Site Investigation Status Report and Remedial Action Plan

Keller Property/Proposed Tennyson Ridge Development
Tennyson Lane/Whitman Lane
Madison, Dane County, Wisconsin

October 13, 2016
Terracon Project No. 58167157

Prepared for:

Wisconsin Housing Preservation Corporation, Astar Capital Management, Inc., and Cardinal Capital Management, Inc.
Madison, Wisconsin

Prepared by:

Terracon Consultants, Inc.
Franklin, Wisconsin

October 13, 2016

Wisconsin Department of Natural Resources
Remediation and Redevelopment Program
3911 Fish Hatchery Road
Fitchburg, Wisconsin 53711

Attention: Mr. Michael Schmoller/Hydrogeologist
Phone: (608) 275-3303
Email: Micheal.Schmoller@wiconsin.gov

Re: Site Investigation Status Report and Remedial Action Plan
Keller Property/Proposed Tennyson Ridge Development
Tennyson Lane/Whitman Lane
Madison, Dane County, Wisconsin
BRRTS #03-13-553975
Terracon Project No. 58167157

Dear Mr. Schmoller:

Terracon Consultants, Inc. (Terracon) is pleased to submit this Site Investigation Status Report and Remedial Action Plan report for the above-referenced site. The data presented herein was compiled from several limited investigations performed from 2006 to present. Although further investigation is needed, we understand that the Wisconsin Department of Natural Resources (WDNR) has agreed to review the existing data and the proposed remedial action plan presented herein to facilitate redevelopment plans that are time-sensitive. On behalf of our client, we appreciate your willingness to assist on an expedited basis. We have included a check for $1,050 to cover the review fee per NR 749, Wisconsin Administrative Code (WAC). Please contact us if you have questions regarding the information provided in this report.

Sincerely,

Edmund A. Buc, P.E., CHMM
Senior Project Engineer

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

EAB/BRS:eab/\\milwaukee1\Data\Projects\2016\58167157\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Tennyson Ridge RAP and MMP.docx

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TENNYSON LANE/WHITMAN LANE
MADISON, DANE COUNTY, WISCONSIN

BRRTS #03-13-553975
TERRACON PROJECT NO. 58167157

1.0 INTRODUCTION

Wisconsin Housing Preservation Corporation retained Terracon Consultants, Inc. (Terracon) to review the results of previously completed environmental studies completed at 1902 Tennyson Lane (the "site"), Madison, Wisconsin. The site location is depicted on Exhibit 1, Appendix A. The site is currently being considered for redevelopment with single-family and multi-family residential dwellings.

The review was performed to further evaluate the impacts that were previously identified by others on-site. The information presented herein was used to develop a conceptual site model. Remedial action options were identified and evaluated in general accordance with NR 722, Wisconsin Administrative Code (WAC), using the conceptual site model. Based on the results of the remedial action options evaluation, a Remedial Action Plan (RAP) and materials management plan were developed for the site to address the identified impacts and facilitate redevelopment.

1.1 Background Information

The site is the location of an open leaking underground storage tank/leaking aboveground storage tank (LUST/LAST) case (BRRTS #03-13-553975). Terracon reviewed the contents of the Wisconsin Department of Natural Resources (WDNR) case file, which included a Phase I Environmental Site Assessment (ESA) report prepared by Liesch dated October 2005. Based on review of the report, the ESA encompassed the parcel for the site at 1902 Tennyson Lane and also adjoining parcel to the east of the site (formerly identified as 3802 Packers Avenue). The details of the parcel located at 3802 Packers Avenue are not discussed herein since it is not a part of the site. The parcel at 1902 Tennyson Lane contained 10 buildings.

During their site reconnaissance, Liesch observed automobiles, construction materials, HVAC equipment, motors, and other items. These items were observed primarily on the 1902 Tennyson Lane parcel. In addition, in the area north of the buildings, Liesch observed HVAC units, scrap metal, motors, automobiles, trailers, tanks, and chicken sheds. The chicken sheds contained

several chemical substances in intact containers, including but not limited to paints, solvents, adhesives, asphalt, glycol ether, isopropyl alcohol, and latex underlayment liquid. Liesch observed lawn care equipment and automotive parts and supplies, including engines, transmissions, exhaust pipes, tires, and wheels, as well as numerous miscellaneous hardware items inside Building 8, located in the central portion of the subject site (see Liesch Phase I ESA, Figure 3 for their building designations).

Based on information obtained during the ESA, Liesch identified the following recognized environmental conditions (RECs) related to the 1902 Tennyson Lane parcel: seven former and current underground storage tanks (USTs) and aboveground storage tanks (ASTs) (which contained fuel oil, gasoline, diesel fuel, and unknown contents) located at the building complex, hazardous substances stored in various locations, spills of unidentified oily substances in the vicinity of the auto repair shop, a floor drain in the auto shop and a storm grate outside that discharge to the soil surface, and biological agents stored in a containment area in Building 3. In addition, Liesch identified a propane AST at the 1902 Tennyson Lane parcel as a historical REC.

Liesch also identified items of environmental note that may require existing or future environmental compliance activities. These items included: the property listing in the database report for handling radioactive material, various items stored for salvage or reuse, fluorescent lighting fixtures throughout the facility, fluorescent lighting ballasts, suspected asbestos containing materials (ACM), and potential ozone-depleting materials in various appliances. Finally, Liesch recommended the following: properly abandon and close unused ASTs and USTs including the collection of soil samples for analysis; collect and analyze soil samples and/or groundwater samples to address the various RECs; conduct an ACM survey prior to building renovation or demolition activities; develop an inventory of hazardous substances for proper handling and disposal, develop a method of managing infectious substances associated with research, dispose of used fluorescent lamps; replace, recharge, and/or dismantle HVAC units; and determine the nature, history, and status of radioactive materials at the property.

Liesch subsequently conducted a Phase II ESA in 2005 to assess the RECs identified in the Phase I ESA. The investigation included using a Geoprobe® or hand augers to collect soil samples from 13 locations across the site in the vicinity of the RECs. One soil boring was located near the southeast corner of Building 1 on the site (B-1). Boring B-1 was intended to evaluate whether the AST present in the southeast corner of Building 1 had experienced a release. Borings B-2, B-2A, and B-2B were intended to evaluate an existing fuel oil UST located beneath the southwest corner of Building 3. Boring B-3 was advanced to evaluate the former fuel oil UST located at the northwest corner of Building 3. Boring 4 was advanced to evaluate possible releases from a former UST and AST, both used for fuel oil containment north of the center of Building 7. Borings B-5 and B-5A were advanced to evaluate potential releases from an oily stain observed north of Building 7. Boring B-6 was advanced to evaluate potential releases from a former gasoline UST located north of Building 9. Boring B-7 was advanced to the east of Building 3 near a drain tile

discharge point where oily staining was observed. Boring B-8 was advanced on the east side of the existing fuel oil UST located west of the loading dock for Building 3. Boring B-9 was advanced in a former animal burial area located in the vacant land northeast of the buildings. Boring B-10 was advanced near a transformer pad east of Building 6.

Borings were advanced to depths of approximately 4 to 16 feet below ground surface (bgs). Soil samples were collected continuously and screened on-site using an organic vapor meter (OVM). The soil types were variable, but predominantly sandy soils were encountered. Select soil samples were submitted for analysis of gasoline range organics (GRO), diesel range organics (DRO), petroleum volatile organic compounds (PVOCs), volatile organic compounds (VOCs), Resource Conservation and Recovery Act (RCRA) metals, polychlorinated biphenyls (PCB), and/or formaldehyde. The soil samples submitted for analysis were collected from depths that varied from near ground surface to 14-16 feet bgs. Groundwater samples were not collected for analysis.

