



November 12, 2019

Kendal Heldt  
Western Utility Contractors  
2565 Palmer Ave.  
University Park, IL 60484

RE: 600 N. Fairbanks Ct. Thorium Monitoring  
CDOT Permit: 1169718 and 1172356

Dear Ms. Heldt:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation for repair of an existing damaged conduit and installation of a new fiber optic conduit at 600 N. Fairbanks Court in Chicago, Illinois. The monitoring was performed by Mark Dewald, SAHCI Health Physicist, on November 1 through November 7, 2019.

#### Instrumentation

Surface gamma scans were performed using a Ludlum Model 2221 Scaler / Ratemeter (serial no. 126497) with attached Ludlum Model 44-10 2"x2" NaI Detector (w/ 6" collimated lead shield). The instrument was calibrated on October 18, 2019. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,179 counts per minute (cpm).

The average background count rate for this location was measured as 1,860 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was collected by entering the excavation and recording the highest count rate for the floor and walls of the trench to a maximum excavation depth of 4.5 feet below ground surface. Material excavated deeper than 3 feet below ground surface was surveyed in the excavator bucket prior to loading. 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 1,500 cpm to 4,500 cpm. No count rates were found at any time that exceeded the threshold limit of 6,179 cpm.

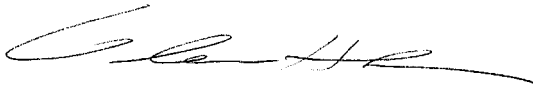
Additional Monitoring

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.

A handwritten signature in black ink, appearing to read 'G. Huber', with a long horizontal flourish extending to the right.

Glenn Huber, CHP  
President

## Radiation Survey Form

Location/ Project ID: 600 N. Fairbanks

Date: 11/1/2019, 11/4-7/2019

Technician: Mark Dewald

Inst Model: Ludlum 2221

Serial No.: 126497

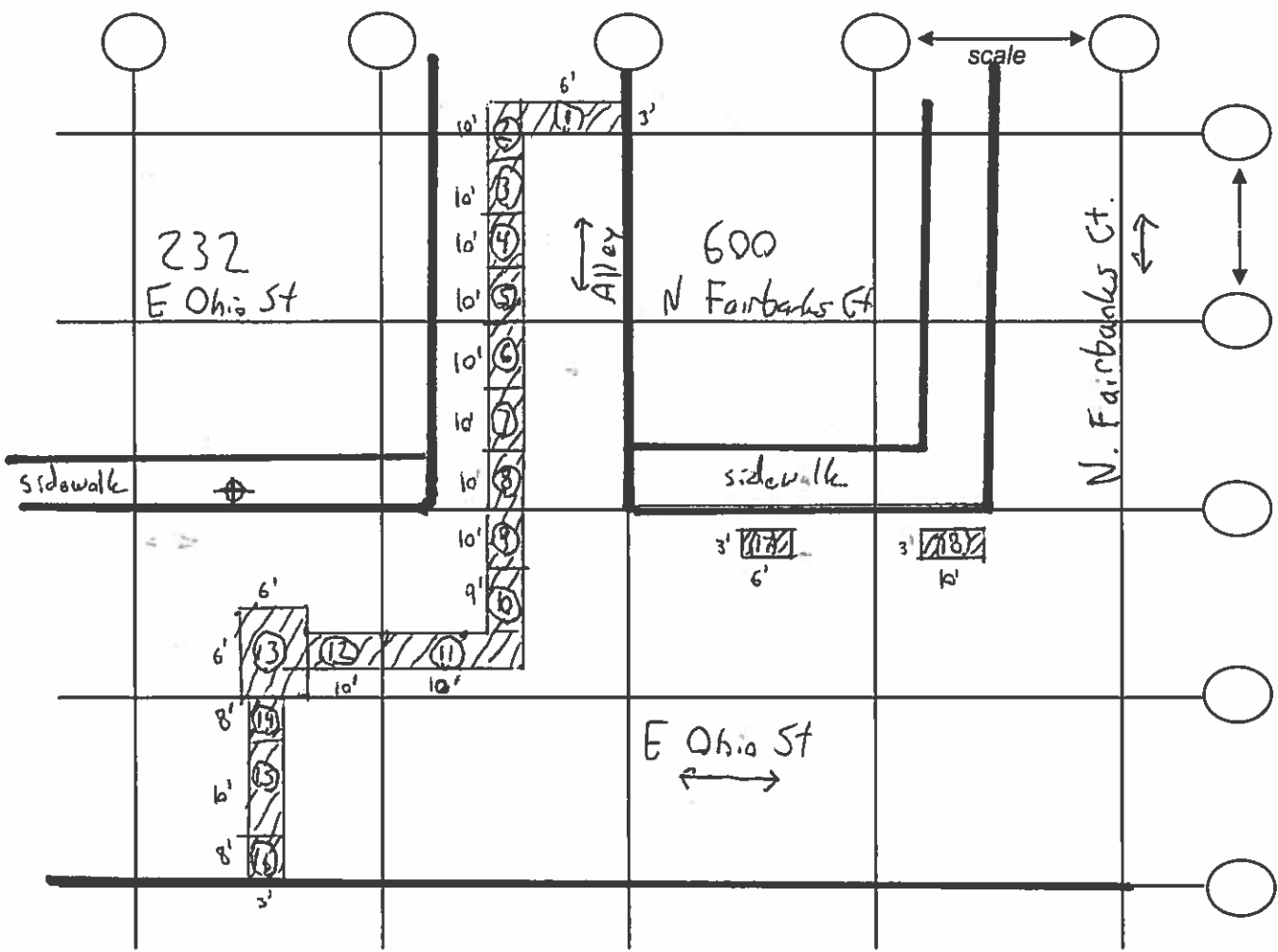
Probe Type: 1"x1" NaI / ~~2"x2" NaI~~  
Shielded / Not Shielded

Lift Elevation: 0-56"

Background 1860 cpm

Action Level: 6179 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.



⊕ → Background location  
 ▨ → Excavated Area

# Radiation Survey Form Data

*Stan A. Huber Consultants, Inc.*

Location: Western Utility Contractors - 600 N. Fairbanks Ct.  
 Name: Mark Dewald  
 Date: 11/1/19, 11/4/19 - 11/7/19  
 Instrument ID: Ludlum Model 2221 Scaler/Ratemeter w/ Model 44-10 NaI Detector (w/ 6" Lead Shield) #126497  
 7.1 pCi/g CPM: 6,179 CPM  
 BKG CPM: 1,860 CPM

Depth	Trench Segment ID (CPM)										
	1	2	3	4	5	6	7	8	9	10	11
Surface	2200	2500	2100	1900	2000	1600	1800	1900	1500	1500	1500
-1.5'	2300	2800	2300	2200	2300	2200	1800	2600	2100	2500	2400
-3.0'	2700	N/A	N/A	N/A	N/A	N/A	2600	3100	3200	3400	3300
-4.5'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Depth	Trench Segment ID (CPM)						
	12	13	14	15	16	17	18
Surface	1600	1600	1600	1500	1500	1800	1700
-1.5'	3000	2200	2600	2900	3500	1700	1800
-3.0'	4500	3400	3900	3600	3400	1800	1800
-4.5'	N/A	3900	N/A	N/A	N/A	N/A	N/A