



February 11, 2021

Jared Szajkowski  
Western Utility Contractors  
2565 Palmer Ave.  
University Park, IL 60484

RE: 200-223 E. South Water St. Thorium Monitoring 1/22/21 – 2/3/21  
CDOT Permit: 1390908

Dear Mr. Szajkowski:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation for installation of a conduit at 200-223 E. South Water St. in Chicago, Illinois. The monitoring was performed by Brian Schmidt, SAHCI Health Physics Technician, on January 22 through February 3, 2021.

Limited excavation had occurred at this location on January 21, 2021 prior to the start of onsite monitoring. The excavated material had been transported to StockYards Materials at 4015 South Ashland Ave. in Chicago, IL. Glenn Huber, SAHCI Health Physicist, performed gamma surface scans of this material on January 22, 2021.

#### Instrumentation

Surface gamma scans were performed using Ludlum Model 2221 Scaler / Ratemeters (serial nos. 132844 and 134542) with attached Ludlum Model 44-10 2"x2" NaI Detectors (w/ 6" collimated lead shields). The instruments were calibrated on July 28, 2020. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for instrument serial number 132844 is 7,592 counts per minute (cpm). The action level for instrument serial number 134542 is 7,228 cpm.

The average background count rate for 200-223 E. South Water St. was measured at 1,621 cpm. The average background count rate at 4015 South Ashland Ave. was measured at 1,572 cpm.

#### Soil Gamma Scans – StockYards Materials

Gamma surface scans were performed on the previously excavated stockpiled material using Ludlum Model 2221 Scaler / Ratemeter, serial no. 134542. Survey data was collected by walking over the surface of the stockpile and recording the maximum observed surface count rate. The maximum count rate observed on the stockpile was 2,900 cpm. No count rates were found at any time that exceeded the instrument specific count rate threshold limit of 7,228 cpm.

### Soil Gamma Scans – Utility Trench

Gamma surface scans were performed on the utility trench using the Ludlum Model 2221 Scaler / Ratemeter, serial no. 132844. Survey data was collected by entering the excavation and recording the highest count rate for the floor and walls to a maximum excavation depth of 3 feet below ground surface. All asphalt, concrete, and soil were loaded directly into a truck for disposal.

The maximum gamma count rate for each lift was recorded on the attached Radiation Survey Form. The count rates in the excavation ranged from 1,200 cpm to 3,600 cpm. No count rates were found at any time that exceeded the instrument specific count rate threshold limit of 7,592 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.

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

### Radiation Survey Form

Location/ Project ID: WESTERN UTILITY - LOWER S. WATER ST. - FIBER OPTIC UTILITY EXCAVATION - ROW RADIOLOGICAL SOIL SURVEY

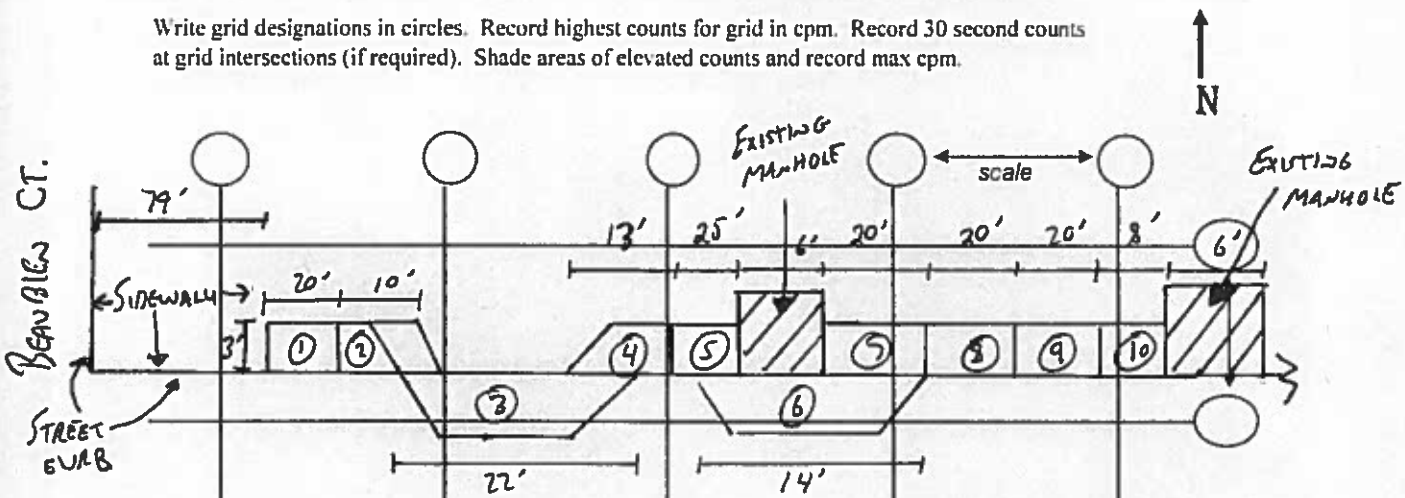
Date: 1/22/2021 - 2/3/2021 Technician: BRIAN SCHMIDT

