



April 5, 2022

City of Hartford  
John Griffin, PE  
109 North Main Street  
Hartford, WI 53027

Dear Mr. Griffin:

**Reference: Workplan for Former Jerrys Dry Cleaning / South Main Street Properties, 24, 28, & 32 South Main Street, Hartford, Wisconsin; WDNR BRRTS #02-67-220908**

Per your request, Stantec Consulting Services Inc. (Stantec) prepared this workplan and estimate of probable costs to conduct a site investigation of historical contaminant releases associated with the Former Jerry's Dry Cleaning / South Main Street Properties located at 24, 28, & 32 South Main Street in Hartford, Wisconsin (the Site). Stantec developed the scope of work presented in this workplan based on previous investigation results and early-March 2021 discussions with John Feeney, Project Manager with the Wisconsin Department of Natural Resources (WDNR). This is the first phase of site investigation work to identify immediate vapor concerns, address polycyclic aromatic hydrocarbon (PAH) impacts on the 28 South Main Street parcel, and continue tracing potential chlorinated volatile organic compound (CVOC) impacts at depth on the Site and in the South Main Street right-of-way (ROW). Our understanding of the project and proposed scope of work is outlined below.

## BACKGROUND INFORMATION

The Site is currently an open WDNR Bureau of Remediation and Redevelopment Tracking System (BRRTs) site due to CVOC and gasoline contamination in the soil and groundwater (BRRTS #02-67-220908, Former Jerrys Dry Cleaning). The dry cleaner operated on the 24 South Main Street parcel between 1966 and 1992. Subsequent soil and groundwater contamination was measured west of the Site in a 1998 investigation conducted by Montgomery Watson and was reported to the WDNR in November 1998. Tetrachloroethene (PCE), trichloroethene (TCE), and cis-1,2-dichloroethene (CIS-1,2-DCE) were detected above their respective chapter (ch.) NR 140 Wisconsin Administrative Code (WAC) preventative action levels (PALs) and/or enforcement standards (ESs) in the South Main Street and Hwy 60 ROWs.

Stantec conducted a Phase II environmental site assessment (ESA) between October 2019 and March 2020 to further assess recognized environmental conditions (RECs) identified in a 2019 Phase I ESA. These RECs included historical dry cleaner, auto repair, black smith, and wagon shop use on or adjoining the Site. PCE and TCE were detected in soil between zero and five feet below ground surface (ft bgs) above their ch. NR 720 WAC residual contaminant levels (RCLs). In addition, PCE was detected above the ch. NR WAC 140 ES on the eastern portion of the 24 South Main Street parcel and PCE/TCE were detected above the ch. NR 140 WAC PAL on the remaining temporary wells sampled on this parcel.

The 28 South Main Street parcel operated as an auto sales and service / farm improvement warehouse between 1913 and 1949 with an oil house on the eastern portion of the parcel. Additionally, a repair/painting shop with three lifts adjoined the eastern portion of this parcel between 1918 and 1957. During Stantec's 2019-2020 Phase II ESA, various PAHs were reported at concentrations exceeding their respective ch. NR 720 WAC industrial direct contact RCL, ch. NR 720 WAC non-industrial direct contact RCL and/or groundwater protection RCLs on the eastern portion of the 28 South Main Street parcel. Additionally, benzo(a)pyrene, benzo(b)fluoranthene, and chrysene were detected above their respective ch. NR 140 WAC ESs.

Based on the results of the Phase II ESA, additional investigation per ch. NR 716 WAC requirements was recommended by Stantec and the WDNR to further evaluate the source(s) and extent of release(s) and assess appropriate future actions. The Phase II ESA was provided to the WDNR on January 20, 2021 and after discussions with John Feeney in early-March 2021, the WDNR made the following recommendations/requests:

- Additional soil and groundwater sampling to define the vertical extent of VOCs and address PAH impacts on the Site;

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- Additional soil and groundwater sampling in the South Main Street corridor;
- Sub-slab and indoor vapor sampling of nearby building(s);
- Sump-pump screening/sampling of nearby building(s); and
- Vapor screening of underground utilities near the Site.

The scope of the first phase of this site investigation to address these items is outlined below.

## SCOPE OF WORK

### Former Dry Cleaner Facility Evaluation

Stantec will conduct a review of the City's Building Department records, if available, in an effort to identify the former dry cleaner machine locations, drainage configuration and/or any other pertinent records that may inform source location (if any). Pertinent information obtained during this review may more precisely determine likely contaminant source location(s) and will be used to adjust proposed borehole/well locations.

### Soil Boring, Monitoring Well, and Piezometer Installation and Sampling

Before any subsurface work is begun, Diggers Hotline® will be contacted to locate public utilities in the project area, and a site-specific health and safety plan will be developed. A private utility locate will also be conducted to identify other unmarked utilities. Additionally, Stantec will obtain a permit to drill in a ROW as required by the City before beginning subsurface work. Afterwards, soil samples will be collected from up to four boreholes using dual-tube direct-push soil sampling techniques (up to 35 ft bgs). Boreholes will be advanced to evaluate the subsurface conditions at locations where chlorinated compounds may be detected. Monitoring wells will then be installed in select boreholes using 4.25-inch inside diameter hollow-stem augering equipment. Proposed borehole and groundwater monitoring wells with associated laboratory analysis are illustrated on the attached Figure 1 and are summarized in the table below.

