening Levels (VRSL)*	Residential	174000	6.95	585	6950	69.5	1.56	6950	36	139	85.1	187	NV	1070000	120	25.3	851	174	24300	156	1740	40.7	NS	NS	NS	3480	374	6950	3480	3600	20900	27.5	3480	34800	1390	174000	NS	NS	69.5	NS	NS	6950	55.9	3480
	Commercial	730000	29.2	2560	29200	292	6.81	29200	157	584	372	818	NV	4510000	524	110	3720	730	102000	681	7300	178	NS	NS	NS	14600	1640	29200	14600	15700	87600	120	14600	146000	5840	730000	NS	NS	292	NS	NS	29200	929	14600
Sample ID ↓	Sampling Date ↓																																											
SV1	09/19/2018	<3.7	<3.7	<2.7	<2.7	<5.0	<5.0	<4.0	<2.7	<3.0	<4.0	<6.0	<5.0	<16	3.7	<4.3	<1.7	<6.3	7	<4.3	<3.0	<3.3	<2.7	<3.0	<5.7	<3.3	10	--	35	<2.3	<2.3	<0.99	13	15	17	57	<2.7	<3.0	<3.7	<3.7	<2.3	<1.7	49	
	07/28/2020	<3.4	<3.4	<2.5	<2.5	<4.6	<4.6	<3.7	<2.5	<2.8	<3.7	<5.6	<4.6	170	2.3	<4	<16	<5.9	6.9	<4	<2.8	<5.1	<2.5	<2.8	<5.2	<3.1	7.2	4400	29	<2.2	<2.1	5.7	11	11	35	29	<2.5	<2.8	<3.4	<3.4	<2.2	<1.5	40	
	12/08/2020	<1.6	<1.6	<1.1	<1.1	2.5	<2.1	<1.7	<1.1	<1.3	<1.7	<2.6	2.4	9.6	<0.86	<1.9	<7.4	<2.7	0.89	<2.9	<1.3	7	<1.1	<1.3	<2.4	4.5	3	46	14	<1.0	<0.99	4.2	4.6	<1.3	43	11	<1.1	<1.3	<1.6	<1.6	<1.0	<0.71	<1.8	
	03/26/2021	<4.7	<4.7	<3.5	<3.4	<6.4	<6.7	<5.2	<3.5	<4.0	<5.2	<7.8	<6.4	44	<2.8	<5.8	<2.2	<8.4	<2.7	<5.5	<4.0	5.5	<3.4	<3.9	<7.4	<4.3	6.2	520	26	<3.1	<3.0	8.9	10	<3.7	33	24	<3.4	<3.9	<4.7	<4.9	<3.1	<2.2	37	
06/16/2021	<3.9	<3.9	<2.8	<2.8	<5.3	<5.3	<4.3	<2.8	<3.2	<4.3	<6.4	5.7	54	4	<4.6	<19	<6.8	<2.2	<4.6	<3.2	6.1	<2.8	<3.2	<6.1	<3.6	13	1900	45	<2.5	<2.5	5	16	<3.2	48	59	<2.8	<3.2	<3.9	<3.9	<2.5	<1.8	62		
SV2	09/19/2018	<4.0	<4.0	<2.9	<2.9	<5.5	<5.5	<4.4	<2.9	<3.3	<4.4	<6.6	6.5	<18	5.2	<4.8	<1.9	<7.0	15	<4.8	<3.3	8.4	<2.9	<3.3	<6.2	<3.7	12	--	40	<2.6	<2.5	<1.1	13	15	1200	62	<2.9	<3.3	100	<4.0	<2.6	<1.8	54	
	07/28/2020	<8.5	<8.5	<6.2	<6.2	<12	<12	<9.2	<6.2	<6.9	<9.2	<14	35	180	8.8	<10	<40	<15	11	<10	<6.9	<7.7	<6.2	<6.9	<13	<5.4	<5.3	<7.7	<6.9	<6.9	1900	14	<6.2	<6.9	80	<8.5	<5.4	<3.8	<2.0					
	12/08/2020	<1.6	<1.6	<1.1	<1.1	2.8	<2.5	<3.0	<1.3	<1.5	<2.0	<3.0	<2.5	11	<0.99	<2.1	<8.6	<3.1	<1.0	<2.1	<1.5	<1.7	<1.3	<1.5	<2.8	4.6	1.5	11	7.8	<1.2	<1.1	3.6	2.8	<1.5	32	5.6	<1.3	<1.5	<1.8	<1.2	<0.73	11		
	03/26/2021	<4.7	<4.7	<3.5	<3.4	<6.4	<6.7	<5.2	<3.5	<4.0	<5.2	<7.8	<6.4	<21	<2.8	<5.8	<2.2	<8.4	<2.7	<5.5	<4.0	8.7	<3.4	<3.9	<7.4	<4.3	<3.8	130	8.3	<3.1	<3.0	<4.5	<3.8	<3.7	520	6.9	<3.4	<3.9	7	<4.9	<3.1	<2.2	12	
06/16/2021	<4.0	<4.0	<2.9	<2.9	<5.5	<5.5	<4.4	<2.9	<3.3	<4.4	<6.6	6.9	73	4.1	<4.8	<1.9	<7.0	3.9	<4.8	<3.3	1.5	<2.9	<3.3	<6.2	<3.7	11	410	46	<2.6	<2.5	7.5	16	<3.3	68	48	<2.9	<3.3	<4.0	<4.0	<2.6	<1.8	63		
12/08/2020	<2.4	<2.4	<1.7	<1.7	<3.3	<3.3	<2.6	<1.7	<2.0	<2.3	<3.3	13	<1.3	<2.8	<1.1	<4.1	<1.4	<2.8	<2.0	<2.2	<1.7	<2.0	<3.7	4.2	4.5	4.5	21	<1.5	<1.5	3.6	7.7	<2.0	79	17	<1.7	<2.0	<2.4	<2.4	<1.5	<1.1	29			
SV2-D	09/16/2018	<3.9	<3.9	<2.9	<2.9	5.4	5.4	4.3	2.9	3.2	4.3	6.5	6.4	34	2.5	0.96J	<1.9	<6.8	19	<4.7	<3.2	2.3	<2.9	<3.2	<6.1	0.35J	4.7	1200	17	<2.5	8.1J	<3.6	6.9	7.2	300	22	<2.9	<3.2	4.2	0.81J	<2.5	<1.8	24	
	07/28/2020	<8.4	<8.4	<6.1	<6.1	<11	<11	<9.2	<6.1	<6.9	<9.2	<14	<11	45	<4.6	<9.9	<4.0	<14	<4.8	<9.9	<6.9	<7.6	<6.1	<6.9	<13	<7.6	<6.9	850	<13	<5.3	<5.3	<7.6	<6.9	<6.9	790	<6.1	<6.9	14	<8.4	<5.3	<3.8	<2.0		
	12/08/2020	<1.9	<1.9	<1.4	<1.4	<2.6	<2.6	<3.1	<1.4	<1.6	<2.1	<3.1	9.6	30	1.7	<2.2	<9.0	<3.3	1.8	<2.2	<1.6	1.9	<1.4	<1.6	<2.9	4.1	7.7	410	37	<1.2	<1.2	4	13	<1.6	130	31	<1.4	<1.6	2	<1.9	<1.2	<0.86	50	
	03/26/2021	<4.0	<4.0	<3.0	<2.9	<5.5	<5.7	<4.4	<3.0	<3.4	<4.4	<6.6	<5.4	51	<2.7	<4.9	<19	<7.2	<2.3	<4.6	<3.4	<3.6	<2.9	<3.3	<6.3	<3.6	5.8	1700	24	<2.7	<2.6	<3.9	9	<3.1	120	21	<2.9	<3.3	<4.0	<4.1	<2.6	<1.9	33	
06/16/2021	<4.4	<4.4	<3.2	<3.2	<6.0	<6.0	<4.8	<3.2	<3.6	<4.8	<7.2	<6.0	40	5.1	<5.2	<21	<7.6	3.1	<5.2	<3.6	<4.0	<3.2	<3.6	<6.8	<4.0	15	450	63	<2.8	4.2	7.5	22	<3.6	200	70	<3.2	<3.6	4.7	<4.4	<2.8	<2.0	85		
SV3-D	09/16/2018	<9.1	<9.1	<6.6	<6.6	<12	<12	<9.9	<6.6	<7.4	<9.9	<15	<12	25J	2.9J	1.1J	<4.3	<16	<5.1	<11	<7.4	2J	<6.2	<7.4	<14	<8.3	2.2J	900	8.6J	<5.8	33J	<8.3	3.6J	3.2J	300	11	<6.6	<7.4	3.6J	0.93J	<5.8	<4.1	12	
	06/16/2021	<4.0	<4.0	<2.9	<2.9	<5.5	<5.5	<4.4	<2.9	<3.3	<4.4	<6.6	<5.5	47	2.9	<4.8	<1.9	<7.0	<2.3	<4.8	<3.3	<3.7	<2.9	<3.3	<6.2	<3.7	8.1	820	35	<2.6	260	6.3	13	<3.3	200	35	<2.9	<3.3	4.5	<4.0	<2.6	<1.8	48	
	09/19/2018	<4.1	<4.1	<3.0	<3.0	<5.6	<5.6	<4.4	<3.0	<3.3	<4.4	<6.7	<5.6	150	<2.2	<4.8	<1.9	<7.0	5.5	<4.8	<3.3	<3.7	<3.0	<3.3	<6.3	<3.7	4.7	--	17	<2.6	<2.6	<1.1	6.9	8.5	52	21	<3.0	<3.3	<4.1	<4.1	<2.6	<1.9	24	
	07/28/2020	<8.5	<8.5	<6.2	<6.2	<12	<12	<9.3	<6.2	<7.0	<9.3	<14	<12	160	<4.7	<1.0	<40	<15	8	<10	<7	<7.8	<6.2	<7	<13	<7.8	8.8	5500	35	<5.4	<5.4	9.4	13	13	460	32	<6.2	<7	<8.5	<8.5	<5.4	<3.9	49	
12/08/2020	<1.9	<1.9	<1.4	<1.4	<2.7	<2.7	<2.1	<1.4	<1.6	<2.1	<3.2	3.6	10	<1.1	<2.3	<9.2	<3.4	<1.1	<2.3	<1.6	2.4	<1.4	<1.6	<3.0	4	3.4	130	16	<1.2	<1.2	4.4	6.7	<1.6	160	10	<1.4	<1.6	<1.9	<1.9	<1.2	<0.88	22		
03/26/2021	<4.4	<4.4	<3.3	<3.2	<6.0	<6.2	<4.9	<3.3	<3.7	<4.9	<7.3	<6.0	46	<2.6	<5.4	<2.1	<7.9	<2.5	<5.1	<3.7	<4.0	<3.2	<3.7	<6.9	<4.0	6.9	780	33	<2.9	<2.8	5.5	13	<3.5	20	31	<3.2	<3.7	<4.4	<4.6	<2.9				

# FIGURES

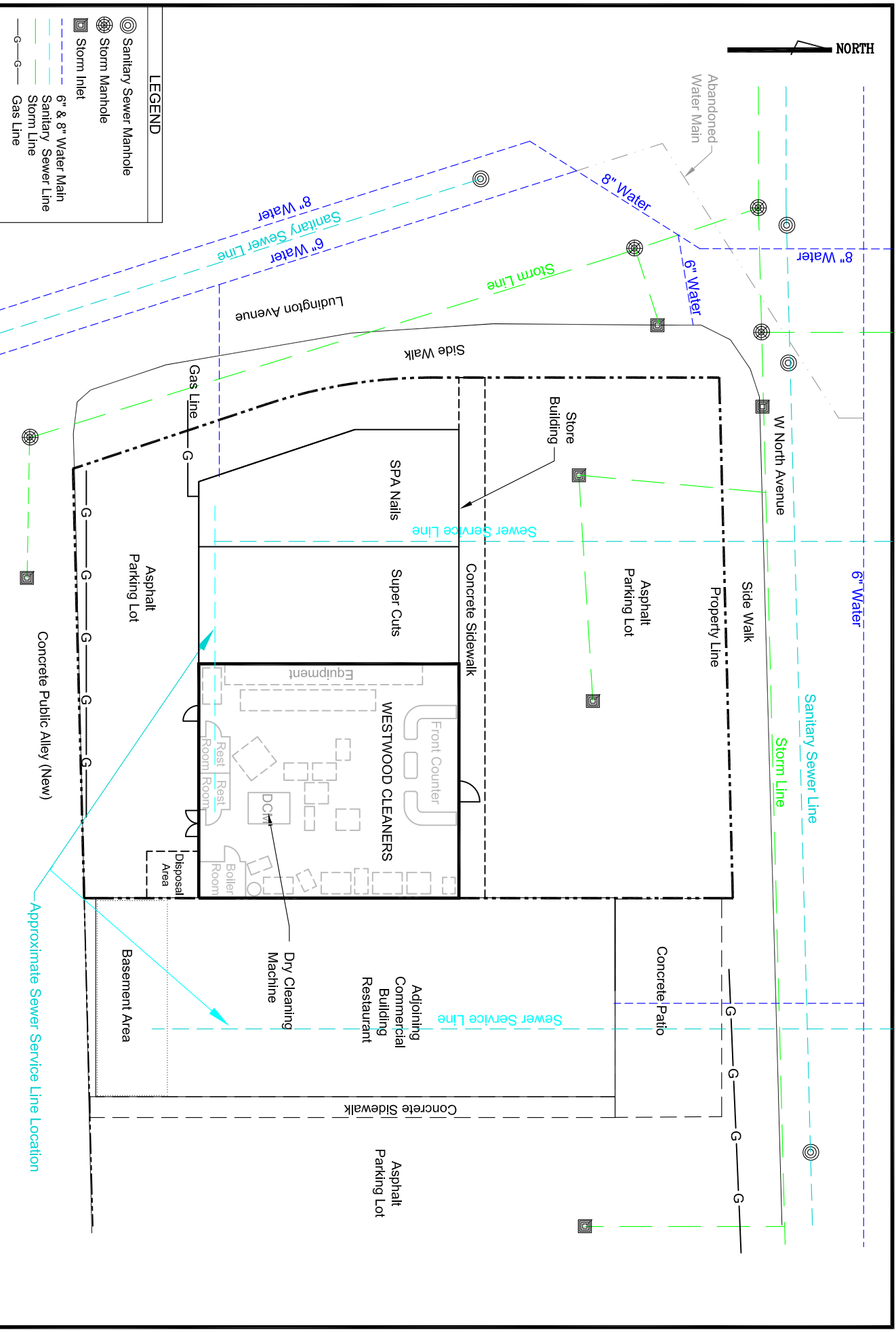
**Figure 1 Site Vicinity Map**  
WDNR BRRTS #02-41-552537/Milwaukee County  
Westwood Cleaners  
8751 W. North Avenue, Wauwatosa, WI 53226



