

March 30, 2016



Wisconsin Department of Natural Resources
Waukesha Service Center
141 NW Barstow Street
Waukesha, Wisconsin 53188

Cory

Attn: Mr. Dave Volkert

Re: **Supplementary Site Investigation Work Plan-Revised**
Clare Central Apartments
1003 and 1033 West Atkinson Avenue
Milwaukee, Wisconsin
Terracon Project No. 58107058
WDNR BRRTS #02-41-549867
VPLE BRRTS #06-41-560680

Dear Mr. Volkert:

On January 21, 2016, Terracon Consultants, Inc. (Terracon) prepared a supplementary site investigation work plan (SSIWP) to perform environmental consulting services at the Clare Central apartment complexes located at 1003 and 1033 Atkinson Avenue, Milwaukee, Wisconsin (site). On March 2, 2016, the Wisconsin Department of Natural Resources (WDNR) provided comments and requested modifications to the SSIWP.

Soil and Groundwater Investigation

The WDNR response/requests with respect to the soil and groundwater investigation are presented below, followed by Terracon's response in bold/italics.

- "The DNR is requesting definition of soil impacts north or northeast of borings SGP-1, SSB-1, P-17 and SGP-7". ***As requested, Terracon has added eight (8) soil borings (P-33 through P-40) in the requested on-site areas along West Atkinson Avenue. The borings will be advanced to approximately 20 feet below ground surface (bgs), in accordance with procedures outlined in the SSIWP. The proposed locations are presented on the attached Site Diagram-Proposed Boring Locations.***
- "Terracon may want to revise some of the boring/well locations planned southwest of P-10 and P-18. Access to the property at 3610 N. 11th Street may not be possible based on past requests, so borings planned for this property should be moved. The City of Milwaukee owns the properties at 3614 and 3604 N. 11th Street and access to these properties should not be an issue. DNR suggests that Terracon move borings further south on the 3614 North 11th Street property, and further north on the 3604 N. 11th Street property. This action would eliminate any potential access issues for borings/wells planned on the 3610 N. 11th Street property. Borings originally planned on the 3610 N. 11th Street property could be relocated for better definition of soil impacts at the north end of the site". ***As requested, Terracon moved proposed soil boring P-30 and groundwater monitoring well MW-11 from***

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the 3610 N. 11th Street property to the 3604 N. 11th Street property. Soil borings P-28 and P-29 were moved slightly south on the 3614 N. 11th Street property. The revised locations are presented on the attached Site Diagram-Proposed Boring Locations.

- “In the Work Plan, Terracon plans on selecting one soil sample from each soil boring for laboratory analysis of volatile organic compounds (VOCs). It may be pertinent to collect an additional sample in most or all of these borings to determine the vertical extent of contamination, and to delineate the direct contact exceedance areas”. ***The sampling and analysis plan will be modified to incorporate collecting two samples per boring for VOC laboratory analysis. One discrete sample will be collected from 0-4 feet bgs to evaluate the direct-contact pathway, and the second sample will be collected from below 4 feet bgs at the depth exhibiting the highest PID screen reading, or if PID readings are not elevated, the interval immediately above the apparent soil/groundwater interface.***

- “The Soil CVOC Isoconcentration Map prepared by Sigma in the September 10, 2015 *Additional Site Investigation Summary Report* illustrate total chlorinated VOC (CVOC) concentrations for the entire soil column at the site. Additional maps should be created illustrating CVOC concentrations at different depths such as 0-4 feet, 4-8 feet and 8-12 feet. This is a better representation of the extent of contamination and may be beneficial when evaluating a remedy”. ***Terracon will prepare separate soil isoconcentration maps from the requested depths.***

Vapor Intrusion Work

The WDNR response/requests with respect to the vapor intrusion investigation are presented below, followed by Terracon’s response in italics.

- “The Work Plan calls for sampling the ambient air and sub-slab vapor at the two Clare Central apartment buildings and the residence at 3618 N. 11th Street. It will not be necessary to collect additional sub-slab samples at this time at these locations. The number of ambient air samples planned for the two apartment buildings and for the residence at 3618 N. 11th Street needs to be increased. DNR vapor intrusion guidance (PUB-RR-800) recommends collecting one air sample from each level of a typical residential home and multiple samples from larger facilities. In July 2013, the Wisconsin Department of Health Services (DHS) and City of Milwaukee Health Department (MHD) conducted an air sampling event in each of the Clare Central apartment buildings. The results from the indoor air sampling event are included in DHS’s August 29, 2013 *Environmental Health Investigation Update* report. Please refer to the DHS report to review their sampling locations and protocol. A background outside air sample should also be collected”. ***As requested, Terracon will remove the sub-slab vapor sampling from the 3618 N. 11th Street residence, and Clare Central apartment buildings, and implement the ambient air sampling per the table below. The number of samples, naming conventions and sampling locations are consistent with the July 17, 2013 sampling performed by DHS and MHD. Terracon made an assumption that access is provided to collect samples from the same areas in***

Units #1, #2 and #5. Per our discussion, it is understood that DHS will review/approve this ambient air sampling plan prior to implementation.

