From: John Storlie <john.storlie@theosgrp.com>
Sent: Friday, March 13, 2020 2:12 PM
To: Rozeboom, David B - DNR
Cc: Steve Osesek; Randy Turtenwald (Turtenwaldr@cityoflacrosse.org); Ian Turner (turnerI@lseairport.com); LenzB@cityoflacrosse.org
Subject: Revised Sampling locations - Wells 23 & 24, La Crosse
Attachments: SamplingLocations.kmz; SIWP_Revised_SOW_Letter_031320.pdf

Importance: High

Follow Up Flag: Follow up
Flag Status: Completed

Dave - As we discussed, attached is a letter and figures outlining revised Sampling locations. In a couple instances we reduced the number of shallow borings/samples and increased deeper borings and sampling a the capillary fringe. A KMZ file of the sampling locations is also attached for you to review on Google Earth.
Please call me with any question you may have.
Sincerely,
John
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Direct: +1 608 433 9389 | Mobile: +1 608 769 2433 | Fax: +1 608 433 9386 john.storlie@theOSgrp.com | http://secure-web.cisco.com/18l-N9iMpvD3d5m76o2jOrwq5EYljZqdXJbhG52bSVmv9LJUCwN_6oEN9UtVsSvCWnDSBja6aRZ5ANZFboX1EAe8bFs_iZdSMBpMizCXKmSi2KTXpUeHaa8b2mtMQr4zAwLw3ireoEQSVxbz60esulCIzV_7M6-fMsCVO6AEC9vPJsxMncY-5zF4qV0bBOqbVIdVoPMmsNZWVV-Y6NnAXR7YRxdB0RdecXi0pAlKjczLaOdPf85HGArmq0sHG8hBwEje0SYmrNEGLUrhCMK9uZQ/http%3A%2F%2Fwww.theOSgrp.com

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The OS Group LLC

444 21st Street South · La Crosse, Wisconsin · 54601

March 13, 2020

David Rozeboom
DNR Service Center
1300 W Clairemont Ave.
Eau Claire Wi 54701

Re: REVISED Scope of Work, Site Investigation Work Plan, Municipal Wells 23 & 24
WDNR BRRTS # 02-32-000065

Dear Mr. Rozeboom:

In response to your letter dated and as we discussed on our March 9, 2020 phone conversation, we have revised the soil and groundwater sampling locations and adjusted the soil and groundwater sampling accordingly, as outlined below. The paragraphs below and attached figures essentially supplant the corresponding sections/figures of the SIWP. Note the that the number of groundwater samples has increased. No scope changes were made to the soil and groundwater investigation in the area of the Former Test Burn Pits, Wells 23 & 24 and Former Remediation Discharge Rip Rap.

Soil Investigation

1997 Fuel Spill

OSG will install three (3) boreholes or Geoprobe borings in the grass located immediately north of the terminal apron. Two (2) of the boreholes/Geoprobes will be installed to a depth of three (3) feet below ground surface (bgs) and one (1) to the water table, at an estimated depth of twenty-five (25) bgs. Soil samples will be collected continuously during borehole advancement and classified according to the USCS. One (1) soil sample from approximately 2-3 feet bgs from each of the shallow boreholes/Geoprobes and two (2) samples (2-3 feet bgs and water table interface) from the deep borehole/Geoprobe will be submitted for PFAS analysis. One (1) additional borehole will be installed to the east of the airport apron, downgradient from the fuel spill, to approximately five (5) feet below the water table. One (1) soil sample from the water table interface will be submitted for PFAS analysis. This borehole will be finished as a water table monitoring well. Figure 5 depicts proposed boring and well locations near the former fuel spill.