100 Ft. Radius Away From Contamination Plume

Property Lines

NORTH



LEGEND

- Sanitary Sewer Manhole
- Storm Manhole
- Storm Inlet
- 6" & 8" Water Main
- Sanitary Sewer Line
- Storm Line
- Gas Line

SITE NAME Westwood Dry Cleaners (#02-41-552537) FIGURE NO. 1a

FIGURE NAME Site Utility Line Location Map

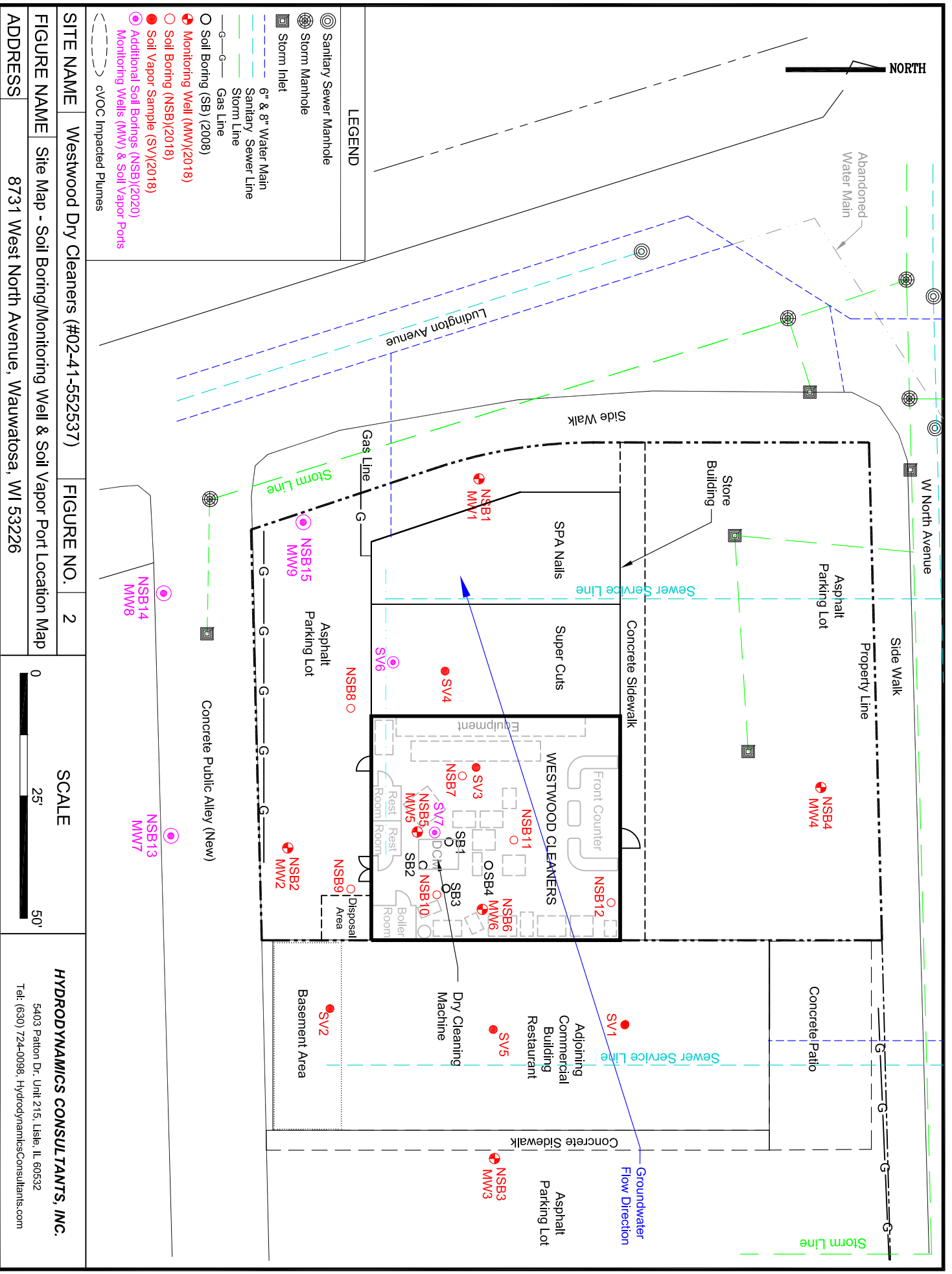
ADDRESS 8731 West North Avenue, Wauwatosa, WI 53226

SCALE



**HYDRODYNAMICS CONSULTANTS, INC.**

5403 Paton Dr., Unit 215, Lisle, IL 60532  
Tel: (630) 724-0098, HydrodynamicsConsultants.com



**LEGEND**

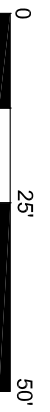
- Sanitary Sewer Manhole
- Storm Manhole
- Storm Inlet
- 6" & 8" Water Main
- Sanitary Sewer Line
- Storm Line
- Gas Line
- Soil Boring (SB) (2008)
- Monitoring Well (MW)(2018)
- Soil Boring (NSB)(2018)
- Soil Vapor Sample (SV)(2018)
- Additional Soil Borings (NSB)(2020)
- Monitoring Wells (MW) & Soil Vapor Ports
- cVOC Impacted Plumes

**SITE NAME** Westwood Dry Cleaners (#02-41-552537) **FIGURE NO.** 2

**FIGURE NAME** Site Map - Soil Boring/Monitoring Well & Soil Vapor Port Location Map

**ADDRESS** 8731 West North Avenue, Wauwatosa, WI 53226

**SCALE**

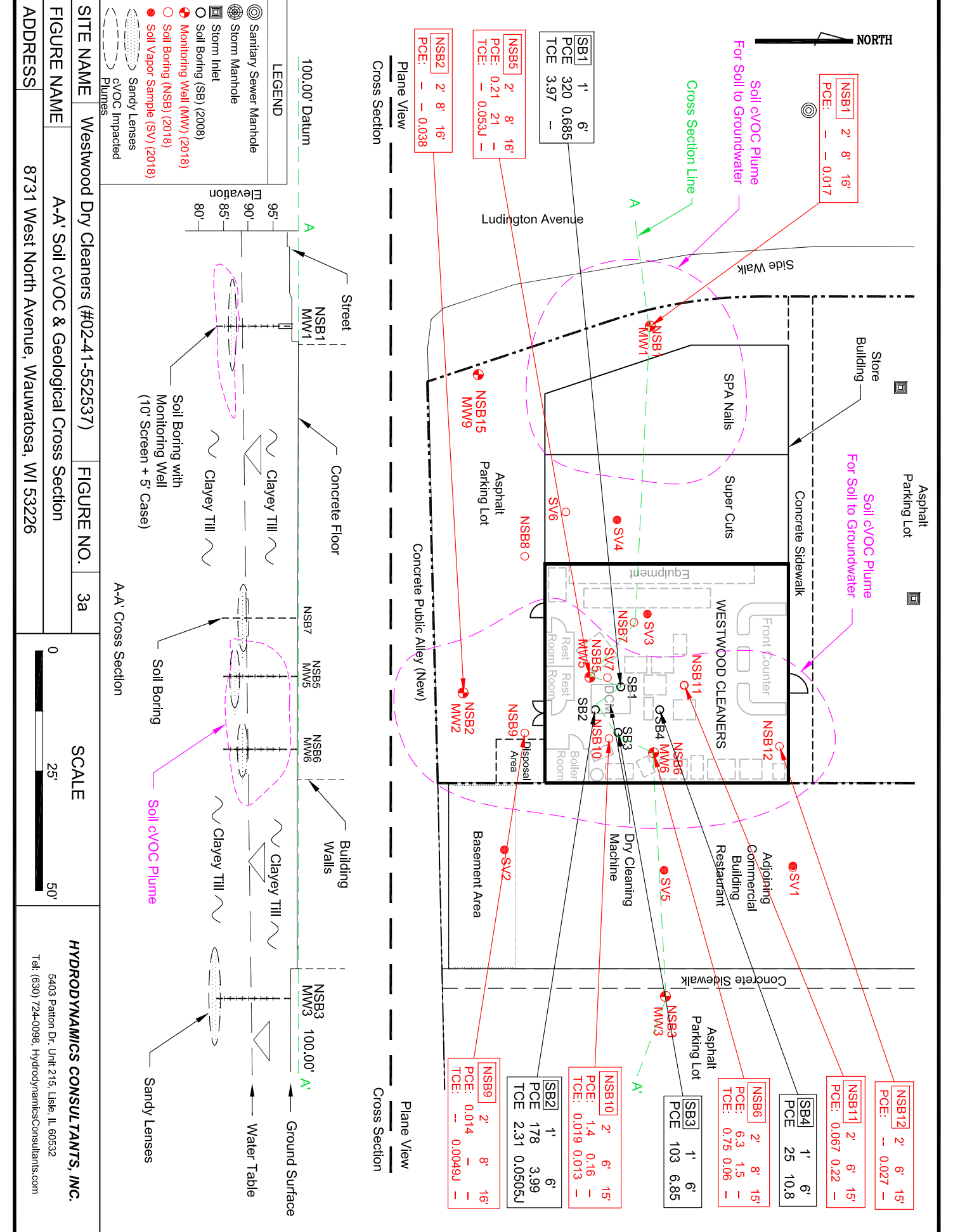


**HYDRODYNAMICS CONSULTANTS, INC.**

5403 Patton Dr., Unit 215, Lisle, IL 60532  
 Tel: (630) 724-0098, HydrodynamicsConsultants.com







<b>SITE NAME</b>	Westwood Dry Cleaners (#02-41-552537)	<b>FIGURE NO.</b>	3a
<b>FIGURE NAME</b>	A-A' Soil cVOC & Geological Cross Section		
<b>ADDRESS</b>	8731 West North Avenue, Wauwatosa, WI 53226		

<b>SCALE</b>	0 25' 50'
<b>HYDRODYNAMICS CONSULTANTS, INC.</b>	5403 Patton Dr., Unit 215, Little, IL 60532 Tel: (630) 724-0098, HydrodynamicsConsultants.com

<b>SB1</b>	1'	6'	
PCE	320	0.685	
TCE	3.97	--	
<b>NSB5</b>	2'	8'	16'
PCE:	0.21	21	--
TCE:	--	0.053J	--
<b>NSB2</b>	2'	8'	16'
PCE:	--	--	0.038
<b>SB2</b>	1'	6'	
PCE	178	3.99	
TCE	2.31	0.0505J	
<b>NSB9</b>	2'	8'	16'
PCE:	0.014	--	--
TCE:	--	0.0049J	--
<b>NSB12</b>	2'	6'	15'
PCE:	--	0.027	--
<b>NSB11</b>	2'	6'	15'
PCE:	0.067	0.22	--
<b>SB4</b>	1'	6'	
PCE	25	10.8	
<b>NSB6</b>	2'	8'	15'
PCE:	6.3	1.5	--
TCE:	0.75	0.06	--
<b>SB3</b>	1'	6'	
PCE	103	6.85	
<b>NSB10</b>	2'	6'	15'
PCE:	1.4	0.16	--
TCE:	0.019	0.013	--

**LEGEND**

- Sanitary Sewer Manhole
- Storm Manhole
- Storm Inlet
- Soil Boring (SB) (2008)
- Monitoring Well (MW) (2018)
- Soil Boring (NSB) (2018)
- Soil Vapor Sample (SV) (2018)
- Sandy Lenses
- cVOC Impacted Plumes