According to the December 13, 2005 report, elevated OVM readings and petroleum odors or staining were observed in borings B-2, B-5, B-5A, B-7, and B-8. Analytical results confirmed that elevated concentrations of petroleum products were present in soil samples collected from borings B-2B, B-5, B-5A, B-7, and B-8. Liesch recommended that additional sampling be conducted to define the extent of contamination. Specifically, Liesch noted that the impacts near boring B-2B were associated with a UST that is beneath the building such that further investigation could not be performed. Instead, Liesch recommended that the UST be removed and investigation be performed if the building is demolished. Liesch recommended further investigation near boring B-5 and B-5A. However, they indicated that debris in the area would have to be removed to allow access for the investigation. Impacts were also noted in borings B-7 and B-8. Boring B-8 was reportedly associated with a fuel oil UST located in an area between two buildings. Liesch recommended removal/investigation similar to their recommendation for the UST located near boring B-2. Boring B-7 is located east of the buildings in an area of oil-stained soil.

The LUST case file also included several documents prepared by Pioneer Environmental, Inc. The documents discuss various environmental tasks needed to proceed with redevelopment of the site.

The Phase I and Phase II ESA reports and the Pioneer Environmental, Inc. documents were provided to the WDNR on July 24, 2009 by Alderperson Satya Rhodes-Conway. Reportedly, the Alderperson became involved when she received complaints regarding the safety of the site. In response to the information provided to WDNR, the LUST case was opened on July 24, 2009.

It appears no further action has taken place at the site to specifically address the open LUST case. Terracon has performed three, more recent Phase I ESAs for southwest and western

portions of the site, which the owner was proposing to be subdivided from the site, and the adjoining property to the east. Based on the findings of those Phase I ESAs, three Limited Site Investigation (LSI) reports were prepared. Specifically, the following LSI reports have been generated:

- Limited Site Investigation, Lot 2 of Proposed CSM, Part of 802 Packers Avenue and 1902 Tennyson Lane, Madison, Dane County, Wisconsin dated September 13, 2013, Terracon Project No. 58137074.

- Limited Site Investigation, Dedicated Area: Between Lot 3 and Lot 4 of Proposed CSM, Part of 1902 Tennyson Lane, Madison, Dane County, Wisconsin dated September 19, 2013, Terracon Project No. 58137075.

- Limited Site Investigation, Tennyson Ridge, Tennyson Lane and Eliot Lane, Madison, Dane County, Wisconsin dated August 11, 2016, Terracon Project No. 58167119.

The data collected from these LSIs indicates the impacts associated with the open LUST case have not migrated to the southwest and western portions of the site and the adjoining property to the east.

1.2 Description of Proposed Development

Following the results of the investigation performed to date, which showed soil was not impacted in some areas, the western portion of the site was subdivided to include 13 single-family lots and a right-of-way that will be developed as Eliot Lane. The eastern edge of the site was subdivided to include a right-of-way that will be developed as Whitman Lane. An outlot was created at the northwest corner of Tennyson Lane and Whitman Lane (far southwest corner of the site), which will become a storm water retention pond. The remainder of the site (Dane County Parcel Number 081030216073) will be redeveloped with two 3-story, multi-family residential structures, one with 47 dwelling units and the other with 25 dwelling units. Both buildings will have below grade parking. Parking and driveways will be located to the south and west of the buildings. The remainder of the site will be capped with sidewalks and landscaping. Exhibit 3, Appendix A depicts the proposed redevelopment, property lines, and the existing structures.

1.3 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report.

1.4 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable, or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this investigation. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.0 SITE INVESTIGATION SUMMARY

As indicated in Section 1.1, as a result of the findings of prior Phase I ESAs on and around the site, a Phase II and three limited site investigations have been completed at or surrounding the site since 2005. The investigations were each intended to evaluate the RECs identified by the Phase I ESAs, and other than at a few locations sampled on site in 2005, the results indicate only limited areas of impacted soil are present. Table 1, Appendix B presents the existing data (for detected compounds). The locations of the samples are depicted on Exhibit 2, Appendix A. For detailed descriptions of the associated investigation activities, please refer to the individual reports that document those investigations.

2.1 Soil Analytical Data

The WDNR has established guidance for the calculation of soil residual contaminant levels (RCLs) for direct-contact exposure and the protection of groundwater. The guidance document, *Soil Residual Contaminant Level Determinations using the US EPA Regional Screening Level Web Calculator*, PUB-RR-890, dated January 2014 (with WDNR spreadsheet input parameters updated June 2016) was used to establish RCLs for this site.

2.1.1 VOCs

VOC analytical results are presented in Table 1, Appendix B. All of the soil samples were analyzed for VOCs except for the samples collected from the following 7 Liesch borings: B-1 through B-4, B-6, B-8, and B-10. Soil samples collected from the properties surrounding the site did not contain VOCs in the shallow or deeper soil. Ethylbenzene, trimethylbenzenes (TMBs; combined TMBs -

1,2,4- plus 1,3,5-), and xylenes (combined m-, p-, and o-) were detected above their soil to groundwater pathway RCLs in the soil samples collected from borings B-2B and B-5. Toluene was also detected above its soil to groundwater pathway RCL in the soil samples collected from boring B-5. Combined TMBs also exceeded their soil to groundwater pathway RCL in the soil sample collected from boring B-8. Only the naphthalene concentration detected in soil boring B-5 exceeds both its non-industrial, direct-contact and soil to groundwater pathway RCLs.

The RCL exceedances correlate well with the OVM readings; the OVM readings for these three soil samples are the only OVM readings which exceed 10 parts per million (ppm). Two of the soil samples analyzed for VOCs during sampling performed in 2013 reportedly contained methylene chloride, however, the detections were deemed to be the result of laboratory contamination.

2.1.2 Polycyclic Aromatic Hydrocarbons (PAHs)

During the limited site investigations performed by Terracon in 2013 through 2016, soil samples were collected for PAH analysis, but were placed on hold pending the results of diesel range organics (DRO) analysis. The DRO results were used as a screening tool to determine whether PAHs analysis was warranted. Since the DRO results were generally not elevated, the samples collected for PAH analysis were not run. However, elevated concentrations of DRO were detected in 5 of the soil samples analyzed by Liesch in 2005. We anticipate PAHs may be present in the soil at Liesch boring locations B-2B, B-5, B-5A, B-7, and B-8. Fortunately, the PID correlation described above correlates reasonably well for these locations, with the exception of the soil sample collected from borings B-5A and B-7.

2.1.3 Polychlorinated Biphenyls (PCBs)

A shallow soil sample was collected for analysis of PCBs from boring B-10 during the 2005 Liesch Phase II. PCBs were not detected. However, during a September 8, 2016 site visit, Mr. Schmoller, WDNR Hydrogeologist, indicated that since the pad-mounted transformer originally located near boring B-10 was no longer present and its contents may have been drained to the nearby ground surface prior to salvage, the area should be resampled for the presence of PCBs.

2.1.4 Metals

Metals analytical results are summarized in Table 1, Appendix B. Samples were collected for metals analysis from Liesch borings B-5, B-5A, B-6 (lead only), and B-7. The results did not identify significant impacts, though lead was detected in the shallow soil at boring B-7 above its soil to groundwater pathway RCL and slightly above its background threshold value (BTV). Because of the limited mobility of metals and the limited impacts identified by Liesch, subsequent soil samples collected by Terracon on the surrounding properties did not include metals analysis. However, for the limited site investigation performed on the property to the east, closest to boring

B-7, Terracon analyzed 22 soil samples for lead. The lead concentrations detected in these samples did not exceed RCLs or the BTV for lead.