Inst Model: LVDLVN-2221 Serial No.: 132844

Probe Type: 1"x1" NaI / 2"x2" NaI / Shielded / Not Shielded Lift Elevation: 0-36"

Background 1621 cpm Action Level: 7592 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.



EXCAVATION ID	DEPTH	CPM	EXCAVATION ID	DEPTH	CPM	EXCAVATION ID	DEPTH	CPM
①	0-6"	1500	⑤	0-6"	1700	⑨	0-6"	1500
	6-24"	1700		6-24"	2000		6-24"	1700
	24-42"	2100		24-42"	2100		24-42"	1700
	36-54"	2300		36-54"	2400		36-54"	1900
②	0-6"	1400	⑥	0-6"	1300	⑩	0-6"	1400
	6-24"	1600		6-24"	1600		6-24"	1600
	24-42"	2000		24-42"	1800		24-42"	1900
	36-54"	2200		36-54"	2000		36-54"	1900
③	0-12"	1600	⑦	0-6"	1400			
	12-30"	1700		6-24"	1800			
	30-48"	2000		24-42"	2000			
	36-54"	2000		36-54"	2000			
④	0-6"	1500	⑧	0-6"	1300			
	6-24"	1800		6-24"	1600			
	24-42"	2300		24-42"	1900			
	36-54"	2400		36-54"	1800			

**Radiation Survey Form**

Location/ Project ID: WESTERN UTILITY - LOWER SI WATER ST. - FIBER OPTIC UTILITY EXCAVATION - ROW RADIOLOGICAL SOIL SURVEY

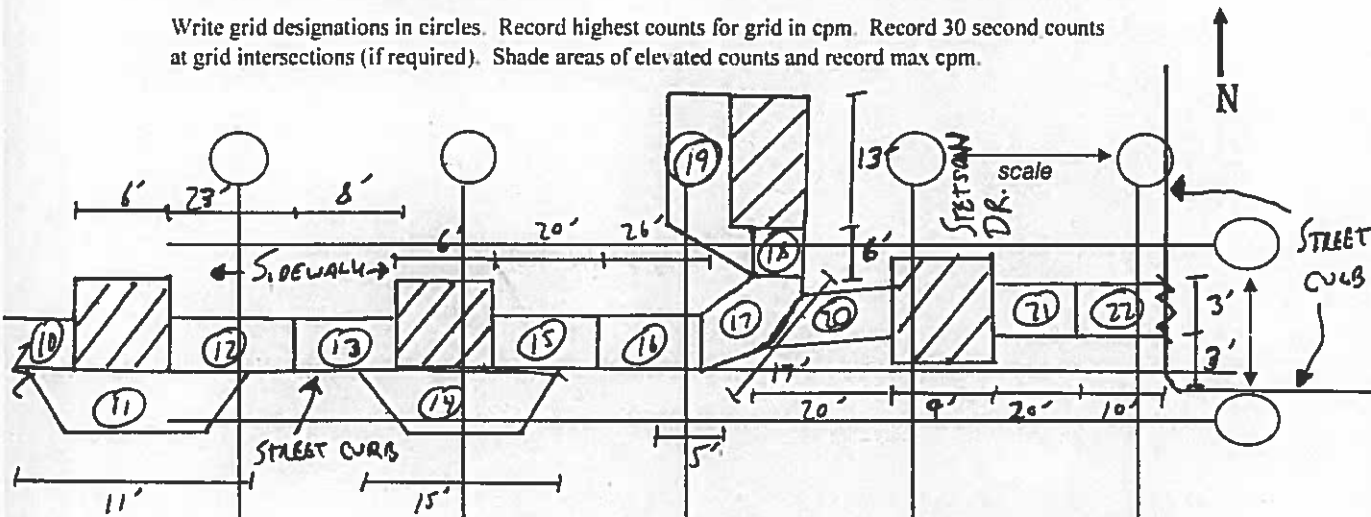
Date: 1/22/2021 - 2/3/2021 Technician: BRIAN SCHMIDT

Inst Model: LVDUM - 221 Serial No.: 132844

Probe Type: 1"x1" NaI / 2"x2" NaI / Shielded / Not Shielded  
Lift Elevation: 0-36"

Background 1621 cpm Action Level: 7592 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.



Excavation ID	Depth	CPM	Excavation ID	Depth	CPM	Excavation ID	Depth	CPM
11	0-12"	1200	15	0-6"	1400	19	0-6"	1400
	12-30"	1500		6-24"	1800		6-24"	1500
	30-48"	1600		24-42"	1900		24-42"	1900
	36-54"	1800		36-54"	2100		36-54"	2100
12	0-6"	1600	16	0-6"	1500	20	12-30"	2600
	6-24"	1500		6-24"	1800		30-48"	2900
	24-42"	2000		24-42"	1800		36-54"	3600
	36-54"	2300		36-54"	2000		0-12"	1900
13	0-6"	1700	17	0-6"	1500	21	12-30"	2400
	6-24"	1800		6-24"	1600		30-48"	2600
	24-42"	1600		24-42"	2100		36-54"	2300
	36-54"	1900		36-54"	2200		0-12"	1700
14	0-12"	1500	18	0-6"	1200	22	12-30"	1600
	12-30"	1500		6-24"	1400		30-48"	1900
	30-48"	1600		24-42"	1600		36-54"	2100
	36-54"	1800		36-54"	1900			

### Radiation Survey Form

Location/ Project ID: WESTERN UTILITY LOWER S. WATER ST. - FIBER OPTIC EXCAVATION -  
LOW RADIOLOGICAL SOIL SURVEY

Date: 1/22/2021 - 2/3/2021

Technician: Brian Schmidt

Inst Model: Ludlum-2221

Serial No.: 132844

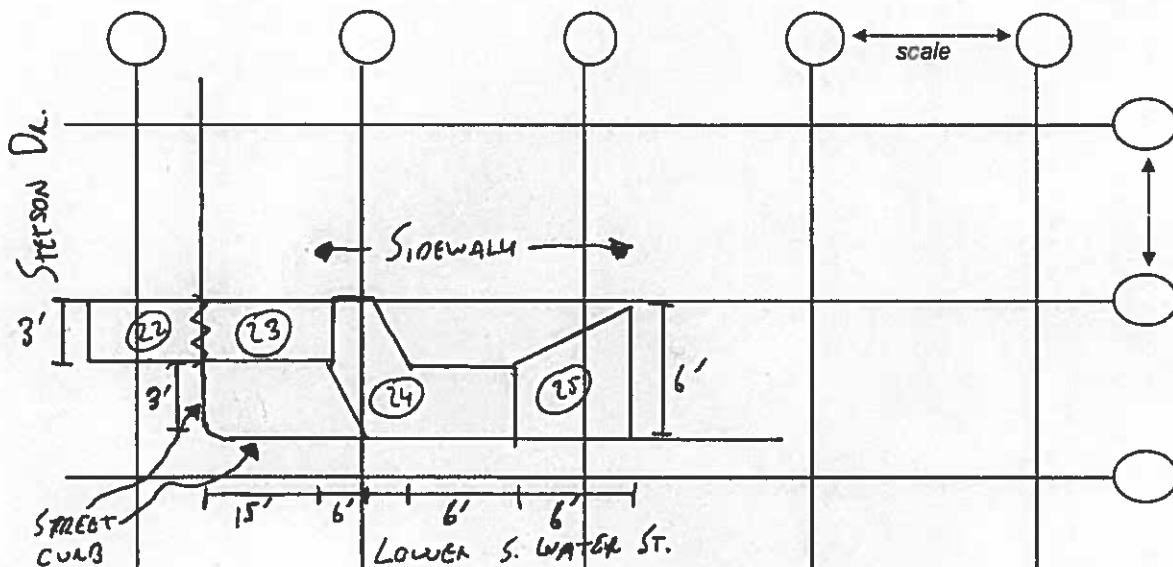
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: 0-36"

Background 1621 cpm

Action Level: 7592 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.



EXCAVATION ID	DEPTH	CPM
23	0-6"	1500
	6-24"	1800
	24-42"	1700
24	36-54"	2100
	0-6"	1700
	6-24"	1800
25	24-42"	1900
	36-54"	1900
	0-6"	1500
	6-24"	1600
	24-42"	2000
	36-54"	1900