**100.00' Datum**

**Plane View**

**Cross Section**

**Plane View**

**Cross Section**

**Soil cVOC Plume For Soil to Groundwater**

**Cross Section Line**

**Soil cVOC Plume For Soil to Groundwater**

**Soil Boring with Monitoring Well (10' Screen + 5' Case)**

**Soil Boring**

**Soil cVOC Plume**

**Sandy Lenses**

**Ground Surface**

**Water Table**

**Sanitary Sewer Manhole**

**Storm Manhole**

**Storm Inlet**

**Soil Boring (SB) (2008)**

**Monitoring Well (MW) (2018)**

**Soil Boring (NSB) (2018)**

**Soil Vapor Sample (SV) (2018)**

**Sandy Lenses**

**cVOC Impacted Plumes**

**100.00' Datum**

**Plane View**

**Cross Section**

**Plane View**

**Cross Section**

**Soil cVOC Plume For Soil to Groundwater**

**Cross Section Line**

**Soil cVOC Plume For Soil to Groundwater**

**Soil Boring with Monitoring Well (10' Screen + 5' Case)**

**Soil Boring**

**Soil cVOC Plume**

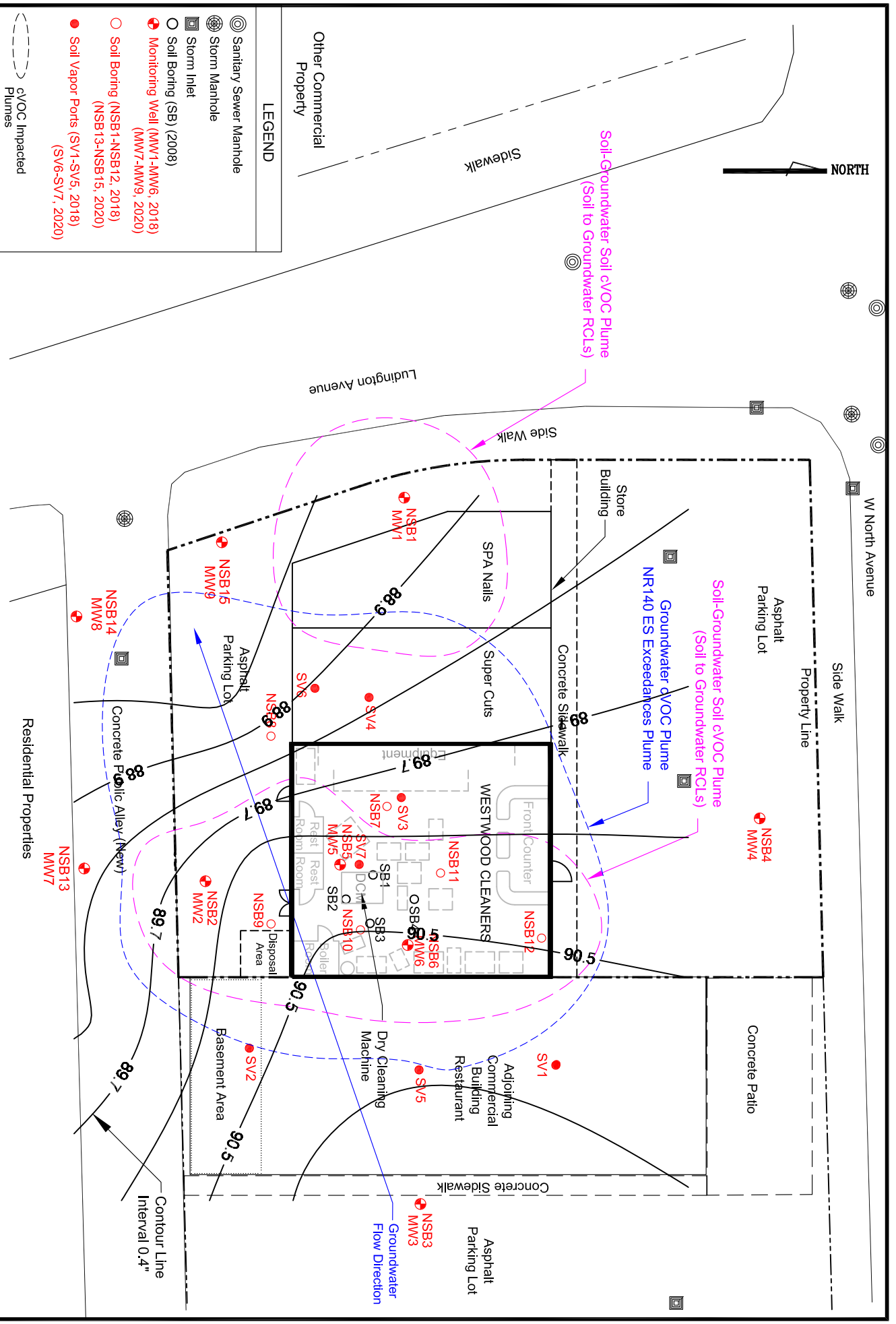
**Sandy Lenses**

**Ground Surface**

**Water Table**





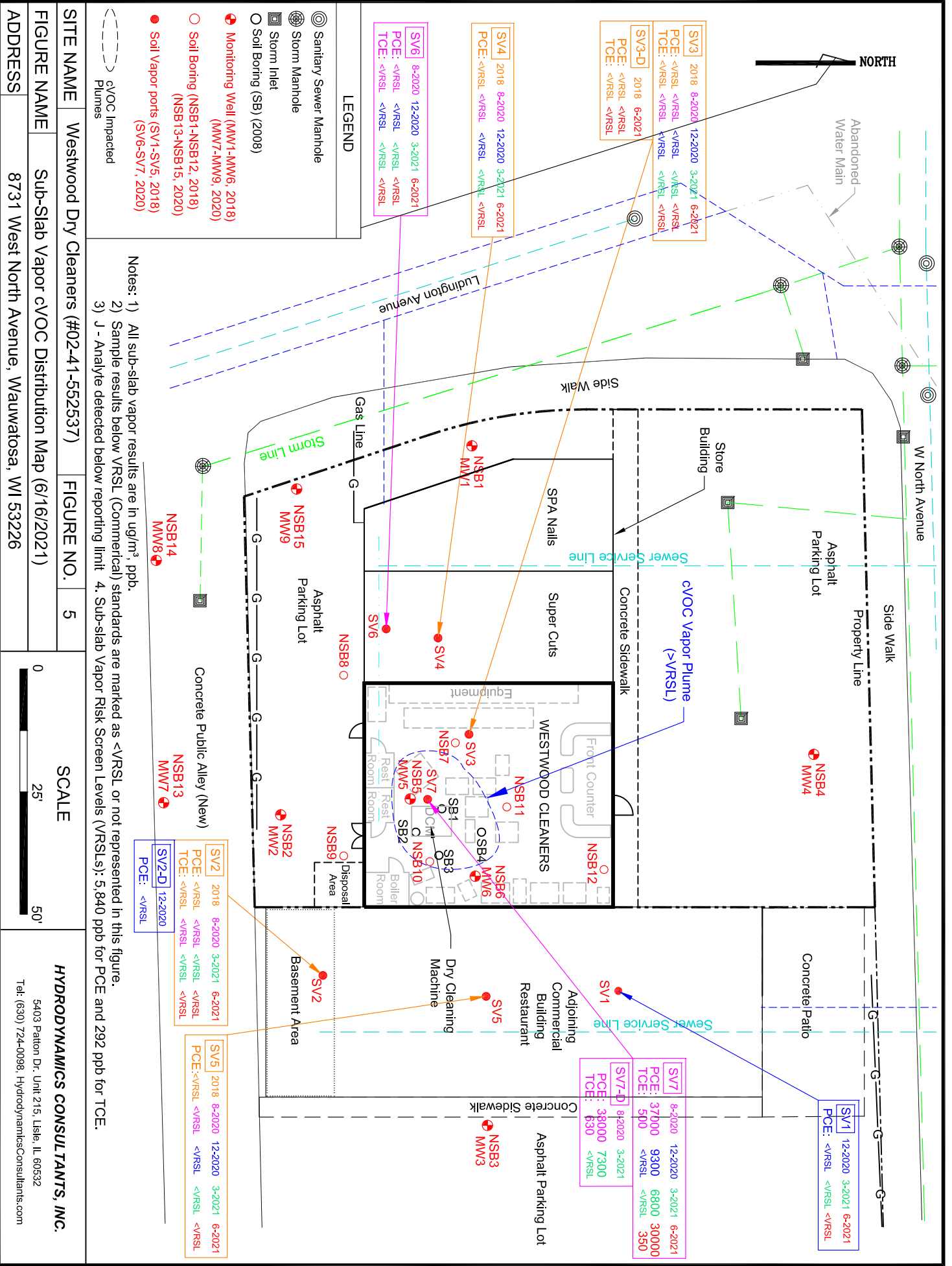


<b>SITE NAME</b>	Westwood Dry Cleaners (#02-41-552537)	<b>FIGURE NO.</b>	4b
<b>FIGURE NAME</b>	Groundwater Table Contour Map (6/16/2021)		
<b>ADDRESS</b>	8731 West North Avenue, Wauwatosa, WI 53226		

**SCALE**



**HYDRODYNAMICS CONSULTANTS, INC.**  
 5403 Paton Dr. Unit 215, Lisle, IL 60532  
 Tel: (630) 724-0098, HydrodynamicsConsultants.com



NORTH

Abandoned Water Main

W North Avenue

Side Walk

Property Line

Asphalt Parking Lot

Store Building

cVOC Vapor Plume (>VRSL)

Side Walk

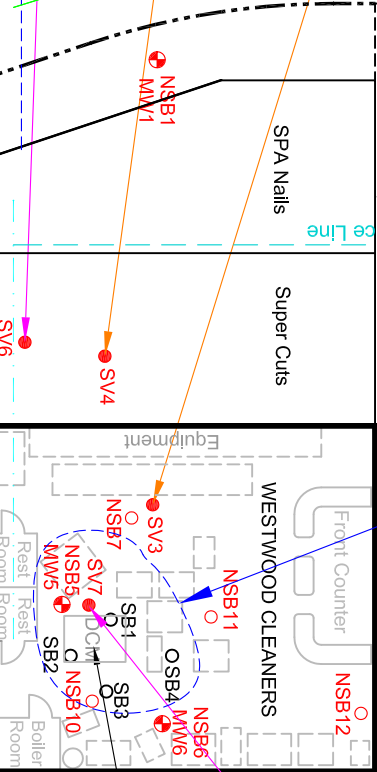
SPA Nails

Super Cuts

WESTWOOD CLEANERS

Adjoining Commercial Restaurant

Asphalt Parking Lot



**SV3** 2018 8-2020 12-2020 3-2021 6-2021  
 PCE: <VRSL <VRSL <VRSL <VRSL <VRSL  
 TCE: <VRSL <VRSL <VRSL <VRSL <VRSL  
**SV3-D** 2018 6-2021  
 PCE: <VRSL <VRSL <VRSL  
 TCE: <VRSL <VRSL <VRSL

**SV4** 2018 8-2020 12-2020 3-2021 6-2021  
 PCE: <VRSL <VRSL <VRSL <VRSL <VRSL  
 TCE: <VRSL <VRSL <VRSL <VRSL <VRSL

**SV6** 8-2020 12-2020 3-2021 6-2021  
 PCE: <VRSL <VRSL <VRSL <VRSL <VRSL  
 TCE: <VRSL <VRSL <VRSL <VRSL <VRSL

**SV1** 12-2020 3-2021 6-2021  
 PCE: <VRSL <VRSL <VRSL  
**SV7** 8-2020 12-2020 3-2021 6-2021  
 PCE: 37000 9300 6800 30000  
 TCE: 500 <VRSL <VRSL 350  
**SV7-D** 8-2020 3-2021  
 PCE: 38000 7300 <VRSL  
 TCE: 630 <VRSL

**SV5** 2018 8-2020 12-2020 3-2021 6-2021  
 PCE: <VRSL <VRSL <VRSL <VRSL <VRSL  
 TCE: <VRSL <VRSL <VRSL <VRSL <VRSL

**NSB14** MW8

**NSB13** MW7

**SV2-D** 12-2020  
 PCE: <VRSL

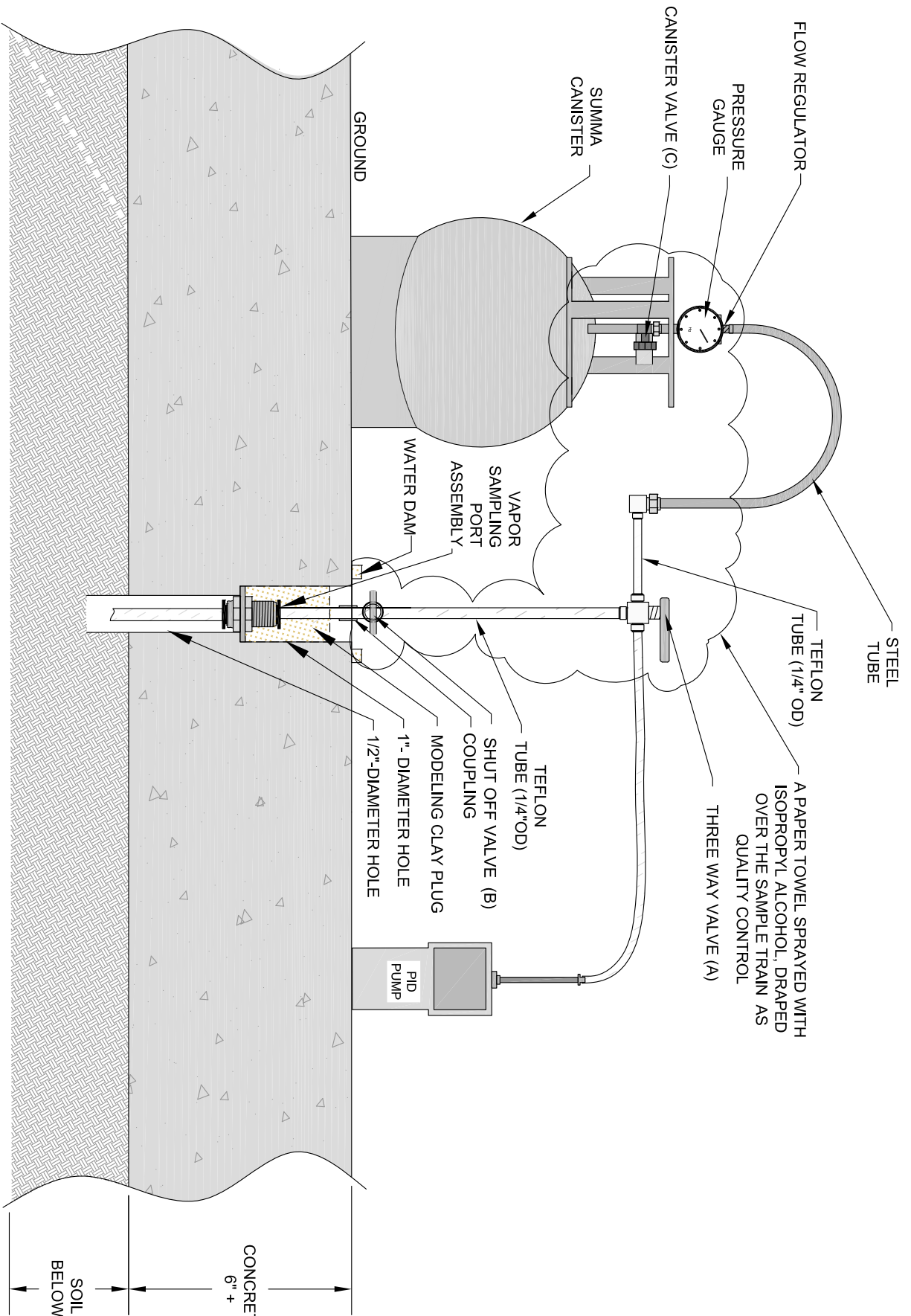
**SV5** 2018 8-2020 12-2020 3-2021 6-2021  
 PCE: <VRSL <VRSL <VRSL <VRSL <VRSL  
 TCE: <VRSL <VRSL <VRSL <VRSL <VRSL