AFFF Test Area

OSG will install three (3) boreholes or Geoprobe borings in the grass located immediately northwest of the airport taxiway, northwest of the Airport Fire Station. Two (2) of the borings will be installed to a depth of three (3) feet bgs and one (1) to the water table anticipated at approximately twenty-five (25) feet bgs. Soil samples will be collected continuously and classified according to the USCS. One (1) soil sample from approximately 2-3 feet bgs from each of the "shallow" borings and three (3) samples (2 to 3 feet, 9 to 10 feet, and water table interface) from the "deeper" boring will be submitted for PFAS analysis. The deep boreholes will be finished as a water table monitoring well. Three (3) additional boreholes or Geoprobe borings will be installed southwest of the airport taxiway, down-gradient from the suspected AFFF Test Area. All three (3) boreholes or Geoprobe borings will be advanced to the water table with one (1) soil sample from each borehole from the water table interface submitted for PFAS analysis. The borehole or Geoprobe boring advanced adjacent to the airport taxiway will be finished as a water table monitoring well. Proposed boring and monitoring well locations at the AFFF Test Area are provided in Figure 6.

Former Airport Fire Station

OSG will install one (1) borehole or Geoprobe boring downgradient from the former fire station, across Fanta Reed Road. The boring will be advanced to the water table anticipated to be located approximately twenty-five (25) feet bgs. Soil samples will be collected continuously, classified according to the USCS, and one soil sample from the water table interface will be submitted for PFAS analysis. The borehole will be finished as a water table monitoring well as depicted in Figure 7.

2001 Crash Site

OSG will install nine (9) boreholes or Geoprobe borings in the vicinity of the 2001 crash site. Prior to the installation, a land surveyor will be used to identify the approximate location of the crash based on the NTSB report and subsequent modifications to the runways. Following completion of the survey, a metal detector will be used to attempt to further pinpoint the location and range of the crash site. After the crash site is best located, nine (9) boreholes/Georpobe borings will be installed. Four (4) of the borings will be advanced in the immediate vicinity of the crash site. Three (3) of the borings will be advanced to a depth of three (3) feet bgs, and one to the water table anticipated at approximately 25 feet bgs. Five (5) borings will be advanced approximately 400 feet downgradient of the crash site in a line perpendicular to the anticipated flow direction. These five (5) borings will all be advanced to the water table, and the center boring completed as a monitoring well. Soil samples will be collected continuously from each boring and classified according to the USCS. In the immediate vicinity of the crash site, one (1) soil sample from the three (3) shallow borings and three (3) soil samples from the one (1) deeper boring will be submitted for PFAS analysis. Downgradient of the crash site, one (1) soil sample from the water table interface from each of the five (5) deep boreholes will be submitted for PFAS analysis. The proposed boring (shallow and deep) and monitoring well locations at the 2001 crash site are depicted in Figure 8.

Groundwater Investigation

Other Potential Source Areas

In addition to the monitoring wells and piezometers installed at and down-gradient of the former test burn pits, groundwater samples will also be collected from the four (4) other potential source areas identified at the airport including the 1) 1997 Fuel Spill, 2) Former Airport Fire Station, 3) AFFF Test Area, and 4) 2001 Crash Site. Groundwater samples will be collected from all "deep" boreholes (i.e., those that extend to the water table) and select deep boreholes will be finished as water table monitoring wells, as outlined in the table below:

Table2: Potential Source Area Groundwater Sampling

Source Area	Number of Deep Boreholes	Boreholes Completed as Monitoring Wells
1997 Fuel Spill	2	1
AFFF Test Area	4	1
Former Fire Station	1	1
2001 Crash Site	6	1

The locations of the proposed monitoring wells discussed herein are provided in Figures 5 to 8.

Thank you for your suggestions. We will proceed with bidding and scheduling the work.

Sincerely,
Coulee Environmental Solutions

John C. Storlie, PG
Principal Consultant
Direct: 608-433-9389
Cell: 608-769-2433

Attachments: Revised figures 5 through 8

cc: Randy Turtenwald, City of La Crosse

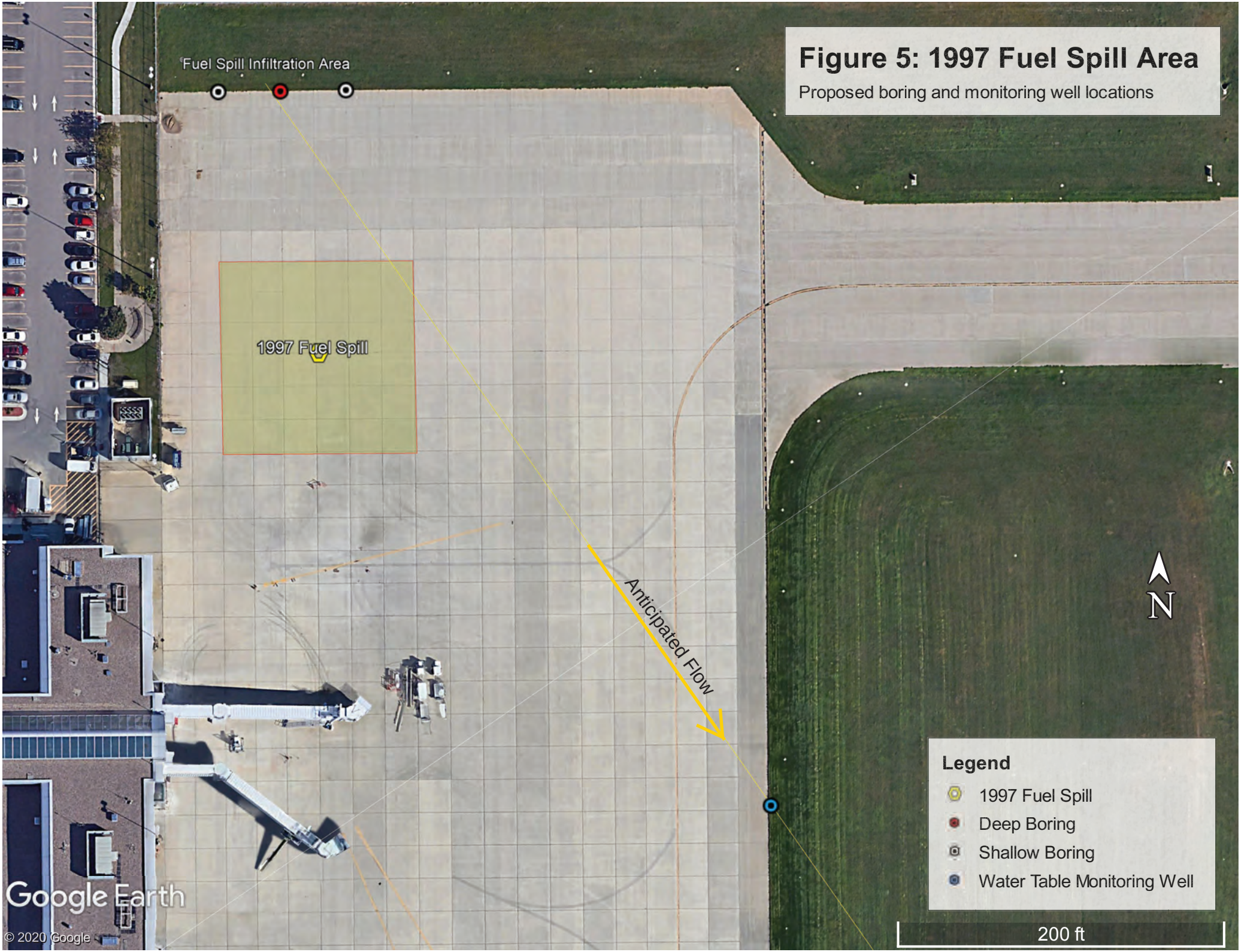

Figure 5: 1997 Fuel Spill Area

Proposed boring and monitoring well locations

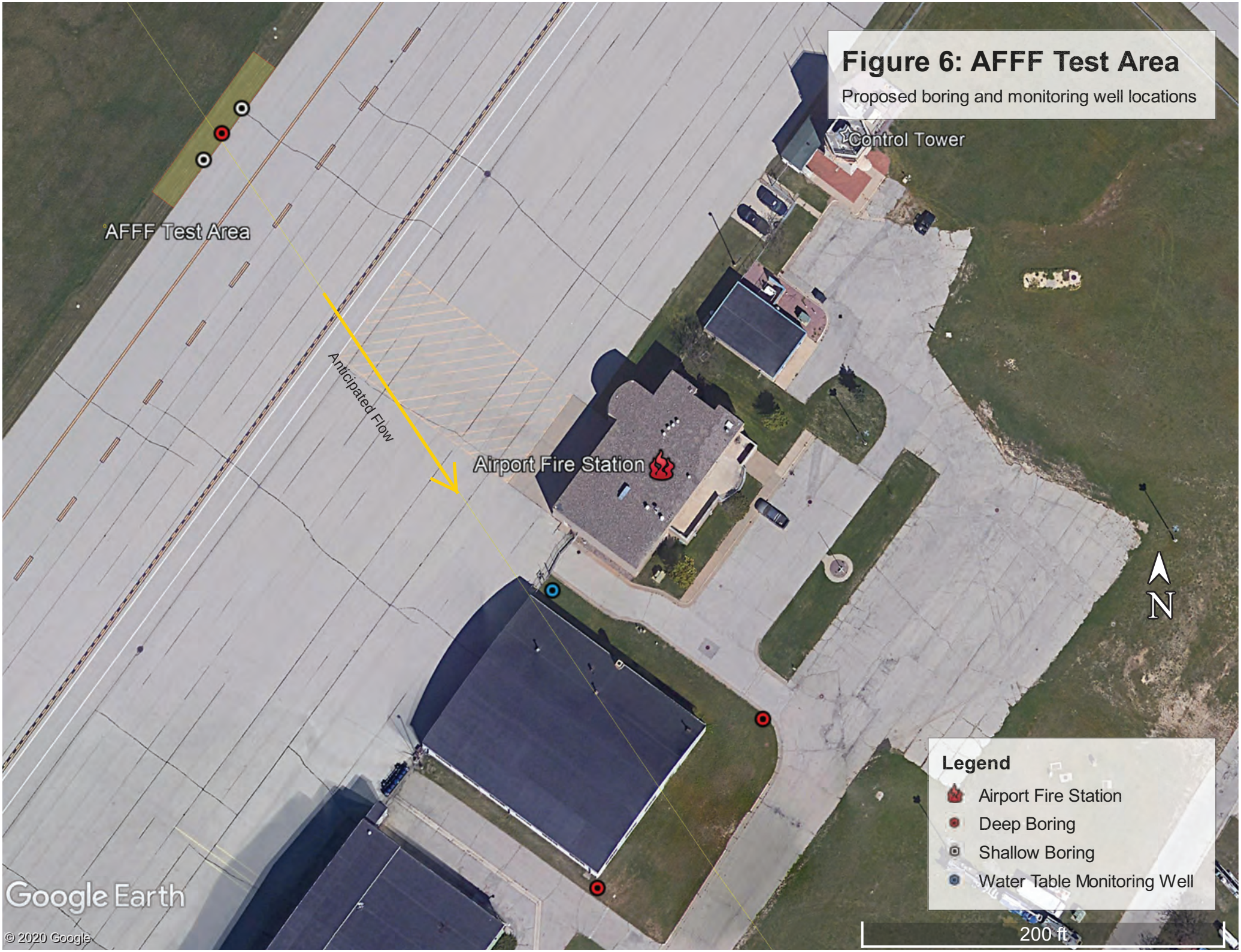
Figure 6: AFFF Test Area
Proposed boring and monitoring well locations
Control Tower
AFFF Test Area
Anticipated Flow
Airport Fire Station
N
Legend
Airport Fire Station
Deep Boring
Shallow Boring
Water Table Monitoring Well
200 ft
Google Earth
© 2020 Google

Figure 7: Former Fire Station

Proposed monitoring well location

Figure 8: 2001 Crash Site

Proposed boring & monitoring well locations