2.2 Groundwater Analytical Data

Terracon encountered boring refusal at depths ranging from 11 to 20 feet bgs during drilling performed in 2013 and 2016. Temporary groundwater monitoring wells were installed in multiple borings, but groundwater did not accumulate within a reasonable period of time. Moisture contents observed during drilling seemed to corroborate that groundwater was not present above refusal depths. Although not specifically noted in the Liesch report, those borings were advanced to similar depths and Liesch did not collect groundwater samples. It is likely that the sandstone bedrock anticipated in the area was the cause of boring refusal in all borings advanced at the site, and that groundwater is present at depth within the bedrock. Based upon the apparently limited extent of the impacted soil, the depth to groundwater, the availability of municipal water, and the high cost of bedrock drilling, we do not believe further groundwater investigation is required.

3.0 CONCEPTUAL SITE MODEL

Terracon used the information from the Phase I ESAs, the 2005 Liesch Phase II report and the three limited site investigation reports prepared by Terracon from 2013 through 2016 to develop the following conceptual site model:

- The site was first developed with buildings sometime between 1937 and 1949.
- The buildings were occupied by various entities over the years that either were known or suspected to store and handle petroleum products and/or hazardous substances at the site.
- Based upon the findings of their 2005 Phase I ESA, Liesch developed a sampling plan intended to evaluate all the RECs.
- Four distinct areas of impacted soil were identified. The impacts generally appear to be associated with diesel, fuel oil, or other heavier weight hydrocarbons, and not solvents, PCBs, or metals (except that a slightly elevated lead concentration was present in the soil sample collected from boring B-7). Other areas of the site did not appear to be impacted.
- Impacts at two of the four locations are associated with fuel oil USTs that require removal once the overlying structures are removed.
- Impacts at the other two locations appear to be associated with surface releases.

- The impacts correlated well with the OVM and/or photoionization detector (PID) readings (except at borings B-5A and B-7).

- The soil types vary across the site, but the majority is sandy. Bedrock (presumably sandstone) is present from depths of 11 to 20 feet, based on refusal in direct-push borings.

- Groundwater is not present above bedrock. Based on the apparently limited extent of the impacted soil and the depth to groundwater, groundwater investigation is not required.

4.0 REMEDIAL ACTION PLAN

Although further investigation is needed, several remedial action options were considered using the existing data in general accordance with NR 722, WAC. Potential exposure pathways via soil, groundwater, surface water, and vapor were considered. The remedial actions that were considered also took into consideration the planned multi-family residential use of the site. The results were subsequently used to develop a remedial action plan for the site.

4.1 Remedial Action Options Evaluation

Based on existing data, remedial actions need to address the direct-contact pathway with the naphthalene at boring B-5, the potential for groundwater impacts at each of the four locations due to the soil to groundwater pathway RCL exceedances, and potential vapor intrusion concerns within the buildings due to the close proximity of petroleum impacts in some areas. Based on the depth to groundwater, the limited extent of the impacts, and the availability of municipal water, the groundwater pathway is less of a concern. Similarly, as things exist, vapor intrusion is not a concern because the impacts are located at depth below buildings without basements, are not located near buildings, or the buildings they are located near are considered large commercial buildings with good ventilation. Furthermore, the detected constituents are associated with petroleum products and degrade quickly under aerobic conditions, which are likely present in the sandy soil.

However, since the site will be redeveloped with multi-family housing, the known impacts must be managed to mitigate the direct-contact and vapor intrusion pathways. With the planned installation of a bio-retention basin in the area of impacted soil by boring B-2, the plan must also address potential impacts to surface water leaving the site. Since the existing data indicates the extent of the soil impacts is limited, Terracon proposes to not perform groundwater investigation at this time.

Remedial action options must consider monitored natural attenuation. Given the planned redevelopment, this option is not acceptable on its own. Two other options considered include excavation and off-site disposal of the known impacts or excavation and on-site management of

the known impacts. Given the limited data available and planned layout of the proposed development, these options were combined to create a remedy that will address the identified limited impacts concurrently with redevelopment of the site.

4.2 Remedial Action Plan

Based on the remedial action options evaluation and the conceptual site model, which includes consideration of current and proposed future land use and the limited amount of investigation data, Terracon recommends the following remedial action plan (RAP):

- Terracon will develop a health and safety plan (HASP) to be used by our personnel during field services. At this time, we anticipate that a USEPA Level D work uniform consisting of hard hats, safety glasses, high visibility vests, protective gloves, and steel-toed boots will be required by all personnel in the work area. Contractor's personnel or subcontractors that may be exposed to the contaminated soil shall be properly trained and equipped in accordance with OSHA 1910.120. Terracon will provide a copy of our HASP to contractors upon request; however, the contractor is responsible for the health and safety of their employees.

- In accordance with WDNR's request, a shallow soil sample will be collected for analysis of PCBs near the pad-mounted transformer formerly located near boring B-10. If PCBs are detected, the RAP will be amended accordingly.

- Removal of the structural impediments so the two fuel oil USTs located near borings B-2 and B-8 can be abandoned by removal. Tank System Site Assessments (TSSA) will be performed for both tanks and a single report will be prepared documenting both. The TSSAs will be performed in general accordance with DSPS 310, WAC, and the *Guide to Assessment and Reporting of Suspected or Obvious Releases from Underground and Aboveground Storage Tank Systems* (R.10/2012), except that the laboratory analysis will include VOCs, PAHs, and lead.

- Screening of all soil excavated from Dane County Parcel Number 081030216073 (to be redeveloped with two 3-story, multi-family residential structures, one with 47 dwelling units and the other with 25 dwelling units after demolition of the existing structures), the north half of the Eliot Lane right-of-way, and the entire right-of-way for Whitman Lane. These are the areas of the site that have documented impacts or potential impacts extending from known impacts. Screening will involve visual observation by Terracon during excavation activities and measuring VOCs using the equivalent headspace method and a PID at a frequency of approximately 200 cubic yards excavated or more.

- Soils that do not appear to be visually impacted and do not register PID readings of 10 ppm or greater will be considered not impacted. These soils will be moved to the adjoining parcel to the north (Dane County Parcel No. 081019395010).

- Soils that appear to be visually impacted or register a PID reading of 10 ppm or greater will be segregated and temporarily stockpiled on site as outlined in Section 5.0 pending the decision for proper on-site management or off-site disposal. Because these temporary stockpiles will likely be created in Fall 2016, we anticipate they may need to be maintained until Spring 2016 due to weather and physical conditions at the site.

- In areas where soils appear visually impacted or register a PID reading of 10 ppm or greater, Terracon will collect sidewall and base samples to document the concentrations in the soil at the final extent of the excavation. The sidewall and base samples will be analyzed for VOCs, PAHs, and lead.

- Impacted soil with suitable engineering properties will be relocated on the property beneath pavements or not within 4 feet of the ground surface in unpaved areas, unless additional sampling confirms the impacts do not exceed non-industrial direct-contact RCLs. Soil may be replaced outside building footings without a concern for vapor intrusion since the basement level of both buildings is being constructed for parking with associated required ventilation.

- Impacted soil that does not have suitable engineering properties (e.g. topsoil) will be relocated on site in a green space area and not within 4 feet of the ground surface, unless additional sampling confirms the impacts do not exceed non-industrial direct-contact RCLs or other measures are taken to protect against direct-contact.

- Alternatively, impacted soil may be landfilled if necessary or desirable due to large or small quantities identified, respectively.

- Following the above active remedial actions, natural attenuation will be relied upon to address the remaining impacted soil.

Access to the site will be controlled during construction with fencing to limit contact with the exposed soil. Following completion of construction activities, the remedial actions will be documented and submitted to WDNR. Section 5 addresses the specifics of materials management during implementation of the remedial action plan.

4.3 Sustainable Remedial Action

Terracon evaluated the criteria listed in NR 722.09(m) regarding sustainable remedial action as

part of the remedial action plan development.

4.3.1 Strategies within Terracon

Terracon is committed to implementing green remediation technologies to help optimize efficiency and increases the net benefit of cleanup actions without compromising remediation goals. We are focused on specific and general remediation needs as technologies, applications, and cleanup goals continue to evolve.

Terracon is a member of the U.S. Green Building Council and actively promotes recycling, reducing fuel/energy consumption, and reducing greenhouse gas emissions through the life of the projects including:

- Increasing and promoting sustainable and environmentally friendly practices.
- Developing and designing sustainable practices for remediation applications.

Terracon is committed to the principles and practices of sustainability. In very practical terms, this means conducting our business and meeting the needs of our clients and employees in an environmentally, socially and economically responsive manner.

Terracon incorporates sustainability into the designs and solutions developed for our projects. Within the firm, we continuously define, promote and implement sustainable practices. We educate and encourage employees to adopt sustainable practices both inside and outside the firm. Our employee's commitments towards sustainability are strengthened by being an employee-owned firm. For our clients and within the firm, we place particular emphasis on (1) increasing the efficient use of energy, water and materials, and (2) reducing and remediating impacts on human health and the environment produced over the life-cycle of buildings, infrastructure, and related systems.

As a large company, changing and improving daily operations can have large impacts on reducing the environmental footprint of each project for which Terracon is involved. We continue to take measureable steps to address sustainability in our daily operations and the impacts that our actions have on the environment. The basic principles of sustainability are an integral part of our corporate culture and have a rich performance history of sustainability on many projects. Examples of Terracon's sustainability efforts include:

- Reducing the size of our concrete test cylinders from 6”x12” to 4”x8”, which effectively reduced the waste concrete we generate from our materials testing laboratory annually by two-thirds (our single, largest waste stream).

- Collecting and recycling paper, cardboard, aluminum, plastic, batteries and other metal wastes from office and project operations.

- Electronic delivery of our reports to the client either for draft review or as final documents to eliminate paper use and for electronic storage (at client’s discretion).

- Developed a web based program where reports can be stored electronically through Terracon’s servers and accessed by the client or their designees.

- Use of WebEx and Microsoft Link® conferencing to conduct presentations with clients and reduce travel and labor requirements.

- Utilize Lease Plan USA fleet management and GPS units to track vehicle fuel use, idling time, and vehicle maintenance to help ensure our vehicles are operating efficiently and to reduce downtime due to vehicle breakdowns.

- Local offices joining with communities to reduce emissions such as our Fort Collins, Colorado, office joining ClimateWise in Fort Collins to help the community meet greenhouse gas reduction goals set in the Fort Collins Climate Action Plan, achieving Silver status in 2013 with a goal of achieving Gold status in 2014.

- Beginning a program to calculate local office Greenhouse Gas Emissions and developing a reduction goal.

4.3.2 Green and Sustainable Best Management Practices

In addition to general Terracon green principles and practices, the USEPA’s “Principles of Greener Cleanups” (USEPA, 2009) outlines the USEPA policy for evaluating and minimizing the environmental impact during cleanup of contaminated sites.

There are several green and sustainable Best Management Practices (BMP) that can be followed during the site remediation. The purpose of these BMPs is to:

- Minimize energy consumption.

- Minimize water use and impacts to water resources.

- Reduce, reuse, and recycle wastes whenever possible.
- Minimize air pollutants and greenhouse gases.
- Protect the Environment.

During the course of the project Terracon will implement the following BMPs to the extent practicable:

Energy Consumption

- Electronic networks have been established, and teleconferencing, file sharing and screen sharing capabilities have been enacted to minimize travel and reduce fuel used on the project.
- Project team members will carpool whenever possible for the project to reduce fuel use and emissions.
- Personnel and equipment mobilizations will be planned to minimize travel to and from the site.
- As noted above Terracon utilizes Lease Plan USA fleet management and GPS units to track vehicle fuel use, idling time, and vehicle maintenance to help ensure our vehicles are operating efficiently and to reduce downtime due to vehicle breakdowns.
- Terracon's subcontractors will be encouraged to develop their own BMPs.
- Rechargeable batteries will be used whenever possible to minimize battery consumption.
- Excavated soil will be hauled to the nearest available landfill for disposal to minimize fuel use.

Reduce, Reuse, and Recycle

- Report drafts and data will be forwarded electronically whenever possible to minimize paper use.
- Paper copies of draft and final reports will be kept to a minimum.

Air Pollutants and Greenhouse Gases

- In-place management of contaminants will reduce the potential for volatilization.

5.0 MATERIALS MANAGEMENT PLAN

5.1 Soil Management Plan Requirements

Soil management plan requirements for contaminated soil are established in NR 718, WAC. Because the RAP includes on-site management of excavated contaminated soil, the following location standards enumerated in NR 718.12(1)(c), WAC, were considered:

- Floodplain

  Based on the DCIMap Interactive Mapping Service, the site is not located within a floodplain.

- Wetland or Critical Habitat Area

  Based on the DCIMap Interactive Mapping Service, the site is not located with 100 feet of a wetland. Based on the urban nature of the area, the site is not likely located within 100 feet of a critical habitat area.

- Navigable Waterway

  The site is not located within 300 feet of a navigable river, stream, lake, pond or flowage.

- Water Supply Well

  Based on information in the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) Well Construction Report database and WDNR drinking water database, these is no water supply well on-site or within 300 feet of the site.

- Groundwater and Placement of excavated contaminated soil at depths greater than the depth of the original excavation from which the contaminated soil was removed

  Groundwater at the site is located in the sandstone bedrock at least 20 feet bgs. The grading plans include excavating as much as 40,000 cubic yards of soil from

the site. The vast majority of this soil is thought to not be impacted. However, visually impacted soil and soils that register a PID reading of 10 ppm or greater will be segregated and temporarily stockpiled on site pending the decision for proper on-site management or off-site disposal. If managed on site, additional clean soil will be excavated from below areas to be paved or from below 4 feet in unpaved areas so the impacted soil can be placed in those "vaults" and capped with pavement or 4 feet of clean soil. Because sandy soils were observed in some areas, if the base of the "vaults" is comprised of sandy soil, a layer of clayey soil will first be placed at the base of the "vault". If insufficient depth can be achieved due to the presence of bedrock, a 2 foot layer of clayey soil will also be placed over the impacted soil so that the overburden can be reduced to as little as 2 feet of clayey soil plus 6 inches of vegetated topsoil. Because placement of the impacted soils into the "vaults" as described may be an exception to NR 718.12 (1)(c) 5. and 6., WAC, the clayey base and cap described above have been specified as a condition of approval.

- Potential threats to public health, safety or welfare or the environment.

  The excavated impacted soil will be managed in accordance with this *Materials Management Plan*. During construction, the site is fenced. Once the site is redeveloped, it will be paved or otherwise covered with buildings and landscaped areas, limiting the potential for direct-contact and, to some extent, infiltration. We do not expect potential threats to public health, safety or welfare or the environment due to the continued on-site management of the contaminated soil.

The following information is provided to satisfy the requirements of NR 718.12(2)(b), WAC:

- Responsible Party Contact Information

  Tony Balthazor.
  Tennyson Ridge, LLC
  631 South Hickory Street
  Fond du Lac, Wisconsin 54935
  tonyb@nccbuilds.com
  (920) 929-9400

- Volume of Contaminated Soil to be Managed

  The extent of the impacts at the 4 locations with impacted soils has not been closely delineated. As a result, a final estimate of soil requiring excavation and on-site management has not been determined. At this point, we estimate the quantity will not exceed 2,500 cubic yards.

- Location Information

  1902 Tennyson Lane
  Madison, Wisconsin.
  NW ¼ of the NW ¼ of Section 30, Township 8N, Range 10E
  WTM – X=572,088, Y=296,111
  Latitude/Longitude – 43º 8' 9.43"N, 89º 21' 34.38"W

- Environmental Consultant

  Blaine R. Schroyer, P.E.
  Terracon Consultants, Inc.
  9856 South 57th Street
  Franklin, Wisconsin 53132
  brschroyer@terracon.com
  414-423-0255

- General Contractor

  Tony Balthazor.
  Northcentral Construction Co. Inc.
  631 South Hickory Street
  Fond du Lac, Wisconsin 54935
  tonyb@nccbuilds.com
  (920) 929-9400

- Proposed Schedule

  It is anticipated that construction activities will take over 1 year to complete and will begin in as early as October 2016.

- Results of Soil Analysis

  Soil analytical results are presented herein and in the attached Table 1.

- Description of how Contaminated Soil will be Managed

  This information is presented throughout this *Materials Management Plan.*

- Compliance with s. NR 726.13(1)(b) 1. to 5.

  This *Materials Management Plan* and the associated redevelopment of the property are both elements of the RAP for the site. The redevelopment elements will provide an engineered barrier over the contaminated soil to reduce risk associated with direct-contact, limit some infiltration to groundwater, and contact with surface water. With respect to the bioretention basin, soils beneath the basin that appear to be visually impacted or register a PID reading of 10 ppm or greater will be segregated and temporarily stockpiled on site pending the decision for proper on-site management or off-site disposal. The results of the limited investigation completed to date indicate that the primary contaminants in the soil are petroleum-related VOCs and PAHs (assumed). The basements of the proposed buildings are intended for parking with associated appropriate ventilation, which mitigates the limited risk to air quality or indoor air.

5.2 Waste Characterization Contingency

Analytical results from the soil samples collected in conjunction with investigation performed to date were used to complete a waste profile for consideration for disposal at Waste Management's Madison Prairie landfill. Based on the waste profile, impacted soil excavated from the site would not be a listed hazardous waste as defined by NR 661.30, WAC, and would not be a characteristic hazardous waste as defined by NR 661.20, WAC. Consequently, soil excavated from the site during redevelopment could be managed as a special waste.

If soil is encountered during construction that exhibits a greater degree of contamination than is typical for the site (i.e., heavily stained soil, soil exhibiting strong odors, or indications of separate-phase product), such soil should be temporarily stockpiled in accordance with the procedures in Section 5.4 of this *Materials Management Plan* pending completion of a waste determination specific for the stockpiled soil. If required by the intended disposal facility, Terracon will collect a soil sample from the stockpiled soil for laboratory analysis of parameters required by the intended disposal facility. Laboratory analysis can take up to 10 business days during which time the soil stockpile must be property staged as discussed in Section 5.4. The analytical results will be used to complete the waste determination, and the stockpiled soil can then be disposed in accordance with that waste determination. Please note that off-site disposal of impacted soil requires that the materials be properly manifested during transport. No materials may be exported from the site

without a manifest. The owner or Terracon, on behalf of the owner, will issue and track manifests for all impacted soil disposed off-site.

5.3 Reuse of Excavated Soil

Impacted soil will be reused on site as previously described. Conditions not previously encountered may preclude the on-site reuse of soil. The following conditions will require off-site disposal or require other measures not discussed in this plan before on-site reuse would be approved by WDNR:

- Excavated materials, determined not to be suitable for reuse due to significant contamination as determined by visual and olfactory observations (i.e., heavily stained soil, soil exhibiting strong odors, or indications of separate-phase product).
- Insufficient space for on-site materials management.

Requirements for sampling soil to be reused are set forth in NR 718.12(1)(e), WAC, at the following sampling frequency:

- One soil sample for each 100 cubic yards of soil, for the first 600 cubic yards of soil; and
- One sample for each additional 300 cubic yards of soil.

As described previously, preliminary estimates indicate that up to 2,500 cubic yards of impacted soil may be excavated and reused on site. Based on the sampling frequency specified in NR 718.12(1)(e), WAC, 13 soil samples would be needed. Sampling completed during the 2005 Phase II included 13 soil samples. In addition, 28 soil samples were collected from other areas on site (before subdivisions) and the adjoining property to the east. Based on the number of samples collected to date, no additional soil sampling is warranted during construction to meet the sampling frequency of NR 718.12(1)(e), WAC. However, sidewall and base samples are proposed to be collected at each of the four known areas of contamination and other areas of impacted soil, if identified. Additional soil sampling may be needed for waste characterization as described in Section 5.2.

5.4 Temporary Stockpiling of Soil

If excavated, impacted soil will be managed and stored on site in accordance with NR 718, WAC, until it can be properly disposed or reused. The volume of impacted stockpiled soil should not exceed 2,500 cubic yards at any one time or stored for more than 15 days to maintain compliance with NR 718, WAC and chs. NR 500 to 538, WAC.

A stockpile containing less than 2,500 cubic yards of impacted soil, stored on-site within 1,000 feet of the area the soil was excavated, and stored for 15 days or less is considered a temporary stockpile under NR 718.05(3), WAC. Stockpile storage requires provisions for placing temporary stockpiles on impervious material and covering stockpiles, which will be accomplished by placing the stockpiles on and covering them with plastic.

As mentioned in Section 4.2, we anticipate the temporary stockpiled impacted soil may need to be stored until Spring 2017, so the general storage requirements enumerated under NR 718.05(2) are applicable. As described in Section 5.1 of this *Materials Management Plan*, since the site meets the location standards listed in NR 718.05(2)(a), WAC, for storing soil greater than 15 days, an exemption from these standards per NR 718.05(2)(b), WAC, is not needed. However, the remaining requirements of NR 718.05(2) must still be addressed as follows:

- Imperious Base (NR 718.05(2)(c), WAC) and Cover/Anchoring (NR 718.05(2)(d), WAC): Stockpile storage requires provisions for placing temporary stockpiles on impervious material and covering stockpiles, which will be accomplished by placing the stockpiles on and covering them with plastic. A site wide erosion control plan will be maintained as part of the construction activities.

- Surface Water Control (NR 718.05(2)(e), WAC): A site wide erosion control plan will be developed by the contractors to manage storm water at the site.

- Signs (NR 718.05(2)(f), WAC): Stockpiles would be located within the confines of the site, which will be a posted construction area with controlled access. Based on the limited accessibility to the site during construction, posting of signs specific to stockpiles would not be warranted.

- Inspections (NR 718.05(2)(g), WAC): The stockpile will be inspected by Terracon at least once every 30 days. The condition of the stockpile will be noted in a written log.

- Off-site Storage (NR 718.05(2)(h), WAC)): Excavated soil will not be transported off-site for temporary storage without written notification to the WDNR.

- Storage for more than 90 days (NR 718.05(2)(i), WAC): If the stockpile is stored on site for more than 90 days, Terracon will notify the WDNR in accordance with NR 718.05(2)(c), WAC.

6.0 CONTINGENCY PLAN FOR UNDOCUMENTED UNDERGROUND STORAGE TANKS

Several underground storage tanks (USTs) have been removed from the site during its development history and two fuel oil USTs remain. Although the Phase I ESAs did not identify additional other USTs remaining on the site, undocumented USTs may be present. If a UST is encountered during construction:

- The contractors will contact Terracon;
- Terracon will mobilize a certified Tank-System Site Assessor and subcontracted Tank Remover/Cleaner to the site;
- The Tank Remover/Cleaner will containerize and dispose of the tank contents and clean and remove the UST in accordance with SPS 305, WAC; and
- The Terracon Tank-System Site Assessor will collect soil samples in accordance with the DATCP *Tank-System Site Assessment* guidance document.

If a release has occurred from a previously unknown UST, Terracon will contact the property owner and WDNR to discuss options for addressing the release in conjunction with the site redevelopment activities.

7.0 GROUNDWATER MANAGEMENT

The depth to groundwater should limit the need for extensive excavation dewatering during construction. Targeted dewatering may be needed for some elements of the development (i.e., elevator shafts) or when precipitation accumulates in excavations.

Based on the results of the site investigation activities, we are not recommending further investigation of groundwater. Since the redevelopment plans call for excavation and temporary stockpiling of impacted soils on site, which will be protected from surface water, surface water discharges from the site are not anticipated to be impacted. Surface water will be managed in compliance with the overall project storm water and erosion control permits. The following management practices shall be employed should dewatering become warranted during construction:

- If untreated water is to be disposed of via discharge to the City of Madison storm water sewerage system, preapproval for the discharge shall be obtained by the contractor.

- If water is to be transported off-site for disposal by other means, the contractor shall be properly characterize and dispose of it in accordance with local, state, and federal regulations.

Please note that off-site transport for disposal requires that the water be properly manifested during transport. No water may be transported from the site without a manifest. The owner or Terracon, on behalf of the owner, will issue and track manifests for all water transported off-site for disposal.

8.0 DOCUMENTATION OF COMPLIANCE WITH MATERIALS MANAGEMENT PLAN

Upon completion of the site development activities requiring implementation of this *Materials Management Plan*, Terracon will prepare a summary report documenting the chronology of the materials management and disposal including final quantities and location of excavated materials.

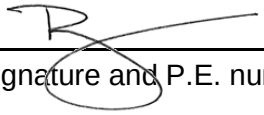
9.0 GENERAL COMMENTS

The analysis and opinions expressed in this report are based upon data obtained during this investigation and laboratory chemical analyses at the indicated locations discussed in this report. This report does not reflect variations in subsurface stratigraphy, hydrogeology, and contaminant distribution that may occur across the site. Actual subsurface conditions may vary and may not become evident without further investigation.

This report is prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted environmental engineering practices. No warranties, express or implied are intended or made. In the event any changes in the nature or location of suspected sources of contamination as outlined in this report are observed, the conclusions and recommendations contained in this report shall not be valid unless these changes are reviewed and the opinions of this report are modified or verified in writing by Terracon.

10.0 CERTIFICATIONS

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

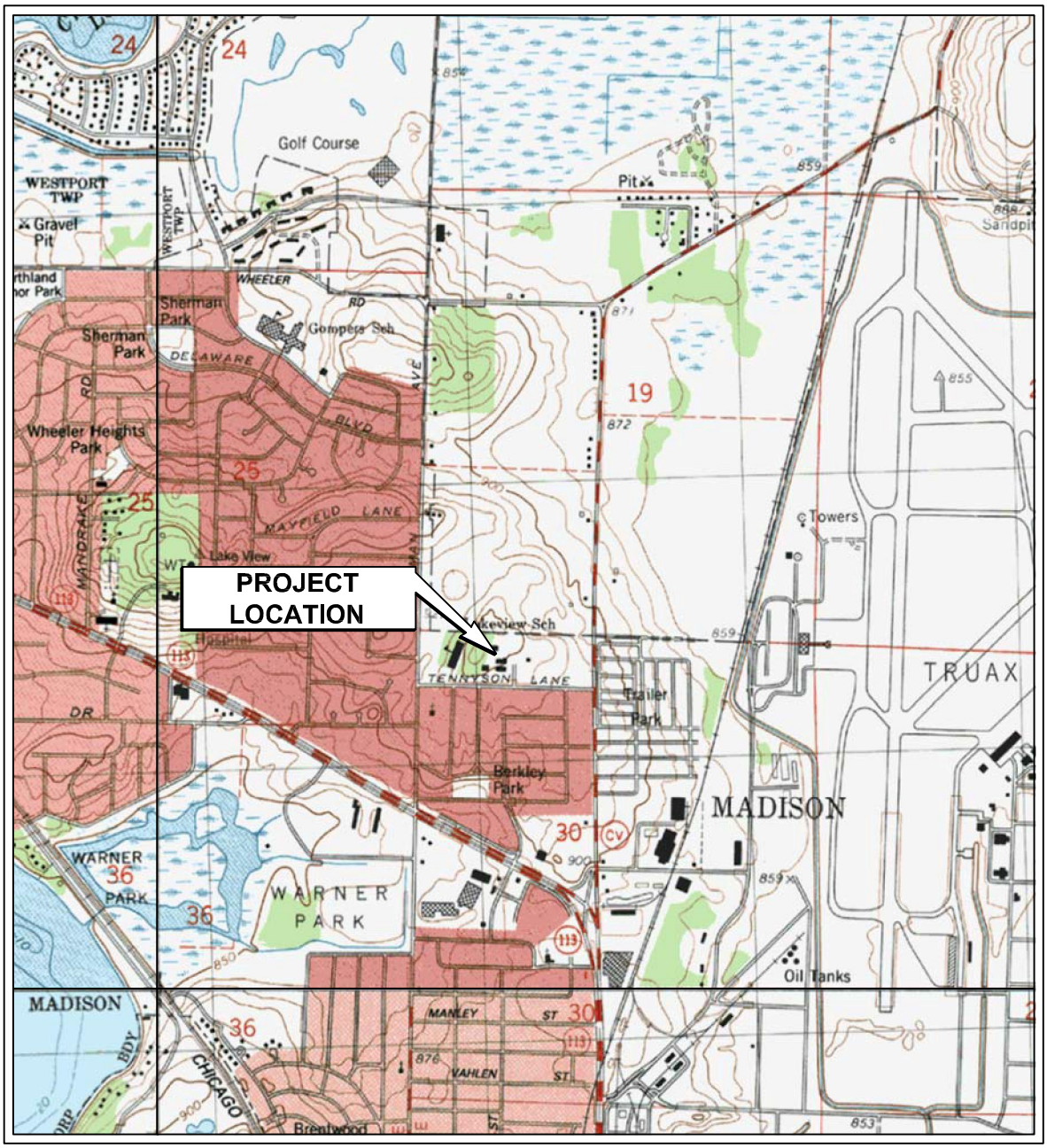


E-31505
Signature and P.E. number

Project Engineer
Title

Appendix A – Exhibits

UNITED STATES – DEPARTMENT OF THE INTERIOR – GEOLOGICAL SURVEY



SCALE 1:24 000

1 .5 0 KILOMETERS 1 2

1000 0 METERS 1000 2000

1 .5 0 1

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 10 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

DE FOREST QUADRANGLE
DANE COUNTY
1983
7.5 MINUTE SERIES (TOPOGRAPHIC)

DIAGRAM IS FOR GENERAL LOCATION ONLY AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mngr:	BRS
Drawn By:	JMN
Checked By:	RMV
Approved By:	BRS

Project No.	58167157
Scale:	AS SHOWN
File No.	58167157
Date:	9/26/2016

Terracon
Consulting Engineers and Scientists
9856 SOUTH 57th STREET FRANKLIN, WI 53132
PH. (414) 423-0255 FAX. (414) 423-0566

TOPOGRAPHIC MAP

TENNYSON RIDGE

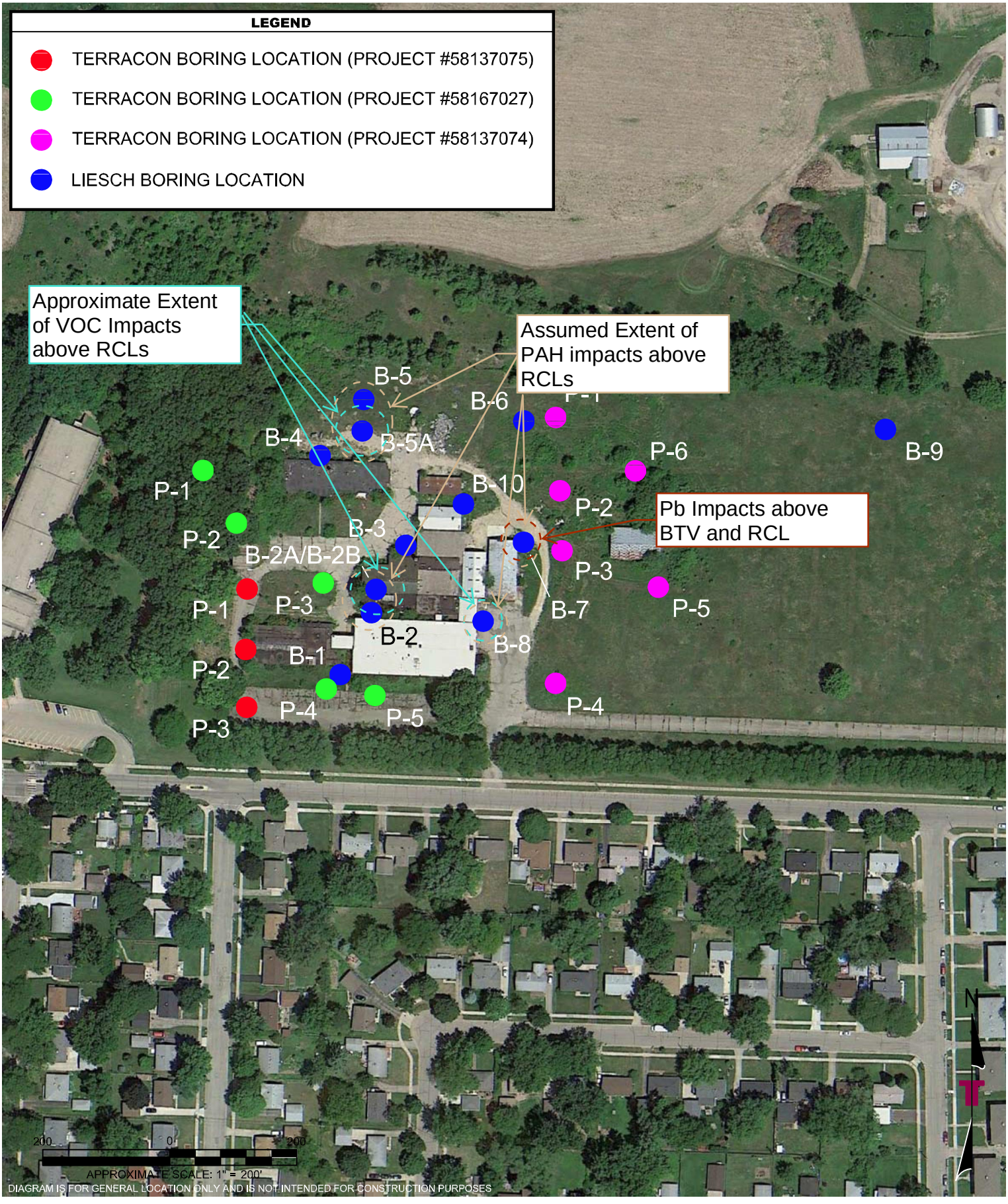
1818 AND 1910 TENNYSON LANE

MADISON WISCONSIN

EXHIBIT

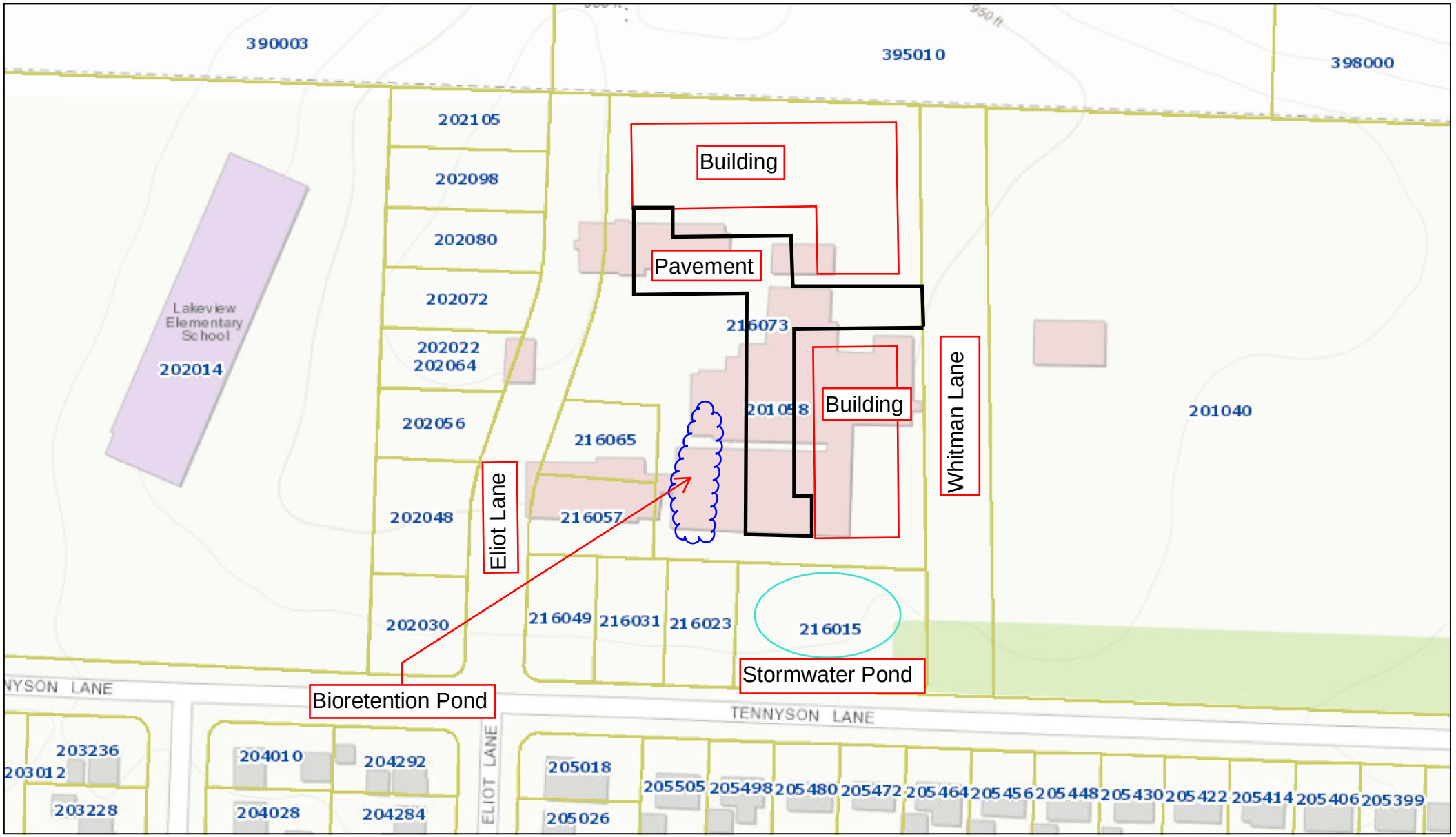
1

(TOPOGRAPHIC)



Project Mngr: BRS	Project No. 58167157	Terracon Consulting Engineers and Scientists	SITE DIAGRAM	EXHIBIT
Drawn By: JMN	Scale: AS SHOWN	9856 SOUTH 57th STREET FRANKLIN, WI 53132	TENNYSON RIDGE	2
Checked By: BRS	File No. 58167157	PH. (414) 423-0255 FAX. (414) 423-0566	1818 AND 1910 TENNYSON LANE	
Approved By: BRS	Date: 9/26/2016		MADISON WISCONSIN	(AERIAL)

Tennyson Ridge



October 12, 2016

Parcel Number

Tax Parcels

Exhibit 3 - Conceptual Development Plan

1:2,174

0 0.0175 0.035 0.07 mi

0 0.0275 0.055 0.11 km

Planning
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, ©

Terracon
10122016

Appendix B - Tables

Table 1
Soil Analytical Test Results Summary for VOCs and Metals

Tennyson Ridge
1818 and 1910 Tennyson Lane
Madison, Wisconsin
Terracon Project No. 58167157

				VOCs														Metals						
Sample ID	**Sample Depth (Feet)**	**Sample Date**	**PID**	Benzene	sec-Butylbenzene	Ethylbenzene	Isopropylbenzene	p-Isopropyltoluene	Methylene Chloride	Naphthalene	n-Propylbenzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	o-Xylene	m&p Xylenes	Gasoline Range Organics	Diesel Range Organics	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium
Liesch Soil Analytical Results 2005																									
B-1	6-8	10/24/2005	<1	<0.025	-	<0.025	-	-	-	-	-	<0.025	<0.025	<0.025	<0.025	<0.050	-	<4.5	-	-	-	-	-	-	-
B-2	0-2	10/24/2005	7.2	<0.025	-	<0.025	-	-	-	-	-	<0.025	<0.025	<0.025	<0.025	<0.050	-	4.3	-	-	-	-	-	-	-
B-2A	9	10/24/2005	<1	<0.025	-	<0.025	-	-	-	-	-	<0.025	<0.025	<0.025	<0.025	<0.075	-	<4.6	-	-	-	-	-	-	-
B-2B	9	11/18/2005	16.5	<0.250	-	*1.7*	-	-	-	-	-	<0.250	*17*	*8.3*	*3.2*	*5.2*	-	9,400	-	-	-	-	-	-	-
B-3	10-12	10/24/2005	<1	<0.025	-	<0.025	-	-	-	-	-	<0.025	<0.025	<0.025	<0.025	<0.050	-	<3.6	-	-	-	-	-	-	-
B-4	10-12	10/24/2005	<1	<0.025	-	<0.025	-	-	-	-	-	<0.025	<0.025	<0.025	<0.025	<0.050	-	<3.8	-	-	-	-	-	-	-
B-5A	0-2	10/24/2005	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	<2.7	5,600	***1.8***	16	0.039	4.8	3.0	0.0062	<0.35
B-5	2-4	10/24/2005	33.0	<0.025	24	*6.9*	7.6	31	<1.0	**24**	10	*1.7*	*48*	*14*	*13*	*19*	1,800	9,700	***0.82***	5.2	<0.031	2.2	1.1	0.0024	<0.34
B-6	10-12	10/24/2005	<1	<0.025	-	<0.025	-	-	-	-	-	<0.025	<0.025	<0.025	<0.025	<0.050	<2.6	-	-	-	-	-	2.5	-	-
B-7	0-2	10/24/2005	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	1,400	***3.7***	120	0.71	26	***69***	0.11	*0.98*
B-8	8-5	10/24/2005	14.0	<0.120	-	0.350	-	-	-	-	-	<0.120	*3.2*	*1.9*	0.230	<0.250	-	1,300	-	-	-	-	-	-	-
B-9	14-16	11/18/2005	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	-	-	-	-	-	-	-	-
B-10	0-2	11/18/2005	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-
Terracon Soil Anayltical Results 2013 (58137075)																									
P-1	2	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	1.4	-	-	-	-	-	-	-
P-1	12	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	7.3	-	-	-	-	-	-	-
P-2	2	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.77	-	-	-	-	-	-	-
P-2	16	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.65	-	-	-	-	-	-	-
P-3	2	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.80	-	-	-	-	-	-	-
P-3	20	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	0.77	-	-	-	-	-	-	-
Terracon Soil Anayltical Results 2013 (58137074)																									
P-1	3	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	*0.0314*	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.74	-	-	-	-	6.3	-	-
P-1	15	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.65	-	-	-	-	3.1	-	-
P-2	2	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.78	-	-	-	-	12.4	-	-
P-2	12	9/5/2013	<1	<0.0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.66	-	-	-	-	2.5	-	-
P-3	3	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.76	-	-	-	-	12.8	-	-
P-3	10	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.69	-	-	-	-	4.1	-	-
P-4	3	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.77	-	-	-	-	11.3	-	-
P-4	12	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	*0.0311*	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.70	-	-	-	-	3.3	-	-
P-5	3	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.79	-	-	-	-	12.8	-	-
P-5	12	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.72	-	-	-	-	3.3	-	-
P-6	3	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.69	-	-	-	-	11.5	-	-
P-6	14	9/5/2013	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	-	<0.71	-	-	-	-	2.5	-	-
Terracon Soil Anayltical Results 2016 (58167119)																									
P-1	1	7/7/2016	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	3.8	-	-	-	-	6.8	-	-
P-1	15	7/8/2016	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	42.1	-	-	-	-	2.9	-	-
P-2	1	7/8/2016	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	13.9	-	-	-	-	14.2	-	-

Table 1
Soil Analytical Test Results Summary for VOCs and Metals

Tennyson Ridge
1818 and 1910 Tennyson Lane
Madison, Wisconsin
Terracon Project No. 58167157

				VOCs																Metals						
Sample ID	**Sample Depth (Feet)**	**Sample Date**	**PID**	Benzene	sec-Butylbenzene	Ethylbenzene	Isopropylbenzene	p-Isopropyltoluene	Methylene Chloride	Naphthalene	n-Propylbenzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	o-Xylene	m&p Xylenes	Gasoline Range Organics	Diesel Range Organics	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium
P-2	11	7/8/2016	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	<0.95	-	-	-	-	3.4	-	-
P-3	1	7/7/2016	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	1.7	-	-	-	-	10.9	-	-
P-3	11	7/7/2016	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	1	-	-	-	-	2.8	-	-
P-4	1	7/7/2016	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	4.5	-	-	-	-	10.1	-	-
P-4	17	7/7/2016	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	<0.88	-	-	-	-	3.3	-	-
P-5	1	7/7/2016	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	5.4	-	-	-	-	16.7	-	-
P-5	11	7/7/2016	<1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	<0.88	-	-	-	-	2.7	-	-
Direct Contact Non-Industrial RCL [1]				**1.49**	**145**	**7.47**	**-**	**162**	**60.7**	**5.15**	**264**	**818**	**89.8**	**182**	**434**	**778**	**-**	**-**	**0.613**	**15,300**	**70**	**100,000**	**400**	**3.13**	**391**
Soil to Groundwater Pathway RCL [2]				*0.0051*	-	*1.57*	-	-	*0.0026*	*0.6582*	-	*1.1072*	*1.3821*			*3.96*	-	-	*0.584*	*164.8*	*0.752*	*360,000*	*27*	*0.208*	*0.52*
Background Threshold Value (BTV) [3]				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	***8***	***364***	***1***	***44***	***52***	-	-

Notes:
VOC = Volatile Organic Compounds
All values are listed in miligrams per kilogram (mg/kg)
[1] Non-Industrial Residual Contaminant Levels (RCLs) for Direct Contact per Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator PUB-RR-890, dated January 2014 (with input parameters updated June 2016).
[2] Protection of Groundwater RCLs per Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator PUB-RR-890, dated January 2014 (with input parameters updated June 2016).
[3] Wisconsin Department of Natural Resources Statewide Background Threshold Value (from June 2016)

XX.XX	Brown = Exceeds Non-Industrial Direct Contact RCL
XX.XX	Italicized and blue = Exceeds Soil to Groundwater Pathway RCL
XX.XX	Bold, underlined, italicized, and green = Exceeds BTV
-	Dashed lines = No established standard or not analyzed