**SITE NAME** Westwood Dry Cleaners (#02-41-552537) **FIGURE NO.** 5

**FIGURE NAME** Sub-Slab Vapor cVOC Distribution Map (6/16/2021)

**ADDRESS** 8731 West North Avenue, Wauwatosa, WI 53226

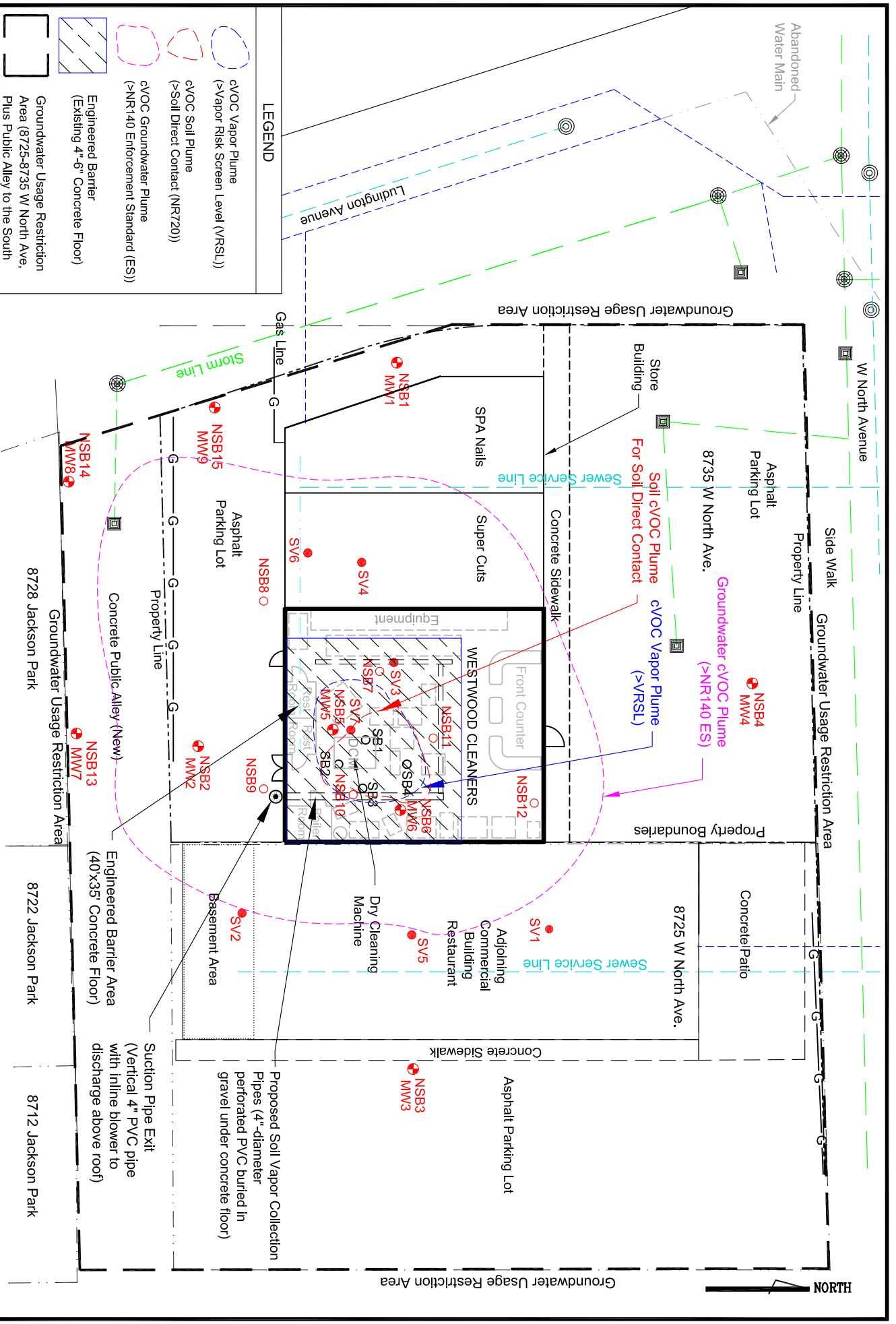




SITE NAME	Westwood Dry Cleaners (#02-41-552537)	FIGURE NO.	5b
FIGURE NAME	Sub-Slab Soil Gas Sampling Diagram		
ADDRESS	8731 West North Avenue, Wauwatosa, WI 53226		

NOT TO SCALE

**HYDRODYNAMICS CONSULTANTS, INC.**  
 5403 Patton Dr. Unit 215, Lisle, IL 60532  
 Tel: (630) 724-0098



**LEGEND**

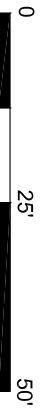
- cVOC Vapor Plume (>Vapor Risk Screen Level (VRSL))
- cVOC Soil Plume (>Soil Direct Contact (NR720))
- cVOC Groundwater Plume (>NR140 Enforcement Standard (ES))
- Engineered Barrier (Existing 4"x6" Concrete Floor)
- Engineered Barrier Area (8725-8735 W North Ave, Plus Public Alley to the South)

SITE NAME: Westwood Dry Cleaners (#02-41-552537)      FIGURE NO.: 6

FIGURE NAME: Site Risk Mitigation and Exposure Prevention System Map

ADDRESS: 8731 West North Avenue, Wauwatosa, WI 53226

**SCALE**



**HYDRODYNAMICS CONSULTANTS, INC.**

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 Tel: (630) 724-0098, HydrodynamicsConsultants.com





APPENDIX I  
SAMPLE CHAIN-OF-CUSTODY AND  
LABORATORY ANALYTICAL RESULTS

**STAT** Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

June 24, 2021

Hydrodynamics Consultants, Inc.  
5403 Patton Drive  
Lisle, IL 60532

Telephone: (630) 724-0098  
Fax: (800) 881-2051

Analytical Report for STAT Work Order: 21060592 Revision 0

RE: Westwood Cleaners, 8731 W. North Avenue, Wauwatosa, WI

Dear Hydrodynamics Consultants, Inc.:

STAT Analysis received 8 samples for the referenced project on 6/17/2021 2:10:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAP standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Justice Kwateng  
Project Manager

*The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples as received and tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.*

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**Client:** Hydrodynamics Consultants, Inc.**Project:** Westwood Cleaners, 8731 W. North Avenue, Wauwato**Work Order Sample Summary****Work Order:** 21060592 Revision 0

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Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
21060592-001A	SV1-4/4		6/16/2021 11:10:00 AM	6/17/2021
21060592-002A	SV2-4/4		6/16/2021 11:35:00 AM	6/17/2021
21060592-003A	SV3-4/4		6/16/2021 12:18:00 PM	6/17/2021
21060592-004A	SV4-4/4		6/16/2021 12:50:00 PM	6/17/2021
21060592-005A	SV5-4/4		6/16/2021 11:20:00 AM	6/17/2021
21060592-006A	SV6-4/4		6/16/2021 1:05:00 PM	6/17/2021
21060592-007A	SV7-4/4		6/16/2021 12:35:00 PM	6/17/2021
21060592-008A	SV3-4/4D		6/16/2021 12:50:00 PM	6/17/2021

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**CLIENT:** Hydrodynamics Consultants, Inc.  
**Project:** Westwood Cleaners, 8731 W. North Avenue, Wauwatosa, W  
**Work Order:** 21060592 Revision 0

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**CASE NARRATIVE**

TO-15 results that are reported in mg/m<sup>3</sup> are calculated based on a temperature of 25°C, atmospheric pressure of 760 mm Hg, and the molecular weight of the analyte.

**STAT Analysis Corporation**

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV1-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 11:10:00 AM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-001

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 6/17/2021		Analyst: MAS
1,1,1-Trichloroethane	ND	0.0039		mg/m <sup>3</sup>	2	6/17/2021
1,1,2-Trichloroethane	ND	0.0039		mg/m <sup>3</sup>	2	6/17/2021
1,1-Dichloroethane	ND	0.0028		mg/m <sup>3</sup>	2	6/17/2021
1,1-Dichloroethene	ND	0.0028		mg/m <sup>3</sup>	2	6/17/2021
1,2,4-Trichlorobenzene	ND	0.0053		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dibromoethane	ND	0.0053		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dichlorobenzene	ND	0.0043		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dichloroethane	ND	0.0028		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dichloropropane	ND	0.0032		mg/m <sup>3</sup>	2	6/17/2021
1,4-Dichlorobenzene	ND	0.0043		mg/m <sup>3</sup>	2	6/17/2021
1,4-Dioxane	ND	0.0064		mg/m <sup>3</sup>	2	6/17/2021
2-Butanone	0.0057	0.0053		mg/m <sup>3</sup>	2	6/17/2021
Acetone	0.054	0.017	*	mg/m <sup>3</sup>	2	6/17/2021
Benzene	0.0040	0.0021		mg/m <sup>3</sup>	2	6/17/2021
Bromodichloromethane	ND	0.0046		mg/m <sup>3</sup>	2	6/17/2021
Bromoform	ND	0.019		mg/m <sup>3</sup>	2	6/17/2021
Bromomethane	ND	0.0068		mg/m <sup>3</sup>	2	6/17/2021
Carbon disulfide	ND	0.0022		mg/m <sup>3</sup>	2	6/17/2021
Carbon tetrachloride	ND	0.0046		mg/m <sup>3</sup>	2	6/17/2021
Chlorobenzene	ND	0.0032		mg/m <sup>3</sup>	2	6/17/2021
Chloroform	0.0063	0.0036		mg/m <sup>3</sup>	2	6/17/2021
cis-1,2-Dichloroethene	ND	0.0028		mg/m <sup>3</sup>	2	6/17/2021
cis-1,3-Dichloropropene	ND	0.0032		mg/m <sup>3</sup>	2	6/17/2021
Dibromochloromethane	ND	0.0061		mg/m <sup>3</sup>	2	6/17/2021
Dichlorodifluoromethane	ND	0.0036		mg/m <sup>3</sup>	2	6/17/2021
Ethylbenzene	0.013	0.0032		mg/m <sup>3</sup>	2	6/17/2021
Isopropyl Alcohol	1.9	0.11		mg/m <sup>3</sup>	25	6/17/2021
m,p-Xylene	0.045	0.0061		mg/m <sup>3</sup>	2	6/17/2021
Methyl tert-butyl ether	ND	0.0025		mg/m <sup>3</sup>	2	6/17/2021
Methylene chloride	ND	0.025		mg/m <sup>3</sup>	2	6/17/2021
Naphthalene	0.0050	0.0036		mg/m <sup>3</sup>	2	6/17/2021
o-Xylene	0.016	0.0032		mg/m <sup>3</sup>	2	6/17/2021
Styrene	ND	0.0032		mg/m <sup>3</sup>	2	6/17/2021
Tetrachloroethene	0.048	0.0050		mg/m <sup>3</sup>	2	6/17/2021
Toluene	0.059	0.0028		mg/m <sup>3</sup>	2	6/17/2021
trans-1,2-Dichloroethene	ND	0.0028		mg/m <sup>3</sup>	2	6/17/2021
trans-1,3-Dichloropropene	ND	0.0032		mg/m <sup>3</sup>	2	6/17/2021
Trichloroethene	ND	0.0039		mg/m <sup>3</sup>	2	6/17/2021

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV1-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 11:10:00 AM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-001

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: <b>6/17/2021</b>		Analyst: <b>MAS</b>
Trichlorofluoromethane	ND	0.0039		mg/m <sup>3</sup>	2	6/17/2021
Vinyl acetate	ND	0.025		mg/m <sup>3</sup>	2	6/17/2021
Vinyl chloride	ND	0.0018		mg/m <sup>3</sup>	2	6/17/2021
Xylenes, Total	0.062	0.0093		mg/m <sup>3</sup>	2	6/17/2021

**Qualifiers:**

ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV2-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 11:35:00 AM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-002

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 6/17/2021		Analyst: MAS
1,1,1-Trichloroethane	ND	0.0040		mg/m <sup>3</sup>	2	6/17/2021
1,1,2-Trichloroethane	ND	0.0040		mg/m <sup>3</sup>	2	6/17/2021
1,1-Dichloroethane	ND	0.0029		mg/m <sup>3</sup>	2	6/17/2021
1,1-Dichloroethene	ND	0.0029		mg/m <sup>3</sup>	2	6/17/2021
1,2,4-Trichlorobenzene	ND	0.0055		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dibromoethane	ND	0.0055		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dichlorobenzene	ND	0.0044		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dichloroethane	ND	0.0029		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dichloropropane	ND	0.0033		mg/m <sup>3</sup>	2	6/17/2021
1,4-Dichlorobenzene	ND	0.0044		mg/m <sup>3</sup>	2	6/17/2021
1,4-Dioxane	ND	0.0066		mg/m <sup>3</sup>	2	6/17/2021
2-Butanone	0.0069	0.0055		mg/m <sup>3</sup>	2	6/17/2021
Acetone	0.073	0.018	*	mg/m <sup>3</sup>	2	6/17/2021
Benzene	0.0041	0.0022		mg/m <sup>3</sup>	2	6/17/2021
Bromodichloromethane	ND	0.0048		mg/m <sup>3</sup>	2	6/17/2021
Bromoform	ND	0.019		mg/m <sup>3</sup>	2	6/17/2021
Bromomethane	ND	0.0070		mg/m <sup>3</sup>	2	6/17/2021
Carbon disulfide	0.0039	0.0023		mg/m <sup>3</sup>	2	6/17/2021
Carbon tetrachloride	ND	0.0048		mg/m <sup>3</sup>	2	6/17/2021
Chlorobenzene	ND	0.0033		mg/m <sup>3</sup>	2	6/17/2021
Chloroform	0.015	0.0037		mg/m <sup>3</sup>	2	6/17/2021
cis-1,2-Dichloroethene	ND	0.0029		mg/m <sup>3</sup>	2	6/17/2021
cis-1,3-Dichloropropene	ND	0.0033		mg/m <sup>3</sup>	2	6/17/2021
Dibromochloromethane	ND	0.0062		mg/m <sup>3</sup>	2	6/17/2021
Dichlorodifluoromethane	ND	0.0037		mg/m <sup>3</sup>	2	6/17/2021
Ethylbenzene	0.011	0.0033		mg/m <sup>3</sup>	2	6/17/2021
Isopropyl Alcohol	0.41	0.0092		mg/m <sup>3</sup>	2	6/17/2021
m,p-Xylene	0.046	0.0062		mg/m <sup>3</sup>	2	6/17/2021
Methyl tert-butyl ether	ND	0.0026		mg/m <sup>3</sup>	2	6/17/2021
Methylene chloride	ND	0.025		mg/m <sup>3</sup>	2	6/17/2021
Naphthalene	0.0075	0.0037		mg/m <sup>3</sup>	2	6/17/2021
o-Xylene	0.017	0.0033		mg/m <sup>3</sup>	2	6/17/2021
Styrene	ND	0.0033		mg/m <sup>3</sup>	2	6/17/2021
Tetrachloroethene	0.068	0.0051		mg/m <sup>3</sup>	2	6/17/2021
Toluene	0.048	0.0029		mg/m <sup>3</sup>	2	6/17/2021
trans-1,2-Dichloroethene	ND	0.0029		mg/m <sup>3</sup>	2	6/17/2021
trans-1,3-Dichloropropene	ND	0.0033		mg/m <sup>3</sup>	2	6/17/2021
Trichloroethene	ND	0.0040		mg/m <sup>3</sup>	2	6/17/2021