<u>Sample Location</u>	<u>Matrix/Analyses¹</u>	<u>No. of Samples</u>	<u>Lab Method¹</u>
Clare:1003 West Atkinson	Ambient Air Samples: CVOCs 1003 Sump Closet (1 st Floor), 1003 Unit #1 Kitchen Counter (1 st Floor), 1003 Mechanical Closet (2 nd Floor), and 1003 Storage Room (2 nd Floor)	4	T0-15
Clare:1033 West Atkinson	Ambient Air Samples: CVOCs 1033 Unit #2 Kitchen Counter (1 st Floor), and 1033 Unit #5 Kitchen Counter (2 nd Floor)	2	T0-15
3618 North 11th Street	Ambient Air Sample: CVOCs 3618 Basement	1	T0-15
Background- Outdoor Air	Ambient Air Sample: CVOCs 1033 Unit #5 Porch (2 nd Floor)	1	T0-15

¹ Terracon will collect 24-hour ambient air samples in laboratory prepared 6-liter Summa canisters with a flow regulator calibrated for 24-hour collection. The ambient air samples collected within the Summa canisters will be submitted to the laboratory for analysis of PCE, TCE, trans-DCE, cis-DCE, and VC using EPA Method TO-15.

- “Sub-slab and ambient air sampling is included in the Work Plan for the residences at 3614, 3610, 3604, and 3600 N. 11th Street. The City of Milwaukee is now the owner of the properties at 3614 and 3604 N. 11th Street. The City of Milwaukee is going to complete a vapor intrusion assessment of their two properties. DNR is requesting that the need for vapor sampling at the other properties at 3610 and 3600 N. 11th Street be re-evaluated after receiving the results from both the City of Milwaukee’s vapor sampling and Terracon’s soil and groundwater sampling”. ***Terracon will await the results of DHS and/or the City of Milwaukee Health Departments ambient air sampling at the 3614 and 3604 N. 11th Street residences, in addition to Terracons soil and groundwater sampling results, and consult with the WDNR on the path forward with respect to residential ambient air sampling.***
- “In January 2013, Acura Services, LLC (Acura) inspected the sub-slab depressurization systems (SSDSs) at the Clare Central apartments and assessed the performance of the systems. Acura’s findings were documented in their January 13, 2014 letter report addressed to SCS Engineers. Acura determined that the SSDSs at Clare Central were producing a vacuum beneath the concrete slabs of the apartment buildings, but the vacuum was weak, or did not extend beneath the entire length of the building. This indicates that the SSDSs may not be adequately performing to ensure the building(s) are protected from vapor intrusion. Acura provided recommendations on

how to improve the performance of the SSDSs. Based on Acura's findings, the SSDSs at Clare Central need to be upgraded. Please move forward with the renovation of the SSDSs at Clare Central. The systems should also be inspected on a regular basis and the inspection results documented." ***Terracon consulted with Acura, and expects that their recommendations regarding SSDS performances are expected to be implemented. Acura will prepare a short report documenting SSDS modification/performance upon completion.***

- "The SSDS at the residence at 3618 N. 11th Street should be inspected on a regular basis and the inspection results documented". ***Terracon will coordinate SSDS inspections on a semi-annual basis, and document the inspections in a letter to the Department. Ideally, the inspections will be concurrent to the SSDS inspections at the 1003 and 1033 complexes.***

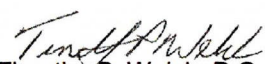
Utilities

As presented in the SSIWP, Terracon will evaluate subsurface underground utility corridors as potential contaminant migration pathways. As requested, underground utilities will be indicated on all site maps. Furthermore, clarification will be provided regarding the catch basin/storm sewer in the east/west alley immediately south of the 1033 W. Atkinson apartment building, and storm sewers in the alley ways.

We look forward to working with you on this project, and if you have any questions or comments regarding the SSIWP revisions presented herein please contact us at your earliest convenience at (414) 423-0255.

