SUBMITTED TO:
Wisconsin Department of Natural Resources
PO Box 7921
Madison, Wisconsin 53707-7921

BY:
Shannon & Wilson, Inc.
5325 Wall Street, Suite 2355
Madison, Wisconsin 53718

(608) 442-5223
www.shannonwilson.com

WORK PLAN

Dane County Fire Training Areas – Darwin Road Site Investigation

BRRTS # 02-13-583366

MADISON, WISCONSIN

SHANNON & WILSON

March 2023

Shannon & Wilson No: 110361

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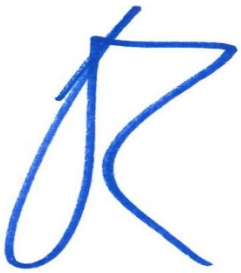
Subject: WORK PLAN, DANE COUNTY FIRE TRAINING AREAS – DARWIN ROAD SITE INVESTIGATION BRRTS # 02-13-583366, MADISON, WISCONSIN

Shannon & Wilson is pleased to submit this work plan for the site investigation activities to be completed in accordance with Chapter NR 716 Wisconsin Administrative Code at the property located at the Dane County Regional Airport, Darwin Road, Madison, Wisconsin.

Sincerely,

SHANNON & WILSON, INC.

Mark A. Rutkowski, P.G.
Sr. Associate / Madison Office Manager



Corey R. Pagels
Sr. Hydrogeologist

MXR:CRP/tad

CONTENTS

Figures

Appendices

1 INTRODUCTION

This Work Plan has been prepared in accordance with Wisconsin Administrative Code (WAC) Ch. NR 716.07 (Site investigation scoping) and Ch. NR 716.09 (Site investigation work plan) for the investigation of per- and polyfluorinated alkyl substances (PFAS) contamination in soils and groundwater at the former Darwin Road firefighting training area (**Figures 1** and **2**) (referred to as the "Site" in this work plan) at the Dane County Regional Airport (DCRA). The objective of this Work Plan is to define the magnitude and extent of PFAS impacts in soil and groundwater on the Site, and to inform additional investigation steps or remedial action, if warranted.

2 SITE INFORMATION

2.1 Site History/Background

Previous information on the former Darwin Road/West firefighting training area (Site) at the DCRA is limited in the Airport's records to a *Final Engineering Report – Contamination Evaluation Truax Field*[1]. Evaluation in the report for the former Darwin Street/West Firefighting Training Area contained the following statement: "The fireman training area practice burn pit was probably created in the early 1950s by the DOD and was in use by DOD and numerous other organizations until December 1987." The location of the Darwin Street/West Firefighting Training Area was originally taken from the aforementioned report; however, additional review of historical aerial photographs (**Appendix A**) resulted in moving the location of the former training area slightly to the west (**Figure 2)**.

2.2 Previous Site Investigation Work

PFAS soil and groundwater sampling activities were conducted at the Site between July 7-8, 2020. Sampling was conducted to confirm the occurrence of PFAS constituents in soil and groundwater at the Site. Soil and groundwater sampling procedures and sample locations were described in the *Initial Site Investigation Work Plan for BRRTS Activity #02-13-583366, Mead & Hunt, March 2020*, submitted to the WDNR on March 4, 2020.

[1] Envirodyne Engineers, Inc. 1989. Final Engineering Report – Contamination Evaluation Truax Field, Madison, Wisconsin under Contract DCRA 49-87-D-0003, Delivery No. 9, prepared for US Army Corps of Engineers.

Soil and groundwater samples were collected at six (6) locations, identified as SBT20-01 through SBT20-06, at the Site using a direct-push sampling rig (Geoprobe®). Soil boring information obtained from the Mead & Hunt March 2020 report was used to create a site conceptual model of the subsurface soil and groundwater at the Site. Two (2) soil samples were collected above the water table from each soil boring; one from the uppermost foot of the soil boring and the second from unsaturated soil immediately above the observed water table. One (1) groundwater sample was also collected at each soil boring location from temporary wells. Soil borings at the Site were advanced to between 15 feet below ground surface (ft bgs) and 25 ft bgs. Saturated conditions, based on information recorded on the soil boring logs, were observed between approximately 10 to 18 ft bgs. Variable interbedded sands, silts, and clay were noted in soil borings SBT20-01 through SBT20-04 in the upper 4 to 8 ft, below which a uniform brown fine sand was observed. Interbedded, "non-uniform" soil was observed deeper in soil borings SBT20-05 (to approximately 11 ft bgs) and SBT20-06 (to approximately 18 ft bgs). A continuous layer of light brown fine sand was observed in all borings beneath these interbedded upper soil layers.

Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) were detected in discrete soil samples collected near surface (up to 363 nanograms per gram [ng/g]) and at depth (up to 279 ng/g). Near surface samples were collected at 0 to 1 ft bgs while samples at depth were collect at or just above the observed saturated zone (water table). The WDNR has set a non-industrial direct contact Residual Contaminant Level (RCL) (NR 720) for both PFOA and PFOS at 1.26 milligrams per kilogram (mg/kg) (1,260 ng/g) and an industrial direct contact RCL (NR 720) for both PFOA and PFOS at 16.4 mg/kg (16,400 ng/g). There are no pre-determined, soil-to-groundwater RCLs for these compounds.

PFOA was detected in all groundwater samples collected between 54.9 nanograms per liter (ng/L) (SBT20-04) and 67,300 ng/L (SBT20-01). PFOS was also detected in all groundwater samples collected between 193 ng/L (SBT20-04) and 1,900 ng/L (SBT20-05). The Wisconsin Department of Health Services' (DHS) recommended groundwater Enforcement Standard (ES) and Preventive Action Limit (PAL) for both PFOA and PFOS are 20 ng/L and 2 ng/L, respectively.

All collected samples were submitted to Vista Analytical Laboratory in El Dorado Hills, California for PFAS analysis using USEPA Analytical Method 537M.

2.3 Physical Setting

2.3.1 Location

The Site is located east of International Lane and north of Darwin Road within the East Half (E ½) of Section 30, Township 8 North, Range 10 East in Madison, Dane County. Wisconsin Transverse Mercator (WTM) coordinates; X – 573115, Y – 295365 (approximate). The Site location and topography are shown on **Figure 1** (Deforest, WI, 7.5-minute topographic map [USGS, 2022])**.**

According to the City of Madison zoning information, the Site is classified as Commercial exempt and zoned AP – Airport District. The parcel located immediately south of Darwin Road is zoned SE - Suburban Employment District.

2.3.2 Physiographic Setting

DCRA is located at an elevation of approximately 890 ft above mean sea level with generally level topography. DCRA is within the Great Lakes Section of the Central Lowlands Physiographic Province, which is characterized by numerous lakes with associated lacustrine plains, prominent end moraines, and a still partially exposed cuestaform topography[2]. Lakes Mendota, Monona, and Waubesa are located to the southwest and south of DCRA.

Surface water drainage at DCRA is to Starkweather Creek, which flows around the DCRA on the north, west, and south sides. Surface water flow at the DCRA is conveyed by ditches, culverts, and storm sewers that outfall to Starkweather Creek. Starkweather Creek empties into Lake Monona approximately 2 miles to the south.

2.3.3 Site Geology

Glacial deposits in southern Wisconsin range in thickness from a few ft to several hundred ft. Because DCRA is situated on a locally thick (approximately 100 to 300 ft) section of glacial drift, several geologic layers encountered elsewhere in the region do not occur beneath DCRA. There is an approximately 350-foot layer of Mt. Simon Sandstone bedrock beneath the glacial deposits in the area of DCRA[3].

During 2020 investigation activities at the Site, variable interbedded sands, silts, and clays were noted in the upper 4 to 8 ft in four (4) of the six (6) soil borings. Interbedded, "non-

[2] Envirodyne Engineers, Inc. 1989. Final Engineering Report – Contamination Evaluation Truax Field, Madison, Wisconsin under Contract DCRA 49-87-D-0003, Delivery No. 9, prepared for US Army Corps of Engineers.
[3] *FY 16 Phase 1 Regional Site Inspections for Perfluorinated Compounds, Wisconsin Air National Guard Truax Air National Guard Base Madison, WI.* Amec Foster Wheeler Environment & Infrastructure, Inc. March 2019.

uniform" soil was observed from 11 to approximately 18 ft bgs in the other two (2) soil borings. A uniform, light brown, fine sand was observed in all soil borings underlying these interbedded upper soil layers.

2.3.4 Site Hydrogeology

Information provided in the *Phase 1 Regional Site Inspection of Truax Field* included the following summary of observations that are believed to be representative of DCRA:

"Regionally, groundwater is found in the unconsolidated glacial deposits and underlying bedrock formations including sandstone of the Trempealeau Group, the deeper Tunnel City Group, and the underlying Elk Mound Group. These bedrock aquifers comprise the principal water supply aquifers in Dane County. The Mt. Simon Sandstone underlying the glacial deposits in the vicinity of DCRA is the lowermost formation of the Elk Mound Group. Based on information collected during previous investigation activities at the DCRA, monitoring wells screened across the water table indicate shallow groundwater flow is generally toward the south and southeast. The water table at DCRA is generally encountered at depths of 5 to 15 ft bgs, and groundwater flow gradients calculated from previous investigations indicate groundwater flow velocities of 0.5 to 0.9 ft per day." Saturated conditions on Site in July 2020 were observed between approximately 10 to 18 ft bgs.

There are currently no known drinking water supply wells at DCRA, and the shallow groundwater system in the vicinity of DCRA is not used as a source of drinking water.

3 SITE INVESTIGATION

Shannon & Wilson (SWI) will complete a Site investigation (SI) that will consist of physical and chemical characterization of the subsurface soil and groundwater at the Site. Results of the physical and chemical characterization will include an evaluation of soil parameters that will be compared to WDNRs NR 720 direct contact RCLs. Groundwater analytical results will be compared to Wisconsin DHSs recommended groundwater PAL and ES concentrations. Both soil and groundwater assessments will be completed to determine an appropriate level of corrective action.

3.1 Utility Locate/GPR Survey

Prior to advancing soil borings at the Site, SWI will coordinate property access with DCRA. Utility locating will be completed by utilizing the public Wisconsin 811 Diggers Hotline. In

addition, DCRA will conduct a private utility locate to further evaluate the location of any buried utilities in the investigation area, in advance of drilling.

3.2 Subsurface Soil Investigation

A track/truck-mounted, hydraulically operated, direct-push sampling rig (Geoprobe®) will be used to continuously collect soil samples from up to 20 soil borings advanced to approximately 20 to 25 ft bgs, to investigate PFAS impacts on the Site. The exact depth of each boring will be determined based on field observations. Soil borings are proposed to be advanced in the general area of the former firefighting training area, with a minimum of four (4) borings proposed to be advanced within the former firefighting training area footprint. As previously mentioned, the location of the Darwin Street/West Firefighting Training Area was originally taken from a previous report (*Final Engineering Report – Contamination Evaluation Truax Field, Madison, Wisconsin, Envirodyne Engineers, Inc. 1989*); however, additional review of historical aerial photographs (**Appendix A**) moves the location of the former training area slightly to the west. The approximate locations of the borings are depicted on **Figure 2**. Boring locations may be adjusted in the field, based on the presence of any underground utilities.

Soil samples will be collected in 5-foot-long clear PVC or acetate sleeves that are pneumatically driven into the ground. All soil borings will be logged by the on-Site SWI scientist and will be described, including sample recovery and lithology description, using the Unified Soil Classification System (USCS). Signs of contamination (staining and odor), moisture content, and other notable observations will also be recorded. WDNR Soil Boring Logs (WDNR Form 4400-122) will be completed for all soil borings completed.

Two (2) soil samples will be collected from each soil boring in clean, pre-labeled, laboratory-provided sample containers and sent on ice, under chain-of-custody protocols, to a State of Wisconsin certified laboratory for analysis of PFAS by USEPA Analytical Method 537M (modified) (utilizing isotope dilution) for the WDNR list of 33 PFAS found in the *Wisconsin DNR PFAS Updates (effective March 1, 2021)*. High-density polyethylene (HDPE) or polypropylene sample bottles with Teflon®-free caps, which are the recommended sampling containers for PFAS sampling, will be used in this sampling. PFAS have been found to adsorb to glass, especially when the sample is in contact with the glass for a long period of time (e.g. being stored in a glass container).

The soil samples will be collected from approximately 1 to 3 ft bgs to evaluate the direct contact exposure pathway and from immediately above the perceived groundwater table (assumed to be between 10 and 18 ft bgs). A third soil sample may be collected from select

soil borings in the perceived "source area" from below the groundwater table to assess the partitioning of PFAS between soil and groundwater.

After completion of the soil borings, all soil borings not used for monitoring well installation will be abandoned per Ch. NR 141, with bentonite, and capped with like surface materials. WDNR Borehole Filling & Sealing Reports (Form 3300-005) will be prepared for all abandoned soil borings. Soil produced from SI activities (soil and monitoring well borings) will be placed in open top, steel, 55-gallon drums, labeled, and stored on-site in a secure location for later disposal at a licensed solid waste facility or to be incorporated into any soil mixing activities that would be a part of remedial actions at the Site.

3.3 Groundwater Investigation – Monitoring Well Installation

To investigate PFAS impacts to groundwater observed during previous investigation activities, we propose to install up to four (4) NR 141-compliant water-table monitoring wells and one NR 141-compliant piezometer at the Site. One monitoring well along with the piezometer will be installed in the immediate area of the former firefighting training area (as depicted on historical aerials, **Appendix A, Figure 2**), with the remaining water-table monitoring wells located at a distance to the north, west, and southeast, in an attempt to define groundwater impacts. Proposed water-table monitoring well and piezometer locations are included on **Figure 2**.

The water-table monitoring wells will be installed to depths of approximately 18 to 25 ft bgs so that the top of the well screen is 2 to 3-ft above the observed water table. During previous investigation activities at the Site, groundwater was observed between 10 and 18 ft bgs. The piezometer will be installed to a depth of approximately 45 ft bgs to evaluate vertical groundwater gradients as well as assess the vertical distribution of PFAS at the Site

All wells will be installed in borings over-drilled using 8.25-inch outside diameter hollow stem augers (HSAs). Water-table monitoring wells will be constructed by inserting a two-inch inside diameter (ID), Schedule 40, PVC casing attached to a 10-foot section of 2-inch-ID 0.010-inch factory-slotted well screen with a PVC well point into the open portions of the HSA drill strings. The monitoring well casing will be topped with an expanding waterproof cap with a lock. Filter pack sand will be inserted into the annular space between the well casing and the HSA drill string, until it reaches approximately two (2) ft above the well screen. Approximately two (2) ft of fine sand will be introduced above the filter pack sand. The remainder of the annular space will be sealed with bentonite chips, to approximately one foot below finished grade. The piezometer will be installed in a similar fashion but with a 5-foot

well screen. The monitoring wells will be completed with a flush-mounted, bolt-down steel protective cover, cemented in place, and flush with the existing surface.

The wells will be developed after installation in accordance with the well development requirements specified in NR 141 to remove fines from the sand filter pack, well screen, and casing. Groundwater removed from the wells for development and sampling purposes will be placed in open top, steel, 55-gallon drums, labeled, and stored on-Site in a secure location for subsequent disposal.

WDNR Monitoring Well Construction Forms (Form 4400-113A) and Monitoring Well Development Forms (Form 4400-113B) will be completed for all wells.

3.4 Monitoring Well Survey

The locations and elevations of all monitoring wells will be surveyed relative to a known City of Madison datum after installation. Both the elevation of the ground surface and the elevation of the top of PVC well casings will be surveyed.

3.5 Groundwater Sampling

Groundwater samples will be collected from the newly installed monitoring wells within approximately one week of installation and development. Sample collection activities will proceed progressively from the least suspected contaminated area to the most suspected contaminated area. Sampling methods and equipment will follow guidance contained in the WDNR's Publication PUBL-DG-038 96, *Groundwater Sampling Field Manual*.

Groundwater levels will be collected pre- and post-well development, and prior to sampling, from the monitoring wells, using a graduated, battery-operated water-level meter and recorded to the nearest 0.01 foot. Following the measurement of the groundwater levels, groundwater sampling will be conducted in general accordance with EPA low-flow sampling procedures.

Groundwater sampling will be performed using a pre-cleaned, stainless steel, electric submersible pump (Grundfos® or similar) or a peristaltic pump, using high-density polyethylene (HDPE) tubing. New HDPE tubing will be used for each monitoring well sampled to avoid cross-contamination between wells. Prior to groundwater sampling, groundwater will be purged using low-flow purging techniques. During the purging of each well, water-level drawdown, flow rate, and water-quality field parameters will be recorded on a groundwater water-quality data sheet. The monitoring wells will be purged at a

pumping rate of between 100 and 500 milliliters per minute (mL/min). Groundwater will be pumped through a flow-through cell and water-quality field parameters; pH, temperature, specific conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity, will be measured with a multi-parameter water-quality meter. The meter will be calibrated according to the manufacturer's specifications prior to sampling and equipment calibration will be documented. The water-quality field parameters will be collected at 3- to 5-minute intervals until all parameters have stabilized for three (3) consecutive readings and are within a set range of limits:

pH	±0.1 pH units;
temperature	(no stabilization requirement);
specific conductivity	±5 percent;
DO	±0.2 mg/L or ±10% saturation (whichever is greater);
ORP	±20 mV (goal but not a requirement); and
turbidity	±10 percent when turbidity is greater than 10 nephelometric turbidity units (NTUs) or final value below 10 NTUs.[4]

Groundwater samples will be collected directly in clean, pre-labeled, laboratory-provided sample containers and sent on ice, under chain-of-custody protocols, to a State of Wisconsin-certified laboratory for analysis of PFAS using USEPA Analytical Method 537M (modified) (utilizing isotope dilution) for the WDNR list of 33 PFAS found in the *Wisconsin DNR PFAS Updates (effective March 1, 2021)*. Polypropylene sample bottles (2, 250-ml) with Teflon®-free caps will be used in this sampling.

A second round of groundwater samples are proposed to be collected from the monitoring wells approximately 3 to 4 months after the initial sampling round, to confirm initial concentrations.

3.6 Hydraulic Conductivity Testing

Rising-head (slug out) and falling-head (slug in) tests are proposed to be performed on one or two (2) of the monitoring wells for the purpose of estimating horizontal hydraulic conductivity (Kh). All collected data will be evaluated using the Bouwer and Rice method with Aqtesolv™ software.

3.7 Equipment Decontamination

All drilling equipment and non-disposable sampling equipment will be decontaminated before being brought to the Site and between each of the boring/well locations. A simple decontamination pad will be set up on-site for use in decontaminating the drilling and non-disposable sampling equipment. The temporary decontamination pad would be constructed of HDPE or polypropylene sheeting covered with plywood with an encircling berm, using landscape timbers or similar, sufficient to capture all of the decontamination fluids. Alconox® detergent and a steam pressure washer will be used with clean, city-supplied water to decontaminate all drill tooling along with a final rinse using laboratory-provided, PFAS-free water. All non-disposable sampling equipment (e.g., water-level meter) will be decontaminated prior to use, and after each use, using Alconox® detergent, distilled water, and a final rinse using laboratory-provided, PFAS-free water. All decontamination water will be placed in open top, steel, 55-gallon drums, labeled, and stored on-Site in a secure location for subsequent disposal.

3.8 Field Quality Assurance/Quality Control (QA/QC) Samples

As previously discussed, prior to and between sample collection, all drill tooling and non-disposable sampling equipment will be decontaminated. Field QA/QC samples will be collected to ensure contamination from PFAS is not introduced into the collected samples from the drilling equipment, sampling equipment, or water/detergent used for equipment decontamination, as well as to assess any cross-contamination during sampling activities, transport of samples for laboratory analysis, and/or storage of samples for laboratory analysis.

Equipment blank (EB) samples will be collected during the SI to ensure and document that contamination from PFAS is not introduced into the collected samples from the drilling equipment, sampling equipment, or water/detergents used for equipment decontamination. EB samples will be collected during soil and groundwater sampling at a frequency of one sample per every ten samples collected or less for each specific media. EB samples will be collected by passing laboratory-supplied and verified PFAS-free water over or through decontaminated field sampling equipment (including drill tooling) before the collection of samples to assess the decontamination processes and to evaluate potential contamination from the equipment used during sampling.

Field blank (FB) samples will be prepared in the field concurrent with EB sample collection using laboratory-supplied and verified PFAS-free water. The PFAS-free water will be poured into a clean pre-labeled laboratory-provided container. The FBs are proposed to be held at

the laboratory and only be analyzed if one of the EB samples contains significant levels of PFAS.

Trip blank (TB) samples consist of a container of PFAS-free water that has been prepared in the laboratory. A TB samples is shipped from the laboratory to the Site with the other sample containers and then is shipped back to the laboratory without having been exposed to any specific field sampling procedures. It is noted that a TB is typically only used for volatile compounds, but it had been recommended for PFAS sampling to assess cross-contamination introduced from the laboratory and during shipping procedures.

A temperature blank will also be included in each cooler shipped to the laboratory to ensure acceptable sample temperatures. The laboratory analytical method dictates that samples be at a temperature of ≤ 6 °C (but not frozen). The laboratory must perform the extraction on the sample within 14 days of sample collection with a further 28 days after laboratory preparation for sample analysis.

Field duplicates (laboratory blind) samples are collected and submitted to assess the potential for laboratory data inconsistency and the adequacy of the sampling and handling procedures. A duplicate sample is collected from the same source utilizing identical collection procedures. During sample collection the original and duplicate samples are collected simultaneously by partially filling an original and duplicate sample containers alternating back and forth between the two containers eventually providing two nearly identical representative samples for analyses. Field duplicates will be submitted "blind" to the laboratory by providing a false identification number. The sampling key to ensure proper sample identification must be submitted to the appropriate personnel to enable completion of the QA/QC review process. Field duplicates will be collected at a frequency of one per 20 investigative samples.

All field QA/QC samples will be sent on ice, under chain-of-custody protocols, to a State of Wisconsin-certified laboratory for analysis of PFAS using USEPA Analytical Method 537M (modified) (utilizing isotope dilution) for the WDNR list of 33 PFAS found in the *Wisconsin DNR PFAS Updates (effective March 1, 2021)*.

3.9 PFAS Investigation/Sampling Considerations

Due to the nature of PFAS and their prevalence in many consumer products, special precautions and procedures are required to avoid introducing PFAS during drilling and sampling. Potential sources of PFAS cross-contamination in the sampling environment include water used during decontamination activities, sampling equipment, field clothing and personal protective equipment (PPE), sun and biological protection products, personal

hygiene and personal care products (PCPs), and food packaging, among other items in the environment itself. All sampling activities will be conducted according to procedures/protocols for collecting and handling environmental samples analyzed for PFAS as outlined in the *Michigan Department of Environmental Quality's General PFAS Sampling Guidance, October 16, 2018*.

3.10 Investigative Waste Management

Soil, purged groundwater, decontamination water, personal protective equipment (PPE), and any other investigative derived waste will be placed in the appropriate and separate containers for proper disposal. Soil produced from SI activities (soil and monitoring well borings) will be placed in open top, steel, 55-gallon drums, labeled, and stored on-Site in a secured location for later disposal at a licensed solid waste facility or to be incorporated into any soil mixing activities that would be a part of remedial actions at the Site. Groundwater removed from the wells for development and sampling purposes and water used in decontamination processes will be placed in, open top, steel, 55-gallon drums, labeled, and stored on-Site in a secured location for subsequent disposal. Disposables (e.g., nitrile gloves, sample tubing) will be placed in sealed trash bags for disposal at a licensed solid waste facility.

3.11 Reporting

SWI will provide a NR 716.15-compliant Site investigation report describing the sampling methods and results of the Site investigation, including any deviations from this work plan. The report will include WDNR-compliant soil boring logs (Form 4400-122), well construction forms (Form 4400-113A), well development forms (Form 4400-113B), and borehole abandonment forms (Form 3300-005); laboratory analytical reports, tables summarizing all field data and laboratory analytical results with comparison to applicable regulatory criteria; and figures depicting all sampling locations relative to pertinent Site features. Geologic cross-sections, groundwater flow maps, researched values of hydraulic conductivity (groundwater flow velocity), and one to two in-situ aquifer tests (slug tests) will be generated and used in the final interpretations of the conditions existing at the Site. The SI report will also contain SWI daily Field Activity Reports that provide narrative and photographic documentation of the field investigation activities. The report will include conclusions supported by the data, and recommendations relative to the investigative findings.

3.12 Field Health & Safety Procedures

SWI field activities will be completed in accordance with a site-specific Health & Safety Plan (HASP) created for this investigation. At a minimum, SWI will hold daily tailgate health &

safety meeting to ensure site workers are aware of the potential physical and chemical hazards that exist at the Site.

4 SCHEDULE

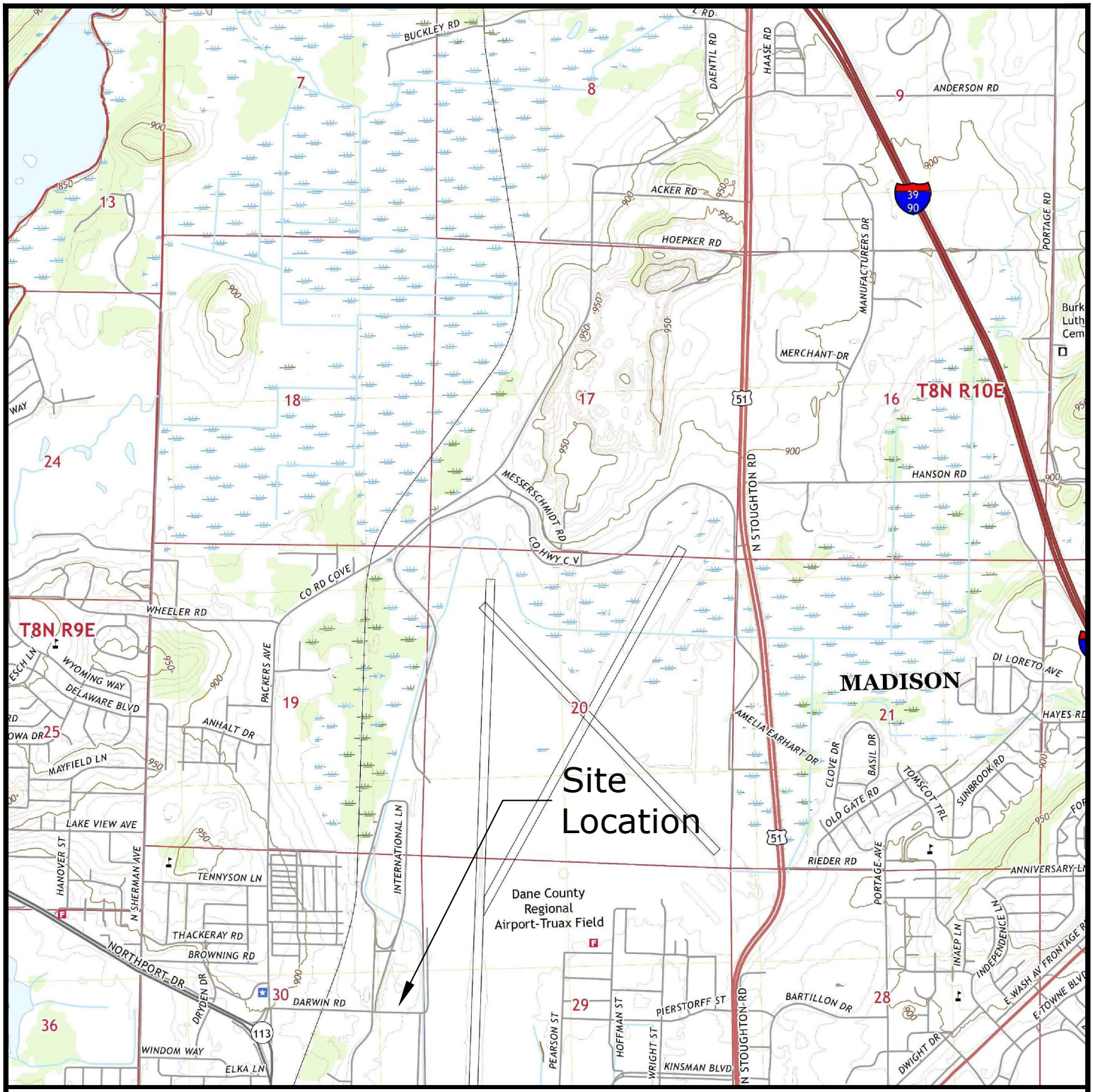
It is anticipated that SWI can begin the field investigation activities within 2-weeks of the WDNR's workplan approval. However, the limiting factor is the availability and schedule of an environmental drilling contractor. A proposed schedule for the execution of the tasks described in this work plan is provided below.

Item	Task Duration	Cumulative Duration
Notice to Proceed; WDNR SI Work Plan approval	0-days	Day 1
Field work/sampling	Within 14-days from NTP	Day 15 – 17
Laboratory	21-days	Days 31 – 32
Data assessment/evaluation	14-days	Days 46-48
SI Report submittal	14-days	Day 60

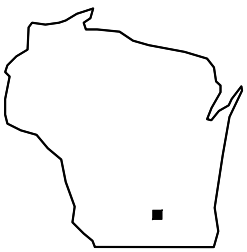
5 REFERENCES

Former Firefighting Training Areas, Soil and Groundwater Sampling Summary, Dane County Regional Airport, BRRTS# 02-13-583366, Mead & Hunt, Inc./LimnoTech, November 2020.

Wisconsin Department of Natural Resources; Chapter NR 716 of the Wisconsin Administrative Code.



BASE MAP SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE, DEFOREST WISCONSIN, DATED 2022.



QUADRANGLE LOCATION

NORTH

DARWIN ROAD PFAS INVESTIGATION
MADISON, WISCONSIN

FIGURE 1
SITE LOCATION

DRAWN BY: CRP | DATE: 03-21-2023

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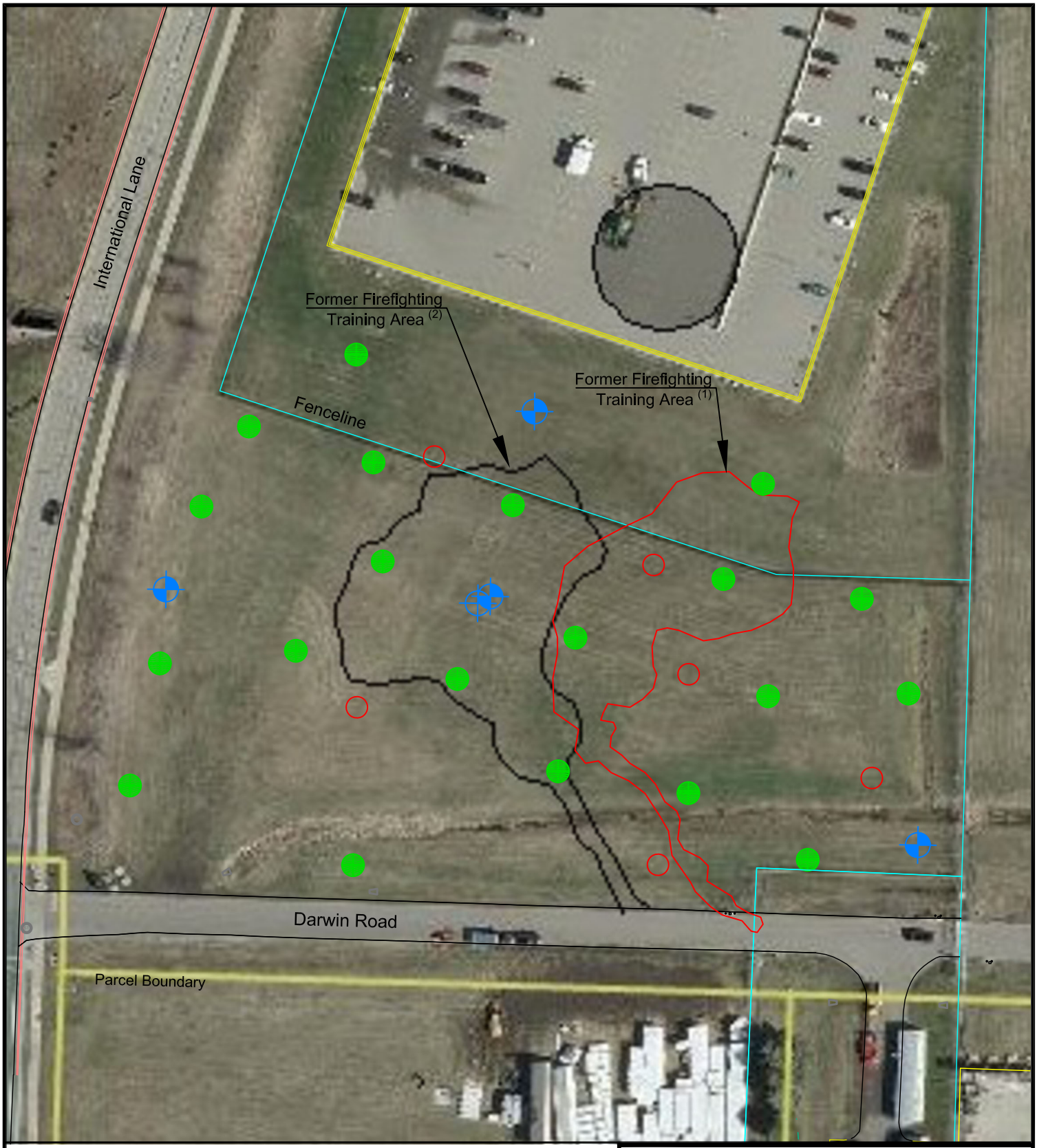

BASE MAP SOURCE: DCIMap, Dane County, WI Aerial, 2022

LEGEND

- Proposed Monitoring Well Location
- Proposed Piezometer Location
- Proposed Geoprobe Location
- July 2020 Soil/Groundwater Sample Location

1 - Outline taken from Envirodyne Engineers, Inc. 1989. Final Engineering Report, Contamination Evaluation Truax Field, Madison, Wisconsin

2 - Outline taken from DCIMap, Dane County, Wisconsin, Aerial, 1968 & 1974

NORTH

SCALE: 1"=80'

DARWIN ROAD PFAS INVESTIGATION
MADISON, WISCONSIN

FIGURE 2
PROPOSED SAMPLE LOCATION MAP

DRAWN BY:	CRP	DATE:	03-21-2023

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

APPENDIX A: HISTORICAL AERIAL PHOTOGRAPHS

Appendix A

Historical Aerial Photographs

Dane County Map 1955

March 22, 2023

Parcels

0 155 310 620 Feet

N

Dane County Map 1968

February 21, 2023

Dane County Mask

Parcels

0 190 380 760 Feet

N

Dane County Map 1974

February 21, 2023

Dane County Mask

Parcels

0 190 380 760 Feet

N

Dane County Map 1987

February 21, 2023

Dane County Mask

Parcels

0 190 380 760 Feet

N

Dane County Map 1995

February 21, 2023

Dane County Mask

Parcels

0 190 380 760 Feet

N

Dane County Map 2005

February 21, 2023

Dane County Mask

Parcels

0 190 380 760 Feet

N

Dane County Map 2014

February 21, 2023

Dane County Mask

Parcels

0 190 380 760 Feet

N

Dane County Map 2020

February 21, 2023

Dane County Mask

Parcels

0 190 380 760 Feet

N