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded



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Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV2-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 11:35:00 AM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-002

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: <b>6/17/2021</b>		Analyst: <b>MAS</b>
Trichlorofluoromethane	ND	0.0040		mg/m <sup>3</sup>	2	6/17/2021
Vinyl acetate	ND	0.026		mg/m <sup>3</sup>	2	6/17/2021
Vinyl chloride	ND	0.0018		mg/m <sup>3</sup>	2	6/17/2021
Xylenes, Total	0.063	0.0095		mg/m <sup>3</sup>	2	6/17/2021

**Qualifiers:**

ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
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Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV3-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 12:18:00 PM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-003

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 6/17/2021		Analyst: MAS
1,1,1-Trichloroethane	ND	0.0044		mg/m <sup>3</sup>	2	6/17/2021
1,1,2-Trichloroethane	ND	0.0044		mg/m <sup>3</sup>	2	6/17/2021
1,1-Dichloroethane	ND	0.0032		mg/m <sup>3</sup>	2	6/17/2021
1,1-Dichloroethene	ND	0.0032		mg/m <sup>3</sup>	2	6/17/2021
1,2,4-Trichlorobenzene	ND	0.0060		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dibromoethane	ND	0.0060		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dichlorobenzene	ND	0.0048		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dichloroethane	ND	0.0032		mg/m <sup>3</sup>	2	6/17/2021
1,2-Dichloropropane	ND	0.0036		mg/m <sup>3</sup>	2	6/17/2021
1,4-Dichlorobenzene	ND	0.0048		mg/m <sup>3</sup>	2	6/17/2021
1,4-Dioxane	ND	0.0072		mg/m <sup>3</sup>	2	6/17/2021
2-Butanone	ND	0.0060		mg/m <sup>3</sup>	2	6/17/2021
Acetone	0.040	0.019	*	mg/m <sup>3</sup>	2	6/17/2021
Benzene	0.0051	0.0024		mg/m <sup>3</sup>	2	6/17/2021
Bromodichloromethane	ND	0.0052		mg/m <sup>3</sup>	2	6/17/2021
Bromoform	ND	0.021		mg/m <sup>3</sup>	2	6/17/2021
Bromomethane	ND	0.0076		mg/m <sup>3</sup>	2	6/17/2021
Carbon disulfide	0.0031	0.0025		mg/m <sup>3</sup>	2	6/17/2021
Carbon tetrachloride	ND	0.0052		mg/m <sup>3</sup>	2	6/17/2021
Chlorobenzene	ND	0.0036		mg/m <sup>3</sup>	2	6/17/2021
Chloroform	ND	0.0040		mg/m <sup>3</sup>	2	6/17/2021
cis-1,2-Dichloroethene	ND	0.0032		mg/m <sup>3</sup>	2	6/17/2021
cis-1,3-Dichloropropene	ND	0.0036		mg/m <sup>3</sup>	2	6/17/2021
Dibromochloromethane	ND	0.0068		mg/m <sup>3</sup>	2	6/17/2021
Dichlorodifluoromethane	ND	0.0040		mg/m <sup>3</sup>	2	6/17/2021
Ethylbenzene	0.015	0.0036		mg/m <sup>3</sup>	2	6/17/2021
Isopropyl Alcohol	0.45	0.12		mg/m <sup>3</sup>	25	6/17/2021
m,p-Xylene	0.063	0.0068		mg/m <sup>3</sup>	2	6/17/2021
Methyl tert-butyl ether	ND	0.0028		mg/m <sup>3</sup>	2	6/17/2021
Methylene chloride	0.042	0.027		mg/m <sup>3</sup>	2	6/17/2021
Naphthalene	0.0075	0.0040		mg/m <sup>3</sup>	2	6/17/2021
o-Xylene	0.022	0.0036		mg/m <sup>3</sup>	2	6/17/2021
Styrene	ND	0.0036		mg/m <sup>3</sup>	2	6/17/2021
Tetrachloroethene	0.20	0.0056		mg/m <sup>3</sup>	2	6/17/2021
Toluene	0.070	0.0032		mg/m <sup>3</sup>	2	6/17/2021
trans-1,2-Dichloroethene	ND	0.0032		mg/m <sup>3</sup>	2	6/17/2021
trans-1,3-Dichloropropene	ND	0.0036		mg/m <sup>3</sup>	2	6/17/2021
Trichloroethene	0.0047	0.0044		mg/m <sup>3</sup>	2	6/17/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV3-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 12:18:00 PM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-003

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: <b>6/17/2021</b>		Analyst: <b>MAS</b>
Trichlorofluoromethane	ND	0.0044		mg/m <sup>3</sup>	2	6/17/2021
Vinyl acetate	ND	0.028		mg/m <sup>3</sup>	2	6/17/2021
Vinyl chloride	ND	0.0020		mg/m <sup>3</sup>	2	6/17/2021
Xylenes, Total	0.085	0.010		mg/m <sup>3</sup>	2	6/17/2021

**Qualifiers:**

ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV4-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 12:50:00 PM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-004

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 6/17/2021		Analyst: MAS
1,1,1-Trichloroethane	ND	0.0053		mg/m <sup>3</sup>	2	6/18/2021
1,1,2-Trichloroethane	ND	0.0053		mg/m <sup>3</sup>	2	6/18/2021
1,1-Dichloroethane	ND	0.0038		mg/m <sup>3</sup>	2	6/18/2021
1,1-Dichloroethene	ND	0.0038		mg/m <sup>3</sup>	2	6/18/2021
1,2,4-Trichlorobenzene	ND	0.0072		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dibromoethane	ND	0.0072		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichlorobenzene	ND	0.0058		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichloroethane	ND	0.0038		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichloropropane	ND	0.0043		mg/m <sup>3</sup>	2	6/18/2021
1,4-Dichlorobenzene	ND	0.0058		mg/m <sup>3</sup>	2	6/18/2021
1,4-Dioxane	ND	0.0087		mg/m <sup>3</sup>	2	6/18/2021
2-Butanone	ND	0.0072		mg/m <sup>3</sup>	2	6/18/2021
Acetone	0.031	0.023	*	mg/m <sup>3</sup>	2	6/18/2021
Benzene	0.0031	0.0029		mg/m <sup>3</sup>	2	6/18/2021
Bromodichloromethane	ND	0.0062		mg/m <sup>3</sup>	2	6/18/2021
Bromoform	ND	0.025		mg/m <sup>3</sup>	2	6/18/2021
Bromomethane	ND	0.0091		mg/m <sup>3</sup>	2	6/18/2021
Carbon disulfide	ND	0.0030		mg/m <sup>3</sup>	2	6/18/2021
Carbon tetrachloride	ND	0.0062		mg/m <sup>3</sup>	2	6/18/2021
Chlorobenzene	ND	0.0043		mg/m <sup>3</sup>	2	6/18/2021
Chloroform	ND	0.0048		mg/m <sup>3</sup>	2	6/18/2021
cis-1,2-Dichloroethene	ND	0.0038		mg/m <sup>3</sup>	2	6/18/2021
cis-1,3-Dichloropropene	ND	0.0043		mg/m <sup>3</sup>	2	6/18/2021
Dibromochloromethane	ND	0.0082		mg/m <sup>3</sup>	2	6/18/2021
Dichlorodifluoromethane	ND	0.0048		mg/m <sup>3</sup>	2	6/18/2021
Ethylbenzene	0.0092	0.0043		mg/m <sup>3</sup>	2	6/18/2021
Isopropyl Alcohol	0.19	0.012		mg/m <sup>3</sup>	2	6/18/2021
m,p-Xylene	0.041	0.0082		mg/m <sup>3</sup>	2	6/18/2021
Methyl tert-butyl ether	ND	0.0034		mg/m <sup>3</sup>	2	6/18/2021
Methylene chloride	ND	0.033		mg/m <sup>3</sup>	2	6/18/2021
Naphthalene	0.0073	0.0048		mg/m <sup>3</sup>	2	6/18/2021
o-Xylene	0.014	0.0043		mg/m <sup>3</sup>	2	6/18/2021
Styrene	ND	0.0043		mg/m <sup>3</sup>	2	6/18/2021
Tetrachloroethene	0.086	0.0067		mg/m <sup>3</sup>	2	6/18/2021
Toluene	0.038	0.0038		mg/m <sup>3</sup>	2	6/18/2021
trans-1,2-Dichloroethene	ND	0.0038		mg/m <sup>3</sup>	2	6/18/2021
trans-1,3-Dichloropropene	ND	0.0043		mg/m <sup>3</sup>	2	6/18/2021
Trichloroethene	ND	0.0053		mg/m <sup>3</sup>	2	6/18/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:**

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV4-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 12:50:00 PM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-004

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
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<b>Volatile Organic Compounds in Air by GC/MS</b>	<b>TO-15</b>				Prep Date: <b>6/17/2021</b>	Analyst: <b>MAS</b>
Trichlorofluoromethane	ND	0.0053		mg/m <sup>3</sup>	2	6/18/2021
Vinyl acetate	ND	0.034		mg/m <sup>3</sup>	2	6/18/2021
Vinyl chloride	ND	0.0024		mg/m <sup>3</sup>	2	6/18/2021
Xylenes, Total	0.056	0.012		mg/m <sup>3</sup>	2	6/18/2021

**Qualifiers:**

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 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV5-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 11:20:00 AM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-005

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 6/17/2021		Analyst: MAS
1,1,1-Trichloroethane	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021
1,1,2-Trichloroethane	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021
1,1-Dichloroethane	ND	0.0024		mg/m <sup>3</sup>	2	6/18/2021
1,1-Dichloroethene	ND	0.0024		mg/m <sup>3</sup>	2	6/18/2021
1,2,4-Trichlorobenzene	ND	0.0045		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dibromoethane	ND	0.0045		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichlorobenzene	ND	0.0036		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichloroethane	ND	0.0024		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichloropropane	ND	0.0027		mg/m <sup>3</sup>	2	6/18/2021
1,4-Dichlorobenzene	ND	0.0036		mg/m <sup>3</sup>	2	6/18/2021
1,4-Dioxane	ND	0.0054		mg/m <sup>3</sup>	2	6/18/2021
2-Butanone	ND	0.0045		mg/m <sup>3</sup>	2	6/18/2021
Acetone	0.036	0.014	*	mg/m <sup>3</sup>	2	6/18/2021
Benzene	0.0031	0.0018		mg/m <sup>3</sup>	2	6/18/2021
Bromodichloromethane	ND	0.0039		mg/m <sup>3</sup>	2	6/18/2021
Bromoform	ND	0.015		mg/m <sup>3</sup>	2	6/18/2021
Bromomethane	ND	0.0057		mg/m <sup>3</sup>	2	6/18/2021
Carbon disulfide	ND	0.0019		mg/m <sup>3</sup>	2	6/18/2021
Carbon tetrachloride	ND	0.0039		mg/m <sup>3</sup>	2	6/18/2021
Chlorobenzene	ND	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Chloroform	0.012	0.0030		mg/m <sup>3</sup>	2	6/18/2021
cis-1,2-Dichloroethene	ND	0.0024		mg/m <sup>3</sup>	2	6/18/2021
cis-1,3-Dichloropropene	ND	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Dibromochloromethane	ND	0.0051		mg/m <sup>3</sup>	2	6/18/2021
Dichlorodifluoromethane	0.0032	0.0030		mg/m <sup>3</sup>	2	6/18/2021
Ethylbenzene	0.0091	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Isopropyl Alcohol	0.36	0.093		mg/m <sup>3</sup>	25	6/18/2021
m,p-Xylene	0.038	0.0051		mg/m <sup>3</sup>	2	6/18/2021
Methyl tert-butyl ether	ND	0.0021		mg/m <sup>3</sup>	2	6/18/2021
Methylene chloride	ND	0.021		mg/m <sup>3</sup>	2	6/18/2021
Naphthalene	0.0062	0.0030		mg/m <sup>3</sup>	2	6/18/2021
o-Xylene	0.013	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Styrene	ND	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Tetrachloroethene	0.097	0.0042		mg/m <sup>3</sup>	2	6/18/2021
Toluene	0.038	0.0024		mg/m <sup>3</sup>	2	6/18/2021
trans-1,2-Dichloroethene	ND	0.0024		mg/m <sup>3</sup>	2	6/18/2021
trans-1,3-Dichloropropene	ND	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Trichloroethene	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV5-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 11:20:00 AM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-005

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: <b>6/17/2021</b>		Analyst: <b>MAS</b>
Trichlorofluoromethane	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021
Vinyl acetate	ND	0.021		mg/m <sup>3</sup>	2	6/18/2021
Vinyl chloride	ND	0.0015		mg/m <sup>3</sup>	2	6/18/2021
Xylenes, Total	0.051	0.0077		mg/m <sup>3</sup>	2	6/18/2021

**Qualifiers:**

ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV6-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 1:05:00 PM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-006