Sincerely,

Terracon

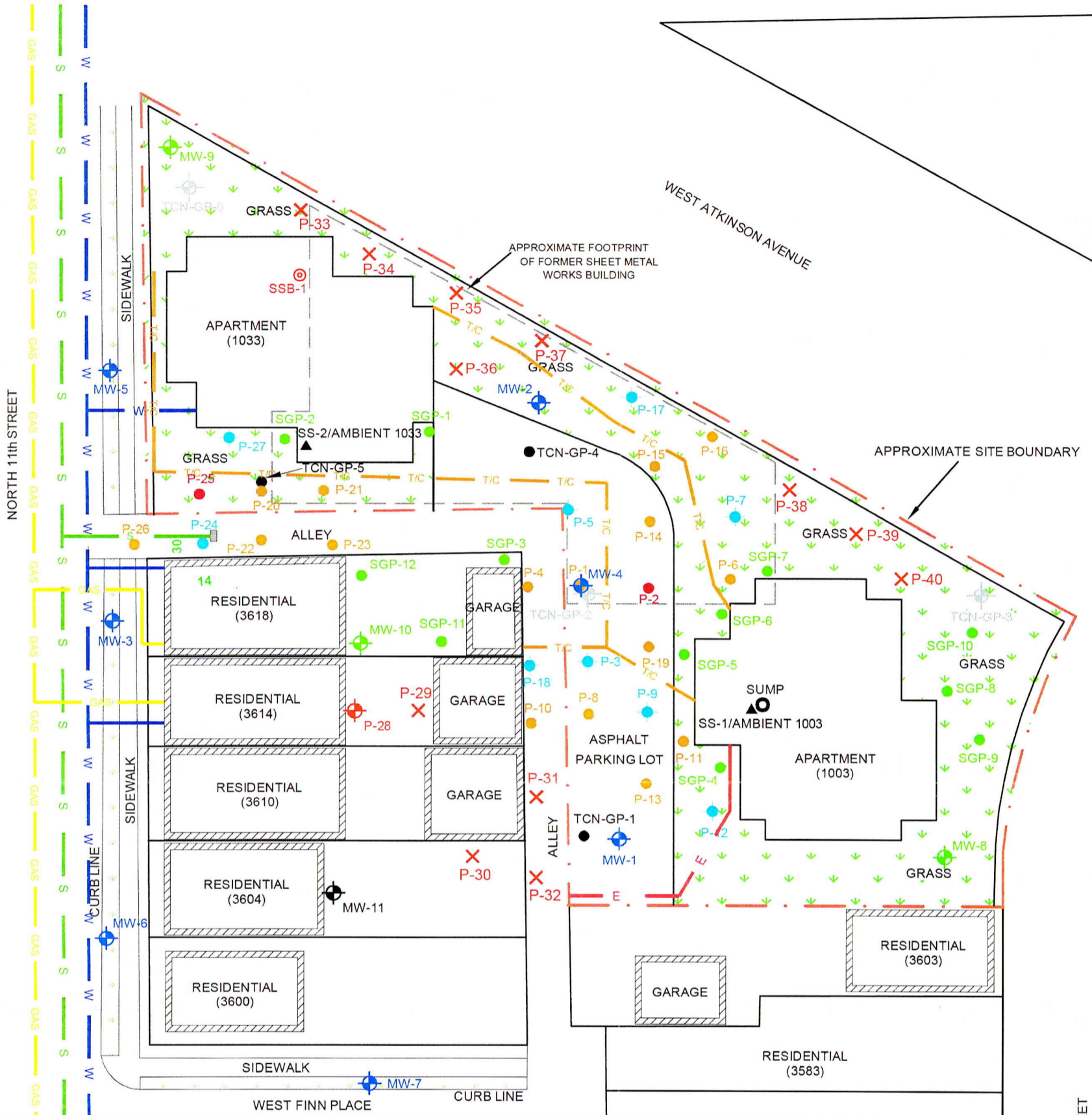

Timothy P. Welch, P.G.
Environmental Department Manager


Blaine R. Schreyer, P.E.
Principal/Office Manager

Attachment: Site Diagram-Proposed Boring Locations

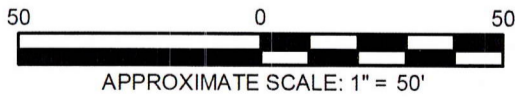
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MAP SOURCE: MILWAUKEE COUNTY LAND INFORMATION OFFICE INTERACTIVE MAPPING SERVICE WEBSITE (2010 AERIAL)
 DIAGRAM IS FOR GENERAL LOCATION ONLY AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES



LEGEND

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|---|---|
| <ul style="list-style-type: none"> ● SOIL & GROUNDWATER PROBE LOCATION (TERRACON LSI, AUGUST 16, 2006) ● SOIL PROBE LOCATION (TERRACON LSI, AUGUST 16, 2006) ⊕ GROUNDWATER MONITORING WELL (TERRACON) ● GEOPROBE BORING TO 20 FEET BGS (TERRACON) ● GEOPROBE BORING TO 20 FEET BGS WITH TEMPORARY WELL (TERRACON) ● GEOPROBE BORING TO 35 FEET BGS (TERRACON) ▲ SUB SLAB VAPOR MONITORING POINT (2/11/11) — E — ELECTRIC (WE ENERGIES) — T/C — COMMUNICATION (AT & T) ▨ STORM SEWER | <ul style="list-style-type: none"> ⊗ PROPOSED SOIL BORING ⊕ PROPOSED GROUNDWATER TEMPORARY WELL ⊕ PROPOSED GROUNDWATER MONITORING WELL ⊕ GROUNDWATER MONITORING WELL (SIGMA) ● GEOPROBE BORING (SIGMA) — W — WATER LINE — GAS — GAS LINE — S — SEWER LINE |
|---|---|



Project Mngr:	TPW	Project No.:	58107058
Drawn By:	SDM	Scale:	AS SHOWN
Checked By:	TPW	File No.:	58107058 BL
Approved By:	TPW	Date:	03/17/2016

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 Consulting Engineers and Scientists
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SITE DIAGRAM - PROPOSED BORING LOCATIONS	
CLARE CENTRAL 1003 AND 1033 WEST ATKINSON AVENUE	
MILWAUKEE	WISCONSIN

FIGURE
1