<u>Location</u>	<u>Borehole and/or Groundwater Monitoring Well</u>	<u>Quantity</u>	<u>Proposed Depth (ft bgs)</u>	<u>Proposed Laboratory Analysis</u>
The Site, 24 South Main Street	Borehole with water table/ piezometer well nest	1	Up to 35	Soil – VOCs, selected based upon screening Groundwater – VOCs x2
South Main Street	Borehole with water table/ piezometer well nest	1	Up to 25	Soil – VOCs, selected based upon screening Groundwater – VOCs x2
The Site, 24 South Main Street, east of the dumpster*	Borehole	1	8 (up to 15*)	Soil – VOCs, selected based upon screening Groundwater* – none, unless a semi-temporary well is applicable
The Site, 28 South Main Street, location of former TW-6	Borehole & water table well	1	15	Soil** – none Groundwater – VOCs
The Site, 28 South Main Street, location of former TW-1/TW-7	Borehole & water table well	1	15	Soil** – none Groundwater – PAHs

\*Based on field observations and site restrictions, this soil boring may be converted into a 15 ft bgs semi-temporary one-inch diameter well with a 4-inch flush mounted protective cover

\*\*Will be "blind drilled" and well set based upon Phase II ESA lithology and laboratory data

Water table wells will be two-inch diameter monitoring wells that will then be installed in the 4.25-inch diameter borehole with a quartz filter sand placed in the annular space between the borehole wall and the outside of the 10-foot, 0.010-inch slotted screen. The annular space above the filter pack will be filled to the ground surface with granular bentonite to serve as a seal to prevent filtration of surface water runoff into the boring which would

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potentially compromise the integrity and representativeness of the groundwater sample data. The well casing will be topped with a flush mounted protective cover.

Piezometer installation will be similar to the water table monitoring well installations, except the piezometer screens will be 5-feet in length and installed up to 35 ft bgs. Piezometers will be installed within five feet of the water table well. Well screen depth will be selected based upon field observations such as lithology, odor, staining, and field screening data.

Sampling and analysis will be performed in compliance with WDNR regulations and guidance. A photoionization detector (PID) will be used to field screen the samples for the presence of VOCs, such as chlorinated solvents. The stratigraphic borehole log will be prepared by Stantec personnel in general conformance with the ASTM International Method D-2488. All soil sampling equipment will be washed with a detergent solution and double rinsed with potable water before each soil sample is collected to prevent sample cross-contamination.

Prior to sampling, all wells will be developed per WDNR regulations and guidance and surveyed accordingly. Following development, at least one round of groundwater sampling will be collected and analyzed by a WDNR-certified analytical laboratory for VOCs or PAHs. If VOCs and/or PAHs are detected above the ch. NR NR140 WAC PAL or ES, an additional round of sampling may need to be collected (and is not included in this phase of work).

#### Vapor Migration Sampling

Per the WDNR's guidance RR-800, titled *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*, situations where vapor sampling is recommended in a building include: CVOC impacted soil within 100 feet of a building, CVOCs exceeding the ch. NR NR140 WAC PAL in contact with the building foundation, CVOCs exceeding the ch. NR NR140 WAC ES at or below the building foundation, or utilities with CVOC vapors that transect a CVOC source area are cause for investigation of the vapor intrusion pathway.

Stantec will evaluate vapor migration at The Pour House (at 22 South Main Street) given its proximity to the groundwater contamination measured on the 24 South Main Street parcel to determine if potential VOC vapors are migrating into the building. Prior to any vapor sampling, Stantec will request access to The Pour House for indoor air and sub-slab vapor sample collection. Access agreements will be drafted for the City's review and approval. The access agreement will be executed between the City and the Pour House parcel owner. Sample locations will consist of two sub-slab vapor samples and one 8-hour indoor air sample collected from the "normal breathing zone" (between 3-5 feet above the lowest floor of the building). Vapor migration sampling will be collected via indoor air and sub-slab samples and laboratory analyzed for VOCs.

If a sump is present and accessible in The Pour House building, observations regarding chlorinated odors, staining, and/or presence of a sheen on water in the sump will be made. In addition, a portable PID will be used to assess the presence of volatile vapors in the sump crock. A sample will be collected from the sump, if accessible.

Per correspondence from the WDNR on in early March 2021, the WDNR requested additional evaluation of vapors associated with nearby underground utilities along the South Main Street and Hwy 60 corridors. Stantec will open accessible stormwater and sanitary sewer manholes adjacent to the Site and use a PID to assess the potential presence of volatile vapors in these sewers. Stantec will evaluate measured contaminant locations and determine the depths of buried utilities that extend through or are near areas of CVOC contamination and evaluate the potential of the buried utilities to act as a contaminant migration pathway.

#### Data Evaluation and Summary

The findings and results of all site investigation data will be evaluated, interpreted, and summarized in a Chapter NR 716 WAC report. The Chapter NR 716 WAC report will include available data collected by Stantec in 2019/2020. At a minimum, the report format will include:

- Procedures
- Site description



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- Soil sampling results
- Groundwater sampling results
- Vapor intrusion sampling results & screening along underground utility lines
- Conclusions and Recommendations
- Site maps or aerial photographs, and other maps that may be useful
- Tabulated data
- Boring logs and abandonment forms (as needed)
- Laboratory reports and chain-of-custody documentation

All project work will be supervised by a Stantec Professional Geologist (PG), a Professional Engineer (PE), and/or a WDNR-certified hydrogeologist.

Please contact us if you have any questions or comments.

Regards,

**STANTEC CONSULTING SERVICES INC.**

A handwritten signature in blue ink that reads "Erin N. Gross".

Erin N. Gross, PG  
Staff Geologist  
Phone: (608) 628-6278  
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Erin.Gross@stantec.com

A handwritten signature in blue ink that reads "Richard J. Binder".

Richard J. Binder, CPG, PG  
Principal  
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Rick.Binder@Stantec.com

Attachment: Figure 1

**HP13:**  
TCE = 5.6 (ES)  
PCE = 46 (ES)  
CIS-1,2-DCE = 8.6 (PAL)  
MC = 0.8 (PAL)

**GP-16:**  
4-6': PCE = <0.012 mg/kg

**HP09:**  
TCE = 30 (ES)  
PCE = 260 (ES)  
CIS-1,2-DCE = 32 (PAL)

**HP11:**  
PCE = 0.9 (PAL)

**TW-4** DTW = 7.6'  
Date 3/30/2020  
Tetrachloroethene (PCE) 1.6

**HP08:**  
TCE = 40 (ES)  
PCE = 500 (ES)  
Vinyl C. = 1 (ES)  
CIS-1,2-DCE = 35 (PAL)  
PVOCS & MC > PAL  
7-9': PCE = 1.7 (GW RCL)

**HP14:**  
PCE = 0.9 (PAL)  
5-7': PCE = 0.12 (GW RCL)

**GP-15:**  
2-4': PCE = <0.014 mg/kg  
6-8': PCE = <0.013 mg/kg

**GP-13:**  
2-4': PCE = 0.091 mg/kg (GW RCL)  
6-8': PCE = <0.013 mg/kg

**HP07:**  
TCE = 28 (ES)  
PCE = 44 (ES)  
Methylene Chloride (MC) = 1.2 (ES)  
PVOCS > PAL/ES  
\*\*No soil above RCLs that I can see

**TW-2** DTW = 8.1'  
Date 10/23/2019  
Tetrachloroethene (PCE) 4.2

**TW-5** DTW = 9.8'  
Date 3/30/2020  
Tetrachloroethene (PCE) 420  
Trichloroethene (TCE) 1.9

**TW-6** DTW = 10.4'  
Date 3/30/2020  
Tetrachloroethene (PCE) 2.7

**TW-1** DTW = 7.8'  
Date 10/23/2019  
Benzo[a]pyrene 3.4  
Benzo[b]fluoranthene 3.8  
Chrysene 3.1

**TW-3** DTW = 8.4'

**TW-7** DTW = 9.0'  
Date 3/30/2020  
Benzo[a]pyrene 0.56  
Benzo[b]fluoranthene 0.56  
Chrysene 0.26

	= Proposed piezometer nest (~13' water table well + 25' piezometer)
	= Proposed 8' soil boring or temporary well if cart rig can manage 10'+
	= Proposed monitoring well (~13' water table well)
	= Former hydropunch location from 1998 Montgomery Watson investigation
	= Former soil boring location from 2014-2015 TRC investigation
	= Sub-slab vapor sampling location
	= 8-hour indoor air sampling



- Legend**
- Property Boundary
  - Parcel Boundary
  - Approximate Groundwater Flow Direction (BRRTS 03-67-215521)
  - Exceeds NR 140 Wis. Adm code Prevention Action Limit
  - Exceeds NR 140 Wis. Adm code Enforcement Standard
  - Borehole Location
  - Temporary Well Location

Figure No. **5**  
Title: **VOC and PAH Concentrations in Groundwater Exceeding NR140 ESs**  
Client/Project: 24, 28, and 32 S. Main Street, Hartford, Wisconsin, Phase II ESA  
Project Location: 193706313, T10N, R18E, S21, C. of Hartford, Washington Co., WI  
Prepared by: AJS on 2019-05-24  
Technical Review by: BI on 2019-05-24  
Independent Review by: EG on 2020-05-11

**Notes**  
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet  
2. Data Sources Include: Stantec, Sanborn, SCO, WDNR, WisDOT  
3. Orthophotography: 2017 Washington Co  
Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

Date = Date sampled  
Groundwater concentrations reported in micrograms per liter  
Soil concentrations reported in milligrams per kilogram  
DTW = depth to water