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 6/17/2021		Analyst: MAS
1,1,1-Trichloroethane	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021
1,1,2-Trichloroethane	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021
1,1-Dichloroethane	ND	0.0024		mg/m <sup>3</sup>	2	6/18/2021
1,1-Dichloroethene	ND	0.0024		mg/m <sup>3</sup>	2	6/18/2021
1,2,4-Trichlorobenzene	ND	0.0045		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dibromoethane	ND	0.0045		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichlorobenzene	ND	0.0036		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichloroethane	ND	0.0024		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichloropropane	ND	0.0027		mg/m <sup>3</sup>	2	6/18/2021
1,4-Dichlorobenzene	ND	0.0036		mg/m <sup>3</sup>	2	6/18/2021
1,4-Dioxane	ND	0.0054		mg/m <sup>3</sup>	2	6/18/2021
2-Butanone	ND	0.0045		mg/m <sup>3</sup>	2	6/18/2021
Acetone	0.11	0.014	*	mg/m <sup>3</sup>	2	6/18/2021
Benzene	ND	0.0018		mg/m <sup>3</sup>	2	6/18/2021
Bromodichloromethane	ND	0.0039		mg/m <sup>3</sup>	2	6/18/2021
Bromoform	ND	0.016		mg/m <sup>3</sup>	2	6/18/2021
Bromomethane	ND	0.0057		mg/m <sup>3</sup>	2	6/18/2021
Carbon disulfide	0.0020	0.0019		mg/m <sup>3</sup>	2	6/18/2021
Carbon tetrachloride	ND	0.0039		mg/m <sup>3</sup>	2	6/18/2021
Chlorobenzene	ND	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Chloroform	ND	0.0030		mg/m <sup>3</sup>	2	6/18/2021
cis-1,2-Dichloroethene	ND	0.0024		mg/m <sup>3</sup>	2	6/18/2021
cis-1,3-Dichloropropene	ND	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Dibromochloromethane	ND	0.0051		mg/m <sup>3</sup>	2	6/18/2021
Dichlorodifluoromethane	ND	0.0030		mg/m <sup>3</sup>	2	6/18/2021
Ethylbenzene	0.0034	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Isopropyl Alcohol	0.20	0.0075		mg/m <sup>3</sup>	2	6/18/2021
m,p-Xylene	0.014	0.0051		mg/m <sup>3</sup>	2	6/18/2021
Methyl tert-butyl ether	ND	0.0021		mg/m <sup>3</sup>	2	6/18/2021
Methylene chloride	ND	0.021		mg/m <sup>3</sup>	2	6/18/2021
Naphthalene	0.0039	0.0030		mg/m <sup>3</sup>	2	6/18/2021
o-Xylene	0.0054	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Styrene	ND	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Tetrachloroethene	0.012	0.0042		mg/m <sup>3</sup>	2	6/18/2021
Toluene	0.015	0.0024		mg/m <sup>3</sup>	2	6/18/2021
trans-1,2-Dichloroethene	ND	0.0024		mg/m <sup>3</sup>	2	6/18/2021
trans-1,3-Dichloropropene	ND	0.0027		mg/m <sup>3</sup>	2	6/18/2021
Trichloroethene	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021

**Qualifiers:**

ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
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 E - Value above quantitation range  
 H - Holding time exceeded



**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV6-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 1:05:00 PM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-006

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: <b>6/17/2021</b>		Analyst: <b>MAS</b>
Trichlorofluoromethane	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021
Vinyl acetate	ND	0.021		mg/m <sup>3</sup>	2	6/18/2021
Vinyl chloride	ND	0.0015		mg/m <sup>3</sup>	2	6/18/2021
Xylenes, Total	0.019	0.0078		mg/m <sup>3</sup>	2	6/18/2021

**Qualifiers:**

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 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV7-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 12:35:00 PM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-007

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 6/17/2021		Analyst: MAS
1,1,1-Trichloroethane	ND	0.0035		mg/m <sup>3</sup>	2	6/18/2021
1,1,2-Trichloroethane	ND	0.0035		mg/m <sup>3</sup>	2	6/18/2021
1,1-Dichloroethane	ND	0.0025		mg/m <sup>3</sup>	2	6/18/2021
1,1-Dichloroethene	ND	0.0025		mg/m <sup>3</sup>	2	6/18/2021
1,2,4-Trichlorobenzene	ND	0.0048		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dibromoethane	ND	0.0048		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichlorobenzene	ND	0.0038		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichloroethane	ND	0.0025		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichloropropane	ND	0.0029		mg/m <sup>3</sup>	2	6/18/2021
1,4-Dichlorobenzene	ND	0.0038		mg/m <sup>3</sup>	2	6/18/2021
1,4-Dioxane	ND	0.0057		mg/m <sup>3</sup>	2	6/18/2021
2-Butanone	ND	0.0048		mg/m <sup>3</sup>	2	6/18/2021
Acetone	0.045	0.015	*	mg/m <sup>3</sup>	2	6/18/2021
Benzene	0.0034	0.0019		mg/m <sup>3</sup>	2	6/18/2021
Bromodichloromethane	ND	0.0041		mg/m <sup>3</sup>	2	6/18/2021
Bromoform	ND	0.017		mg/m <sup>3</sup>	2	6/18/2021
Bromomethane	ND	0.0060		mg/m <sup>3</sup>	2	6/18/2021
Carbon disulfide	ND	0.0020		mg/m <sup>3</sup>	2	6/18/2021
Carbon tetrachloride	ND	0.0041		mg/m <sup>3</sup>	2	6/18/2021
Chlorobenzene	ND	0.0029		mg/m <sup>3</sup>	2	6/18/2021
Chloroform	ND	0.0032		mg/m <sup>3</sup>	2	6/18/2021
cis-1,2-Dichloroethene	0.014	0.0025		mg/m <sup>3</sup>	2	6/18/2021
cis-1,3-Dichloropropene	ND	0.0029		mg/m <sup>3</sup>	2	6/18/2021
Dibromochloromethane	ND	0.0054		mg/m <sup>3</sup>	2	6/18/2021
Dichlorodifluoromethane	ND	0.0032		mg/m <sup>3</sup>	2	6/18/2021
Ethylbenzene	0.012	0.0029		mg/m <sup>3</sup>	2	6/18/2021
Isopropyl Alcohol	0.39	0.099		mg/m <sup>3</sup>	25	6/18/2021
m,p-Xylene	0.051	0.0054		mg/m <sup>3</sup>	2	6/18/2021
Methyl tert-butyl ether	ND	0.0022		mg/m <sup>3</sup>	2	6/18/2021
Methylene chloride	ND	0.022		mg/m <sup>3</sup>	2	6/18/2021
Naphthalene	0.0090	0.0032		mg/m <sup>3</sup>	2	6/18/2021
o-Xylene	0.018	0.0029		mg/m <sup>3</sup>	2	6/18/2021
Styrene	ND	0.0029		mg/m <sup>3</sup>	2	6/18/2021
Tetrachloroethene	30	1.1		mg/m <sup>3</sup>	500	6/18/2021
Toluene	0.047	0.0025		mg/m <sup>3</sup>	2	6/18/2021
trans-1,2-Dichloroethene	ND	0.0025		mg/m <sup>3</sup>	2	6/18/2021
trans-1,3-Dichloropropene	ND	0.0029		mg/m <sup>3</sup>	2	6/18/2021
Trichloroethene	0.35	0.0035		mg/m <sup>3</sup>	2	6/18/2021

**Qualifiers:**

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 HT - Sample received past holding time  
 \* - Non-accredited parameter

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV7-4/4

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 12:35:00 PM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-007

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: <b>6/17/2021</b>		Analyst: <b>MAS</b>
Trichlorofluoromethane	ND	0.0035		mg/m <sup>3</sup>	2	6/18/2021
Vinyl acetate	ND	0.022		mg/m <sup>3</sup>	2	6/18/2021
Vinyl chloride	ND	0.0016		mg/m <sup>3</sup>	2	6/18/2021
Xylenes, Total	0.069	0.0083		mg/m <sup>3</sup>	2	6/18/2021

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 HT - Sample received past holding time  
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Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV3-4/4D

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 12:50:00 PM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-008

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 6/17/2021		Analyst: MAS
1,1,1-Trichloroethane	ND	0.0040		mg/m <sup>3</sup>	2	6/18/2021
1,1,2-Trichloroethane	ND	0.0040		mg/m <sup>3</sup>	2	6/18/2021
1,1-Dichloroethane	ND	0.0029		mg/m <sup>3</sup>	2	6/18/2021
1,1-Dichloroethene	ND	0.0029		mg/m <sup>3</sup>	2	6/18/2021
1,2,4-Trichlorobenzene	ND	0.0055		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dibromoethane	ND	0.0055		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichlorobenzene	ND	0.0044		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichloroethane	ND	0.0029		mg/m <sup>3</sup>	2	6/18/2021
1,2-Dichloropropane	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021
1,4-Dichlorobenzene	ND	0.0044		mg/m <sup>3</sup>	2	6/18/2021
1,4-Dioxane	ND	0.0066		mg/m <sup>3</sup>	2	6/18/2021
2-Butanone	ND	0.0055		mg/m <sup>3</sup>	2	6/18/2021
Acetone	0.047	0.018	*	mg/m <sup>3</sup>	2	6/18/2021
Benzene	0.0029	0.0022		mg/m <sup>3</sup>	2	6/18/2021
Bromodichloromethane	ND	0.0048		mg/m <sup>3</sup>	2	6/18/2021
Bromoform	ND	0.019		mg/m <sup>3</sup>	2	6/18/2021
Bromomethane	ND	0.0070		mg/m <sup>3</sup>	2	6/18/2021
Carbon disulfide	ND	0.0023		mg/m <sup>3</sup>	2	6/18/2021
Carbon tetrachloride	ND	0.0048		mg/m <sup>3</sup>	2	6/18/2021
Chlorobenzene	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021
Chloroform	ND	0.0037		mg/m <sup>3</sup>	2	6/18/2021
cis-1,2-Dichloroethene	ND	0.0029		mg/m <sup>3</sup>	2	6/18/2021
cis-1,3-Dichloropropene	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021
Dibromochloromethane	ND	0.0062		mg/m <sup>3</sup>	2	6/18/2021
Dichlorodifluoromethane	ND	0.0037		mg/m <sup>3</sup>	2	6/18/2021
Ethylbenzene	0.0081	0.0033		mg/m <sup>3</sup>	2	6/18/2021
Isopropyl Alcohol	0.82	0.11		mg/m <sup>3</sup>	25	6/18/2021
m,p-Xylene	0.035	0.0062		mg/m <sup>3</sup>	2	6/18/2021
Methyl tert-butyl ether	ND	0.0026		mg/m <sup>3</sup>	2	6/18/2021
Methylene chloride	0.26	0.025		mg/m <sup>3</sup>	2	6/18/2021
Naphthalene	0.0063	0.0037		mg/m <sup>3</sup>	2	6/18/2021
o-Xylene	0.013	0.0033		mg/m <sup>3</sup>	2	6/18/2021
Styrene	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021
Tetrachloroethene	0.20	0.0051		mg/m <sup>3</sup>	2	6/18/2021
Toluene	0.035	0.0029		mg/m <sup>3</sup>	2	6/18/2021
trans-1,2-Dichloroethene	ND	0.0029		mg/m <sup>3</sup>	2	6/18/2021
trans-1,3-Dichloropropene	ND	0.0033		mg/m <sup>3</sup>	2	6/18/2021
Trichloroethene	0.0045	0.0040		mg/m <sup>3</sup>	2	6/18/2021

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Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

Client: Hydrodynamics Consultants, Inc.

Client Sample ID: SV3-4/4D

Work Order: 21060592 Revision 0

Collection Date: 6/16/2021 12:50:00 PM

Project: Westwood Cleaners, 8731 W. North Avenue, Wau

Matrix: Air

Lab ID: 21060592-008

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS		TO-15		Prep Date: 6/17/2021		Analyst: MAS
Trichlorofluoromethane	ND	0.0040		mg/m <sup>3</sup>	2	6/18/2021
Vinyl acetate	ND	0.026		mg/m <sup>3</sup>	2	6/18/2021
Vinyl chloride	ND	0.0018		mg/m <sup>3</sup>	2	6/18/2021
Xylenes, Total	0.048	0.0095		mg/m <sup>3</sup>	2	6/18/2021

**Qualifiers:**  
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 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded



**Sample Receipt Checklist**

Client Name **HYDRODYNAMICS**

Date and Time Received: **6/17/2021 2:10:00 PM**

Work Order Number **21060592**

Received by: **EAA**

Checklist completed by: EL 6/17/21  
Signature Date

Reviewed by: EA 6/22/2021  
Initials Date

Matrix: Carrier name STAT Analysis

- Shipping container/cooler in good condition?      Yes       No       Not Present
- Custody seals intact on shipping container/cooler?      Yes       No       Not Present
- Custody seals intact on sample bottles?      Yes       No       Not Present
- Chain of custody present?      Yes       No
- Chain of custody signed when relinquished and received?      Yes       No
- Chain of custody agrees with sample labels/containers?      Yes       No
- Samples in proper container/bottle?      Yes       No
- Sample containers intact?      Yes       No
- Sufficient sample volume for indicated test?      Yes       No
- All samples received within holding time?      Yes       No
- Container or Temp Blank temperature in compliance?      Yes       No       Temperature Ambient °C
- Water - VOA vials have zero headspace?      No VOA vials submitted       Yes       No
- Water - Samples pH checked?      Yes       No       Checked by: \_\_\_\_\_
- Water - Samples properly preserved?      Yes       No       pH Adjusted? \_\_\_\_\_

Any No response must be detailed in the comments section below.

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Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Client / Person contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Contacted by: \_\_\_\_\_

Response: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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June 24, 2021

Hydrodynamics Consultants, Inc.  
5403 Patton Drive  
Lisle, IL 60532

Telephone: (630) 724-0098  
Fax: (800) 881-2051

Analytical Report for STAT Work Order: 21060594 Revision 0

RE: Westwood Cleaners, 8731 West North Ave., Wauwatosa, WI 53226

Dear Hydrodynamics Consultants, Inc.:

STAT Analysis received 11 samples for the referenced project on 6/17/2021 2:10:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements specified in WI DNR Chapter NR 149 (Certification Number 399099910). Analyses were performed in accordance with methods as referenced on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. A listing of accredited methods/parameters can also be provided.

For sample results requiring adjustment for dilutions, the detection and reporting limits are adjusted for the corresponding dilution factor. Analytical results expressed on a dry weight basis have units of mg/Kg-dry or  $\mu\text{g}/\text{Kg-dry}$  on the analytical report. Corresponding reporting limits are adjusted for dry weight.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Justice Kwateng  
Project Manager

*The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples as received and tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.*



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**Client:** Hydrodynamics Consultants, Inc.**Project:** Westwood Cleaners, 8731 West North Ave., Wauwatos**Work Order Sample Summary****Work Order:** 21060594 Revision 0

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Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
21060594-001A	MW 1-4/4		6/16/2021 11:30:00 AM	6/17/2021
21060594-002A	MW 2-4/4		6/16/2021 11:37:00 AM	6/17/2021
21060594-003A	MW 3-4/4		6/16/2021 11:44:00 AM	6/17/2021
21060594-004A	MW 4-4/4		6/16/2021 11:50:00 AM	6/17/2021
21060594-005A	MW 5-4/4		6/16/2021 11:56:00 AM	6/17/2021
21060594-006A	MW 6-4/4		6/16/2021 12:03:00 PM	6/17/2021
21060594-007A	MW 6-4/4-D		6/16/2021 12:06:00 PM	6/17/2021
21060594-008A	MW 7-4/4		6/16/2021 12:13:00 PM	6/17/2021
21060594-009A	MW 8-4/4		6/16/2021 12:20:00 PM	6/17/2021
21060594-010A	MW 9-4/4		6/16/2021 12:28:00 PM	6/17/2021
21060594-011A	Trip Blank		6/16/2021 8:35:00 AM	6/17/2021

**STAT Analysis Corporation**

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Accreditations: WI DNR 399099910; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

CLIENT: Hydrodynamics Consultants, Inc.

