



June 7, 2018

Matt Welton  
Western Utility Contractors, Inc.  
2565 Palmer Ave.  
University Park, IL 60466

RE: 233 E. Ontario St. Thorium Monitoring 5/22/18 – 6/1/18  
CDOT Permit # 950886

Dear Mr. Welton:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during excavation of utility conduit trenches in the alley south of 233 E. Ontario St. in Chicago, Illinois. The monitoring was performed by Brian Schmidt and Glenn Huber, SAHCI Health Physics Technicians, on May 22, 2018 – June 1, 2018.

#### Instrumentation

Surface gamma scans were performed using Ludlum Model 2221 Scaler / Ratemeters (serial no. 134542 and 126496) with attached Ludlum Model 44-10 2"x2" NaI detectors (w/ 6" collimated lead shields).

Serial number 134542 was calibrated on August 9, 2017. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,415 counts per minute (cpm).

Serial number 126496 was calibrated on October 11, 2017. The USEPA action level of 7.1 pCi/g total thorium for this instrument is 7,366 cpm

The average background count rate for this location was determined to range from 1,682 to 1,737 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeters described above. Survey data was collected by entering the excavation after each 18-inch lift and recording the highest count rate for the floors and walls to an excavation depth of 48 inches below ground surface. Soil excavated below 48 inches deep was surveyed in the bucket as it was removed to a maximum depth of 74 inches below ground surface. All soil was loaded directly into a truck for disposal.

The maximum gamma count rate for each lift was recorded on the attached Radiation Survey Forms. The count rates in the excavation ranged from 1,500 cpm to 5,600 cpm. No count rates were found at any time that exceeded the instrument specific threshold limits of 7,366 and 6,415 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 USEPA, 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.

A handwritten signature in black ink, appearing to read 'G. Huber', written in a cursive style.

Glenn Huber, CHP  
President

### Radiation Survey Form

Location/ Project ID: WESTERN Utility - ONTARIO ST. - AT&T + RCN COMMUNICATIONS Utility  
INSTALLATION - ROW RAO

Date: 5/23 - 6/1 2018

Technician: BRIAN SCHMIDT SURVEY

Inst Model: LUOLVA-2221

Serial No.: 126496

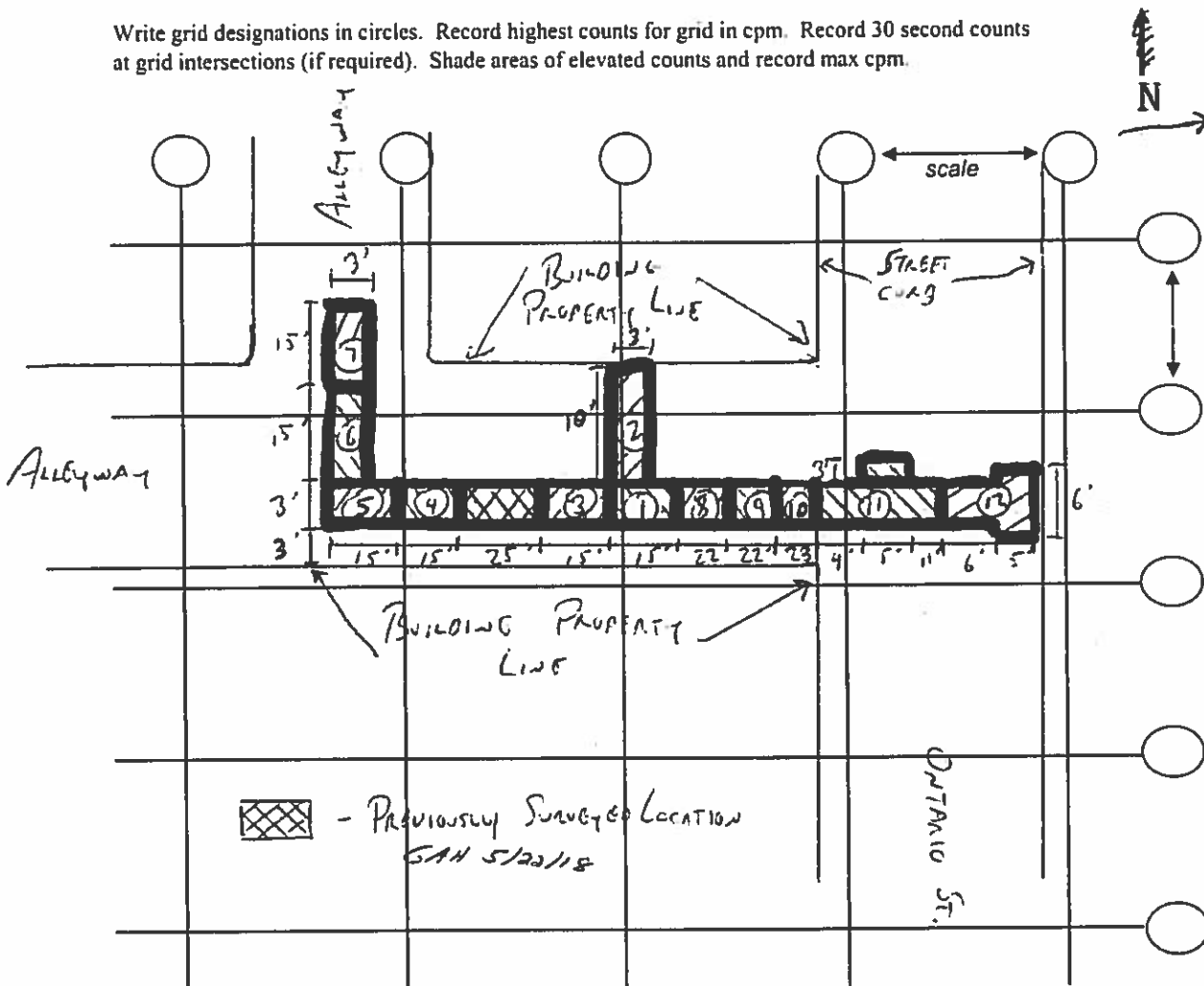
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: 0-74"

Background 1737 cpm

Action Level: 7366 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.



### Radiation Survey Form

Location/ Project ID: WESTERN UTILITY - ONTARIO ST. - AT&T 1 REN UTILITY INSTALLATION - ROW ROAD SURVEY

Date: 5/23 - 6/1 2018 Technician: BRIAN SCHMIDT

Inst Model: LUDLUM - 2221 Serial No.: 126496

Probe Type: 1"x1" NaI / 2"x2" NaI Lift Elevation: 0-74"  
Shielded / Not Shielded

Background 1737 cpm Action Level: 7366 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.



LOCATION #	DEPTH	CPM	LOCATION #	DEPTH	CPM
①	0-12"	1700	⑧	0-12"	1800
	12-30"	4400		12-30"	3200
	30-48"	4800		30-48"	4800
	36-54"	4100		36-54"	4600
②	0-12"	1900	⑨	0-12"	1500
	12-30"	3400		12-30"	2300
	30-48"	4200		30-48"	3200
	36-54"	4300		36-54"	3100
③	0-12"	1500	⑩	0-12"	1700
	12-30"	3300		12-30"	2900
	30-48"	4200		30-48"	3700
	36-54"	3800		36-54"	3800
④	0-12"	1900	⑪	0-12"	1600
	12-30"	3400		12-30"	2700
	30-48"	4600		30-48"	2800
	36-54"	4700		36-54"	3200
⑤	0-12"	1600	⑫	0-12"	1600
	12-30"	3700		12-30"	2600
	30-48"	4900		30-48"	3200
	36-54"	5200		48-66"	4000
⑥	0-12"	2000		66-84"	3400
	12-30"	3700		74-92"	3600
	30-48"	4800			
	36-54"	5000			
⑦	0-12"	1900			
	12-30"	4200			
	30-48"	5300			
	36-54"	4800			

## Radiation Survey Form

Location/ Project ID: 233 E Ontario St - Western Utility

Date: 5/22/18

Technician: Glen Huber

Inst Model: Ludlum 2201

Serial No.: 134542

Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: surface → -40"

Background 1682 cpm

Action Level: 6415 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.

