Stan A. Huber Consultants, Inc.
Health Physics and Radiation Safety Services

200 North Cedar Road – New Lenox, Illinois 60451-1751 – (800) 383-0468 or (815) 485-6161 – FAX (815) 485-4433 – Email sahci@sahci.com – Home Page www.sahci.com

June 23, 2017

Alex Barlan, P.E.
GeoServices, Inc.
1235 E. Davis St., Suite 101
Arlington Heights, Illinois 60005-2145

RE: 530-550 N CTA Bus Lane (Navy Pier) Thorium Monitoring
CDOT Permit # 800944

Dear Mr. Barlan:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the performance of geotechnical borings at 530-550 N. CTA Bus Lane (Navy Pier) in Chicago, Illinois. The monitoring was performed by Justin Maxwell and Brian Schmidt, SAHCI Health Physics Technicians, on June 14, 2017 – June 22, 2017.

Instrumentation

Surface gamma scans were performed using a Ludlum Model 2221 Scaled / Ratemeter (serial no. 127272) with attached Ludlum Model 44-10 2"x2" NaI detector (w/ 6" lead collimated shield). The instrument was calibrated on August 8, 2016. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,738 counts per minute (cpm).

The background count rate for this location was found to average 1,300-1,500 cpm.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was collected by scanning each boring sample interval and any spoils that were removed from the boring. Monitoring was performed until native material reached, between 10 feet and 15 feet below ground surface.

The maximum gamma count rate for each interval was recorded on the attached Radiation Survey Form. The count rates of the boring samples ranged from 1,100 cpm to 2,600 cpm. No count rates were found at any time that exceeded the threshold limit of 6,738 cpm.

Additional Monitoring

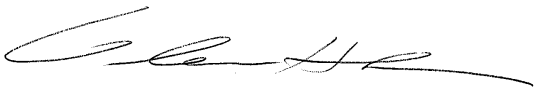
Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

Regulatory Notification of Survey Completion

I will be providing a copy of this report to both the City of Chicago Department of Public Health and US Environmental Protection Agency, as required.

Thank you for your assistance with this project. If you have any questions or need additional information, please call me at (815) 485-6161.

Sincerely,
Stan A. Huber Consultants, Inc.



Glenn Huber, CHP
President

sahci
Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: GeoServices, Inc. 530-550 N. CTA Bus Lane (Navy Pier)

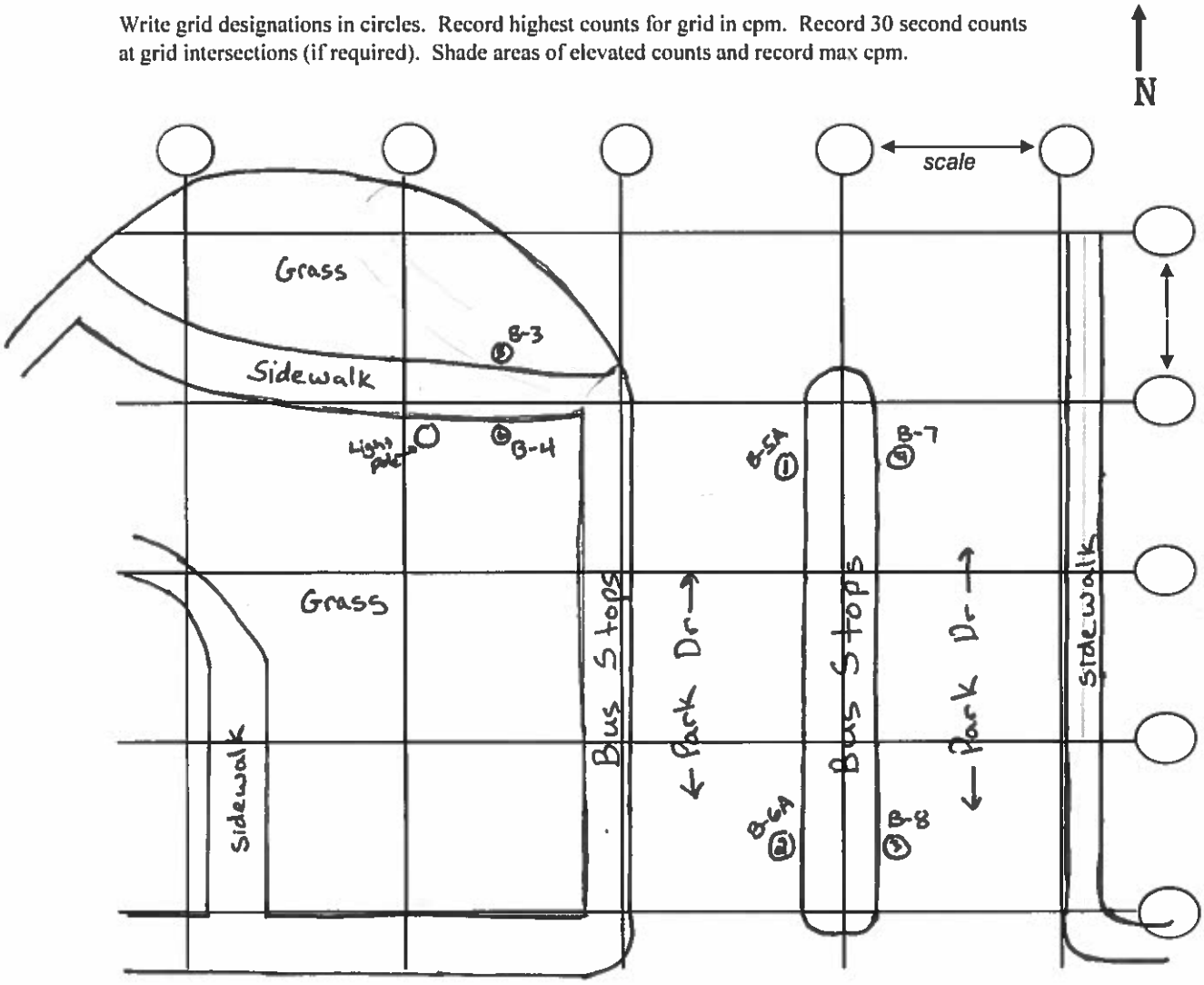
Date: 6/14/17 - 6/22/17 **Technician:** Justin Maxwell

Inst Model: Ludlum Model 2221 **Serial No. :** 127242 Probe: 168144

Probe Type: 1"x1" NaI (2"x2" NaI) (Shielded) / Not Shielded **Lift Elevation:** surface - Native

Background 1300-1500 **cpm** **Action Level:** 6738 **cpm**

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



← E. Grand Ave →

*B-1 Boring not shown; performed on 6/15/17 GAH

Radiation Survey Data

530-550 N. CTA Bus Lane - Navy Pier

GeoServices, Inc.

Date:	6/14/2017
Performed By:	Justin Maxwell
Boring ID:	B-5A

Depth	Count (kcpm)
Surface	1.6
00-1'	1.4
1-2.5'	1.2
3.5-5'	1.4
6-7.5'	1.4
8.5-10'	1.3
Spoils	1.4

Date:	6/14/2017
Performed By:	Justin Maxwell
Boring ID:	B-6A

Depth	Count (kcpm)
Surface	1.6
00-1'	1.4
1-2.5'	1.1
3.5-5'	1.2
6-7.5'	1.5
8.5-10'	1.4
Spoils	1.4

Date:	6/15/2017
Performed By:	Brian Schmidt
Boring ID:	B-1

Depth	Count (kcpm)
Surface	N/A
00-1'	N/A
1-2.5'	1.7
3.5-5'	1.5
6-7.5'	1.6
8.5-10'	1.6
11-12.5'	2.2
12.5-15'	1.4
Spoils	1.9

Date:	6/16/2017
Performed By:	Justin Maxwell
Boring ID:	B-8

Depth	Count (kcpm)
Surface	1.5
00-1'	1.3
1-2.5'	1.3
3.5-5'	1.3
6-7.5'	1.2
8.5-10'	1.5
Spoils	1.4

Date:	6/16/2017
Performed By:	Justin Maxwell
Boring ID:	B-7

Depth	Count (kcpm)
Surface	1.4
00-1'	1.3
1-2.5'	1.3
3.5-5'	1.3
6-7.5'	1.3
8.5-10'	1.3
Spoils	1.4

Date:	6/20/2017
Performed By:	Justin Maxwell
Boring ID:	B-1

Depth	Count (kcpm)
Surface	2.6
00-1'	2.2
1-2.5'	1.8
3.5-5'	2.2
6-7.5'	2.1
8.5-10'	2
11-12.5'	1.8
Spoils	2.5

Date:	6/22/2017
Performed By:	Justin Maxwell
Boring ID:	B-1

Depth	Count (kcpm)
Surface	2.6
00-1'	2.1
1-2.5'	1.9
3.5-5'	2
6-7.5'	1.9
8.5-10'	2.2
11-12.5'	2.2
Spoils	2.6