Client Sample ID: MW 1-4/4

Work Order: 21060594 Revision 0

Collection Date: 6/16/2021 11:30:00 AM

Project: Westwood Cleaners, 8731 West North Ave., Wauwato

Matrix: AQUEOUS

Lab ID: 21060594-001

Analyses	Result	LOQ	LOD	Qualifier	Units	DF	Date Analyzed
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**Volatile Organic Compounds by GC/MS****SW8260B (SW5030B)**

Prep Date:

Analyst: ERP

Acetone	ND	0.020	0.0031		mg/L	1	6/22/2021
Benzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromoform	ND	0.0010	0.0003		mg/L	1	6/22/2021
Bromomethane	ND	0.0050	0.002		mg/L	1	6/22/2021
2-Butanone	ND	0.020	0.0016		mg/L	1	6/22/2021
Carbon disulfide	ND	0.010	0.0003		mg/L	1	6/22/2021
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	6/22/2021
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Chloroethane	ND	0.010	0.0005		mg/L	1	6/22/2021
Chloroform	ND	0.0010	0.0001		mg/L	1	6/22/2021
Chloromethane	ND	0.010	0.0003		mg/L	1	6/22/2021
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	6/22/2021
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	6/22/2021
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	6/22/2021
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	6/22/2021
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	6/22/2021
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	6/22/2021
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	6/22/2021
2-Hexanone	ND	0.020	0.0002		mg/L	1	6/22/2021
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	6/22/2021
Methylene chloride	ND	0.0050	0.0002		mg/L	1	6/22/2021
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	6/22/2021
Styrene	ND	0.0050	0.0003		mg/L	1	6/22/2021
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	6/22/2021
Toluene	ND	0.0050	0.0004		mg/L	1	6/22/2021
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Trichloroethene	ND	0.0050	0.0003		mg/L	1	6/22/2021
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	6/22/2021
Xylenes, Total	ND	0.015	0.001		mg/L	1	6/22/2021

ND - Not Detected at the LOD

LOD/LOQ - Limit of Detection / Limit Of Quantitation for the analysis

**Qualifiers:**

J - Analyte detected below LOQ

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: WI DNR 399099910; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

CLIENT: Hydrodynamics Consultants, Inc.

Work Order: 21060594 Revision 0

Project: Westwood Cleaners, 8731 West North Ave., Wauwato

Lab ID: 21060594-002

Client Sample ID: MW 2-4/4

Collection Date: 6/16/2021 11:37:00 AM

Matrix: AQUEOUS

Analyses	Result	LOQ	LOD	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>							
		<b>SW8260B (SW5030B)</b>					
				Prep Date:			Analyst: ERP
Acetone	ND	0.020	0.0031		mg/L	1	6/22/2021
Benzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromoform	ND	0.0010	0.0003		mg/L	1	6/22/2021
Bromomethane	ND	0.0050	0.002		mg/L	1	6/22/2021
2-Butanone	ND	0.020	0.0016		mg/L	1	6/22/2021
Carbon disulfide	ND	0.010	0.0003		mg/L	1	6/22/2021
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	6/22/2021
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Chloroethane	ND	0.010	0.0005		mg/L	1	6/22/2021
Chloroform	ND	0.0010	0.0001		mg/L	1	6/22/2021
Chloromethane	ND	0.010	0.0003		mg/L	1	6/22/2021
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	6/22/2021
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	6/22/2021
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	6/22/2021
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	6/22/2021
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	6/22/2021
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	6/22/2021
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	6/22/2021
2-Hexanone	ND	0.020	0.0002		mg/L	1	6/22/2021
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	6/22/2021
Methylene chloride	ND	0.0050	0.0002		mg/L	1	6/22/2021
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	6/22/2021
Styrene	ND	0.0050	0.0003		mg/L	1	6/22/2021
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	6/22/2021
Toluene	ND	0.0050	0.0004		mg/L	1	6/22/2021
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Trichloroethene	ND	0.0050	0.0003		mg/L	1	6/22/2021
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	6/22/2021
Xylenes, Total	ND	0.015	0.001		mg/L	1	6/22/2021

**Qualifiers:**

ND - Not Detected at the LOD

J - Analyte detected below LOQ

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

LOD/LOQ - Limit of Detection / Limit Of Quantitation for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditations: WI DNR 399099910; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

CLIENT: Hydrodynamics Consultants, Inc.

Work Order: 21060594 Revision 0

Project: Westwood Cleaners, 8731 West North Ave., Wauwato

Lab ID: 21060594-003

Client Sample ID: MW 3-4/4

Collection Date: 6/16/2021 11:44:00 AM

Matrix: AQUEOUS

Analyses	Result	LOQ	LOD	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>							
		<b>SW8260B (SW5030B)</b>					
				Prep Date:			Analyst: ERP
Acetone	ND	0.020	0.0031		mg/L	1	6/22/2021
Benzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromoform	ND	0.0010	0.0003		mg/L	1	6/22/2021
Bromomethane	ND	0.0050	0.002		mg/L	1	6/22/2021
2-Butanone	ND	0.020	0.0016		mg/L	1	6/22/2021
Carbon disulfide	ND	0.010	0.0003		mg/L	1	6/22/2021
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	6/22/2021
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Chloroethane	ND	0.010	0.0005		mg/L	1	6/22/2021
Chloroform	ND	0.0010	0.0001		mg/L	1	6/22/2021
Chloromethane	ND	0.010	0.0003		mg/L	1	6/22/2021
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	6/22/2021
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	6/22/2021
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	6/22/2021
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	6/22/2021
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	6/22/2021
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	6/22/2021
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	6/22/2021
2-Hexanone	ND	0.020	0.0002		mg/L	1	6/22/2021
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	6/22/2021
Methylene chloride	ND	0.0050	0.0002		mg/L	1	6/22/2021
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	6/22/2021
Styrene	ND	0.0050	0.0003		mg/L	1	6/22/2021
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	6/22/2021
Toluene	ND	0.0050	0.0004		mg/L	1	6/22/2021
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Trichloroethene	ND	0.0050	0.0003		mg/L	1	6/22/2021
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	6/22/2021
Xylenes, Total	ND	0.015	0.001		mg/L	1	6/22/2021

**Qualifiers:**

ND - Not Detected at the LOD

J - Analyte detected below LOQ

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

LOD/LOQ - Limit of Detection / Limit Of Quantitation for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Accreditations: WI DNR 399099910; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

CLIENT: Hydrodynamics Consultants, Inc.

Work Order: 21060594 Revision 0

Project: Westwood Cleaners, 8731 West North Ave., Wauwato

Lab ID: 21060594-004

Client Sample ID: MW 4-4/4

Collection Date: 6/16/2021 11:50:00 AM

Matrix: AQUEOUS

Analyses	Result	LOQ	LOD	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>							
		<b>SW8260B (SW5030B)</b>					
				Prep Date:			Analyst: ERP
Acetone	ND	0.020	0.0031		mg/L	1	6/22/2021
Benzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromoform	ND	0.0010	0.0003		mg/L	1	6/22/2021
Bromomethane	ND	0.0050	0.002		mg/L	1	6/22/2021
2-Butanone	ND	0.020	0.0016		mg/L	1	6/22/2021
Carbon disulfide	ND	0.010	0.0003		mg/L	1	6/22/2021
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	6/22/2021
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Chloroethane	ND	0.010	0.0005		mg/L	1	6/22/2021
Chloroform	ND	0.0010	0.0001		mg/L	1	6/22/2021
Chloromethane	ND	0.010	0.0003		mg/L	1	6/22/2021
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	6/22/2021
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	6/22/2021
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	6/22/2021
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	6/22/2021
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	6/22/2021
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	6/22/2021
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	6/22/2021
2-Hexanone	ND	0.020	0.0002		mg/L	1	6/22/2021
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	6/22/2021
Methylene chloride	ND	0.0050	0.0002		mg/L	1	6/22/2021
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	6/22/2021
Styrene	ND	0.0050	0.0003		mg/L	1	6/22/2021
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	6/22/2021
Toluene	ND	0.0050	0.0004		mg/L	1	6/22/2021
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Trichloroethene	ND	0.0050	0.0003		mg/L	1	6/22/2021
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	6/22/2021
Xylenes, Total	ND	0.015	0.001		mg/L	1	6/22/2021

**Qualifiers:**

ND - Not Detected at the LOD

J - Analyte detected below LOQ

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

LOD/LOQ - Limit of Detection / Limit Of Quantitation for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditations: WI DNR 399099910; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

CLIENT: Hydrodynamics Consultants, Inc.

Work Order: 21060594 Revision 0

Project: Westwood Cleaners, 8731 West North Ave., Wauwato

Lab ID: 21060594-005

Client Sample ID: MW 5-4/4

Collection Date: 6/16/2021 11:56:00 AM

Matrix: AQUEOUS

Analyses	Result	LOQ	LOD	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>							
		<b>SW8260B (SW5030B)</b>					
				Prep Date:			Analyst: ERP
Acetone	ND	0.020	0.0031		mg/L	1	6/22/2021
Benzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromoform	ND	0.0010	0.0003		mg/L	1	6/22/2021
Bromomethane	ND	0.0050	0.002		mg/L	1	6/22/2021
2-Butanone	ND	0.020	0.0016		mg/L	1	6/22/2021
Carbon disulfide	ND	0.010	0.0003		mg/L	1	6/22/2021
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	6/22/2021
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Chloroethane	ND	0.010	0.0005		mg/L	1	6/22/2021
Chloroform	ND	0.0010	0.0001		mg/L	1	6/22/2021
Chloromethane	ND	0.010	0.0003		mg/L	1	6/22/2021
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	6/22/2021
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	6/22/2021
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	6/22/2021
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	6/22/2021
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	6/22/2021
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	6/22/2021
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	6/22/2021
2-Hexanone	ND	0.020	0.0002		mg/L	1	6/22/2021
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	6/22/2021
Methylene chloride	ND	0.0050	0.0002		mg/L	1	6/22/2021
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	6/22/2021
Styrene	ND	0.0050	0.0003		mg/L	1	6/22/2021
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Tetrachloroethene	0.034	0.0050	0.0003		mg/L	1	6/22/2021
Toluene	ND	0.0050	0.0004		mg/L	1	6/22/2021
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Trichloroethene	ND	0.0050	0.0003		mg/L	1	6/22/2021
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	6/22/2021
Xylenes, Total	ND	0.015	0.001		mg/L	1	6/22/2021

**Qualifiers:**

ND - Not Detected at the LOD

J - Analyte detected below LOQ

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

LOD/LOQ - Limit of Detection / Limit Of Quantitation for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Accreditations: WI DNR 399099910; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

CLIENT: Hydrodynamics Consultants, Inc.

Client Sample ID: MW 6-4/4

Work Order: 21060594 Revision 0

Collection Date: 6/16/2021 12:03:00 PM

Project: Westwood Cleaners, 8731 West North Ave., Wauwato

Matrix: AQUEOUS

Lab ID: 21060594-006

Analyses	Result	LOQ	LOD	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>							
		<b>SW8260B (SW5030B)</b>					
				Prep Date:			Analyst: ERP
Acetone	ND	0.020	0.0031		mg/L	1	6/22/2021
Benzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
Bromoform	ND	0.0010	0.0003		mg/L	1	6/22/2021
Bromomethane	ND	0.0050	0.002		mg/L	1	6/22/2021
2-Butanone	ND	0.020	0.0016		mg/L	1	6/22/2021
Carbon disulfide	ND	0.010	0.0003		mg/L	1	6/22/2021
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	6/22/2021
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	6/22/2021
Chloroethane	ND	0.010	0.0005		mg/L	1	6/22/2021
Chloroform	ND	0.0010	0.0001		mg/L	1	6/22/2021
Chloromethane	ND	0.010	0.0003		mg/L	1	6/22/2021
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	6/22/2021
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	6/22/2021
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	6/22/2021
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	6/22/2021
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	6/22/2021
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	6/22/2021
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	6/22/2021
2-Hexanone	ND	0.020	0.0002		mg/L	1	6/22/2021
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	6/22/2021
Methylene chloride	ND	0.0050	0.0002		mg/L	1	6/22/2021
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	6/22/2021
Styrene	ND	0.0050	0.0003		mg/L	1	6/22/2021
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	6/22/2021
Toluene	ND	0.0050	0.0004		mg/L	1	6/22/2021
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	6/22/2021
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	6/22/2021
Trichloroethene	ND	0.0050	0.0003		mg/L	1	6/22/2021
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	6/22/2021
Xylenes, Total	ND	0.015	0.001		mg/L	1	6/22/2021

<b>Qualifiers:</b>	ND - Not Detected at the LOD	LOD/LOQ - Limit of Detection / Limit Of Quantitation for the analysis
	J - Analyte detected below LOQ	S - Spike Recovery outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	R - RPD outside accepted recovery limits
	HT - Sample received past holding time	E - Value above quantitation range
	* - Non-accredited parameter	H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditations: WI DNR 399099910; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

CLIENT: Hydrodynamics Consultants, Inc.

Client Sample ID: MW 6-4/4-D

Work Order: 21060594 Revision 0

Collection Date: 6/16/2021 12:06:00 PM

Project: Westwood Cleaners, 8731 West North Ave., Wauwato

Matrix: AQUEOUS

Lab ID: 21060594-007

Analyses	Result	LOQ	LOD	Qualifier	Units	DF	Date Analyzed
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**Volatile Organic Compounds by GC/MS****SW8260B (SW5030B)**

Prep Date:

Analyst: **CBG**

Acetone	ND	0.020	0.0031		mg/L	1	6/23/2021
Benzene	ND	0.0050	0.0002		mg/L	1	6/23/2021
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
Bromoform	ND	0.0010	0.0003		mg/L	1	6/23/2021
Bromomethane	ND	0.0050	0.002		mg/L	1	6/23/2021
2-Butanone	ND	0.020	0.0016		mg/L	1	6/23/2021
Carbon disulfide	ND	0.010	0.0003		mg/L	1	6/23/2021
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	6/23/2021
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	6/23/2021
Chloroethane	ND	0.010	0.0005		mg/L	1	6/23/2021
Chloroform	ND	0.0010	0.0001		mg/L	1	6/23/2021
Chloromethane	ND	0.010	0.0003		mg/L	1	6/23/2021
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	6/23/2021
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	6/23/2021
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	6/23/2021
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	6/23/2021
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	6/23/2021
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	6/23/2021
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	6/23/2021
2-Hexanone	ND	0.020	0.0002		mg/L	1	6/23/2021
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	6/23/2021
Methylene chloride	ND	0.0050	0.0002		mg/L	1	6/23/2021
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	6/23/2021
Styrene	ND	0.0050	0.0003		mg/L	1	6/23/2021
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	6/23/2021
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	6/23/2021
Toluene	ND	0.0050	0.0004		mg/L	1	6/23/2021
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	6/23/2021
Trichloroethene	ND	0.0050	0.0003		mg/L	1	6/23/2021
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	6/23/2021
Xylenes, Total	ND	0.015	0.001		mg/L	1	6/23/2021

ND - Not Detected at the LOD

LOD/LOQ - Limit of Detection / Limit Of Quantitation for the analysis

Qualifiers: J - Analyte detected below LOQ

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded



**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: WI DNR 399099910; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

CLIENT: Hydrodynamics Consultants, Inc.

Client Sample ID: MW 7-4/4

Work Order: 21060594 Revision 0

Collection Date: 6/16/2021 12:13:00 PM

Project: Westwood Cleaners, 8731 West North Ave., Wauwato

Matrix: AQUEOUS

Lab ID: 21060594-008

Analyses	Result	LOQ	LOD	Qualifier	Units	DF	Date Analyzed
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**Volatile Organic Compounds by GC/MS**

SW8260B (SW5030B)

Prep Date:

Analyst: CBG

Acetone	ND	0.020	0.0031		mg/L	1	6/23/2021
Benzene	ND	0.0050	0.0002		mg/L	1	6/23/2021
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
Bromoform	ND	0.0010	0.0003		mg/L	1	6/23/2021
Bromomethane	ND	0.0050	0.002		mg/L	1	6/23/2021
2-Butanone	ND	0.020	0.0016		mg/L	1	6/23/2021
Carbon disulfide	ND	0.010	0.0003		mg/L	1	6/23/2021
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	6/23/2021
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	6/23/2021
Chloroethane	ND	0.010	0.0005		mg/L	1	6/23/2021
Chloroform	ND	0.0010	0.0001		mg/L	1	6/23/2021
Chloromethane	ND	0.010	0.0003		mg/L	1	6/23/2021
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	6/23/2021
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	6/23/2021
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	6/23/2021
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	6/23/2021
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	6/23/2021
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	6/23/2021
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	6/23/2021
2-Hexanone	ND	0.020	0.0002		mg/L	1	6/23/2021
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	6/23/2021
Methylene chloride	ND	0.0050	0.0002		mg/L	1	6/23/2021
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	6/23/2021
Styrene	ND	0.0050	0.0003		mg/L	1	6/23/2021
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	6/23/2021
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	6/23/2021
Toluene	ND	0.0050	0.0004		mg/L	1	6/23/2021
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	6/23/2021
Trichloroethene	ND	0.0050	0.0003		mg/L	1	6/23/2021
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	6/23/2021
Xylenes, Total	ND	0.015	0.001		mg/L	1	6/23/2021

ND - Not Detected at the LOD

LOD/LOQ - Limit of Detection / Limit Of Quantitation for the analysis

**Qualifiers:**

J - Analyte detected below LOQ

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditations: WI DNR 399099910; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

CLIENT: Hydrodynamics Consultants, Inc.

Client Sample ID: MW 8-4/4

Work Order: 21060594 Revision 0

Collection Date: 6/16/2021 12:20:00 PM

Project: Westwood Cleaners, 8731 West North Ave., Wauwato

Matrix: AQUEOUS

Lab ID: 21060594-009

Analyses	Result	LOQ	LOD	Qualifier	Units	DF	Date Analyzed
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**Volatile Organic Compounds by GC/MS**

SW8260B (SW5030B)

Prep Date:

Analyst: CBG

Acetone	ND	0.020	0.0031		mg/L	1	6/23/2021
Benzene	ND	0.0050	0.0002		mg/L	1	6/23/2021
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
Bromoform	ND	0.0010	0.0003		mg/L	1	6/23/2021
Bromomethane	ND	0.0050	0.002		mg/L	1	6/23/2021
2-Butanone	ND	0.020	0.0016		mg/L	1	6/23/2021
Carbon disulfide	ND	0.010	0.0003		mg/L	1	6/23/2021
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	6/23/2021
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	6/23/2021
Chloroethane	ND	0.010	0.0005		mg/L	1	6/23/2021
Chloroform	ND	0.0010	0.0001		mg/L	1	6/23/2021
Chloromethane	ND	0.010	0.0003		mg/L	1	6/23/2021
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	6/23/2021
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	6/23/2021
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	6/23/2021
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	6/23/2021
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	6/23/2021
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	6/23/2021
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	6/23/2021
2-Hexanone	ND	0.020	0.0002		mg/L	1	6/23/2021
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	6/23/2021
Methylene chloride	ND	0.0050	0.0002		mg/L	1	6/23/2021
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	6/23/2021
Styrene	ND	0.0050	0.0003		mg/L	1	6/23/2021
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	6/23/2021
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	6/23/2021
Toluene	ND	0.0050	0.0004		mg/L	1	6/23/2021
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	6/23/2021
Trichloroethene	ND	0.0050	0.0003		mg/L	1	6/23/2021
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	6/23/2021
Xylenes, Total	ND	0.015	0.001		mg/L	1	6/23/2021

ND - Not Detected at the LOD

LOD/LOQ - Limit of Detection / Limit Of Quantitation for the analysis

**Qualifiers:**

J - Analyte detected below LOQ

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditations: WI DNR 399099910; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

**ANALYTICAL RESULTS**

Date Printed: June 24, 2021

CLIENT: Hydrodynamics Consultants, Inc.

Client Sample ID: MW 9-4/4

Work Order: 21060594 Revision 0

Collection Date: 6/16/2021 12:28:00 PM

Project: Westwood Cleaners, 8731 West North Ave., Wauwato

Matrix: AQUEOUS

Lab ID: 21060594-010

Analyses	Result	LOQ	LOD	Qualifier	Units	DF	Date Analyzed
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**Volatile Organic Compounds by GC/MS****SW8260B (SW5030B)**

Prep Date:

Analyst: **CBG**

Acetone	ND	0.020	0.0031		mg/L	1	6/23/2021
Benzene	ND	0.0050	0.0002		mg/L	1	6/23/2021
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
Bromoform	ND	0.0010	0.0003		mg/L	1	6/23/2021
Bromomethane	ND	0.0050	0.002		mg/L	1	6/23/2021
2-Butanone	ND	0.020	0.0016		mg/L	1	6/23/2021
Carbon disulfide	ND	0.010	0.0003		mg/L	1	6/23/2021
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	6/23/2021
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	6/23/2021
Chloroethane	ND	0.010	0.0005		mg/L	1	6/23/2021
Chloroform	ND	0.0010	0.0001		mg/L	1	6/23/2021
Chloromethane	ND	0.010	0.0003		mg/L	1	6/23/2021
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	6/23/2021
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	6/23/2021
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	6/23/2021
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	6/23/2021
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	6/23/2021
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	6/23/2021
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	6/23/2021
2-Hexanone	ND	0.020	0.0002		mg/L	1	6/23/2021
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	6/23/2021
Methylene chloride	ND	0.0050	0.0002		mg/L	1	6/23/2021
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	6/23/2021
Styrene	ND	0.0050	0.0003		mg/L	1	6/23/2021
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	6/23/2021
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	6/23/2021
Toluene	ND	0.0050	0.0004		mg/L	1	6/23/2021
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	6/23/2021
Trichloroethene	ND	0.0050	0.0003		mg/L	1	6/23/2021
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	6/23/2021
Xylenes, Total	ND	0.015	0.001		mg/L	1	6/23/2021

ND - Not Detected at the LOD

LOD/LOQ - Limit of Detection / Limit Of Quantitation for the analysis

**Qualifiers:**

J - Analyte detected below LOQ

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditations: WI DNR 399099910; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 24, 2021

Date Printed: June 24, 2021

**ANALYTICAL RESULTS**

CLIENT: Hydrodynamics Consultants, Inc.

Work Order: 21060594 Revision 0

Project: Westwood Cleaners, 8731 West North Ave., Wauwato

Lab ID: 21060594-011

Client Sample ID: Trip Blank

Collection Date: 6/16/2021 8:35:00 AM

Matrix: AQUEOUS

Analyses	Result	LOQ	LOD	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>							
		<b>SW8260B (SW5030B)</b>					
				Prep Date:			Analyst: <b>CBG</b>
Acetone	ND	0.020	0.0031		mg/L	1	6/23/2021
Benzene	ND	0.0050	0.0002		mg/L	1	6/23/2021
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
Bromoform	ND	0.0010	0.0003		mg/L	1	6/23/2021
Bromomethane	ND	0.0050	0.002		mg/L	1	6/23/2021
2-Butanone	ND	0.020	0.0016		mg/L	1	6/23/2021
Carbon disulfide	ND	0.010	0.0003		mg/L	1	6/23/2021
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	6/23/2021
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	6/23/2021
Chloroethane	ND	0.010	0.0005		mg/L	1	6/23/2021
Chloroform	ND	0.0010	0.0001		mg/L	1	6/23/2021
Chloromethane	ND	0.010	0.0003		mg/L	1	6/23/2021
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	6/23/2021
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	6/23/2021
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	6/23/2021
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	6/23/2021
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	6/23/2021
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	6/23/2021
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	6/23/2021
2-Hexanone	ND	0.020	0.0002		mg/L	1	6/23/2021
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	6/23/2021
Methylene chloride	ND	0.0050	0.0002		mg/L	1	6/23/2021
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	6/23/2021
Styrene	ND	0.0050	0.0003		mg/L	1	6/23/2021
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	6/23/2021
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	6/23/2021
Toluene	ND	0.0050	0.0004		mg/L	1	6/23/2021
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	6/23/2021
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	6/23/2021
Trichloroethene	ND	0.0050	0.0003		mg/L	1	6/23/2021
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	6/23/2021
Xylenes, Total	ND	0.015	0.001		mg/L	1	6/23/2021

**Qualifiers:**

ND - Not Detected at the LOD

J - Analyte detected below LOQ

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

LOD/LOQ - Limit of Detection / Limit Of Quantitation for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

# STAT Analysis Corporation

2201 West Campbell Park Drive, Chicago, Illinois 60612-3547 Phone: (312) 733-0551 Fax: (312) 733-2386  
 e-mail address: STATinfo@STATAnalysis.com A I H A accredited 10248, N V L A P accredited 101202-0

## CHAIN OF CUSTODY RECORD No: 1 of 1

Company: Hydrodynamics Consultant, Inc. P.O. No.:  
 Project Number: Client Tracking No.:  
 Project Name: Westwood Cleaners Quote No.:  
 Location/Address: 8731 West North Ave., Wauwatosa, WI 53226  
 Sampler(s): Yinong Han  
 Report To: Yong Yu Phone: (630) 724-0098  
 QC Level: 1 2 3 4 Fax: (800) 881-2051  
 Regulatory Program: NPEDS/MWRD RCRA SDWA SRP TACO Other:

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp	Grab	Preserv.	No. of Containers	VOCs	X	Remarks	Lab No.:	Results Needed:
												am pm
MW 1-4/4	6/16/21	11:30	W		Yes	3			X		001	
MW 2-4/4	6/16/21	11:37	W		Yes	3			X		002	
MW 3-4/4	6/16/21	11:44	W		Yes	3			X		003	
MW 4-4/4	6/16/21	11:50	W		Yes	3			X		004	
MW 5-4/4	6/16/21	11:56	W		Yes	3			X		005	
MW 6-4/4	6/16/21	12:03	W		Yes	3			X		006	
MW 6-4/4-D	6/16/21	12:06	W		Yes	3			X		007	
MW 7-4/4	6/16/21	12:13	W		Yes	3			X		008	
MW 8-4/4	6/16/21	12:20	W		Yes	3			X		009	
MW 9-4/4	6/16/21	12:28	W		Yes	3			X		010	
TRIP BLANK	6/16/21	8:35	W		Yes	3			X		011	

Relinquished By: (Signature) Date/Time: 6/17/21  
 Received By: (Signature) Date/Time: 6/17/21 12:05  
 Relinquished By: (Signature) Date/Time: 6/17/21 14:10  
 Received By: (Signature) Date/Time: 6/17/21 14:10  
 Relinquished By: (Signature) Date/Time: 6/17/21 14:10

Laboratory Use:  
 - Container OK  Yes  No  
 - Samples Leaking  Yes  No  
 - Refrigerated (Temp: 3-7 °C)  Yes  No  
 - Sample Labels Match Sample ID  Yes  No

Sample Verification:  
 Yes  No   
 Yes  No   
 Yes  No   
 Yes  No

Work Order No.: 21060594  
 Preservation Code:  
 A = None B = HNO C = NaOH  
 D = H<sub>2</sub>SO<sub>4</sub> E = HCl F = 5035/EnCore

**Sample Receipt Checklist**

Client Name **HYDRODYNAMICS**

Date and Time Received: **6/17/2021 2:10:00 PM**

Work Order Number **21060594**

Received by: **EAA**

Checklist completed by:

SL 6/17/21  
Signature Date

Reviewed by:

AA 6/17/2021  
Initials Date

Matrix:

Carrier name STAT Analysis

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels/containers? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container or Temp Blank temperature in compliance? Yes  No  Temperature **3.7 °C**
- Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No
- Water - Samples pH checked? Yes  No  Checked by: \_\_\_\_\_
- Water - Samples properly preserved? Yes  No  pH Adjusted? \_\_\_\_\_

Any No response must be detailed in the comments section below.

Comments:

Client / Person contacted:

Date contacted:

Contacted by:

Response: